

公務出國報告

(出國類別：專題研究)

## 中小學生團體在博物館中的學習

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出國人職稱：助理研究員

姓名：左曼熹

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聯絡人/電話:

黃潔瑩/23432435

出國人員:

左曼熹 國立自然科學博物館 科學教育組 助理研究員

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內容摘要: 本報告為筆者於2003年9月至12月赴英國倫敦，針對「博物館如何協助中小學生團體在博物館中學習」的議題，在賀立門博物館(Horniman Museum)、自然史博物館(Natural History Museum)、大英博物館(British Museum)與其他相關機構中，透過參與觀察、深入訪談、閱讀收集資料等過程，整理集結出的紀錄與心得。除以賀立門博物館為基礎，介紹各博物館針對中小學生團體通常均有的教學資源與服務。三個博物館再各選擇一個最具特色的教育資源及其活動範例深入介紹，以期深入分析了解各館有關「中小學生團體在博物館中學習」之業務如何發展運作，以及其背後的教育理念。最後提出以下的結論與建議：(一)博物館教學活動應加強標本實體的運用，並以培養學生針對實物自主學習的能力與興趣為目標。(二)博物館應建立運作良好的教育用標本的蒐藏與管理政策，以利於教育用標本持續地充實與運用。(三)博物館教學活動可參考MLA所發展的學習評量系統，擬定活動目標與簡易的評量執行方法。(四)博物館教育部門應有專為學校服務的團隊，並為學生團體發展專屬的博物館教學活動。

本文電子檔已上傳至出國報告資訊網

## 摘要

本報告為筆者於 2003 年 9 月至 12 月赴英國倫敦，針對「博物館如何協助中小學生團體在博物館中學習」的議題，在賀立門博物館 (Horniman Museum)、自然史博物館 (Natural History Museum)、大英博物館 (British Museum) 與其他相關機構中，透過參與觀察、深入訪談、閱讀收集資料等過程，整理集結出的紀錄與心得。除以賀立門博物館為基礎，介紹各博物館針對中小學生團體通常均有的教學資源與服務。三個博物館再各選擇一個最具特色的教育資源及其活動範例深入介紹，以期深入分析了解各館有關「中小學生團體在博物館中學習」之業務如何發展運作，以及其背後的教育理念。最後提出以下的結論與建議：

- 一、 博物館教學活動應加強標本實體的運用，並以培養學生針對實物自主學習的能力與興趣為目標。
- 二、 博物館應建立運作良好的教育用標本的蒐藏與管理政策，以利於教育用標本持續地充實與運用。
- 三、 博物館教學活動可參考 MLA 所發展的學習評量系統，擬定活動目標與簡易的評量執行方法。
- 四、 博物館教育部門應有專為學校服務的團隊，並為學生團體發展專屬的博物館教學活動。

關鍵詞： 博物館教學、中小學生團體參觀教學、實物學習

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## 第一章 前言與計劃目標

博物館在台灣是一晚近才發展的事業，大部分的成人或老師，成長過程中沒有在博物館內學習的經驗，因此多不懂得如何誘導孩子欣賞與利用博物館。亦或沒有引導，隨意走馬看花；亦或安排太多的內容與被動的聆聽活動，犧牲掉孩子在博物館中探索的好奇與興趣，甚為可惜！一個人若在孩童時即認知博物館的奧妙，如同一個人在孩童時即認知閱讀的奧妙一般，將有可能成爲一個懂得終生利用博物館學習的人。

今台灣正值教育改革，實施九年一貫新課程，教材鬆綁，鼓勵教師自行規劃設計課程，課程安排的自主空間與彈性均較過去大很多，博物館開始成爲許多教師們重視的教學資源。筆者雖以多年與學校教師合作發展展示參觀活動單的經驗，多次舉辦教師研習，試圖幫助教師們掌握規劃設計與引領學生在博物館中探索學習的要領，亦期與老師們共同討論開發各種誘發孩子好奇心，引導學習的方案。然而對於英國，一個有悠久的歷史文化，學校教育重視學生思考與學習能力培養的國家，其博物館如何與中小學校互動，豐富學生的學習經驗？而大英自然史博物館與本館發展的方向是相似的，且倡導教育性展示，並曾有系統地發展了一系列不同主題、不同年齡學生適用之展示參觀活動單，一直是我盼望能借鏡參考的，加上由網路中注意到大英博物館與中小學生學習相關的活動也非常豐富且具特色。故原擬以倫敦大英自然史博物館爲學習研究重點，大英博物館做爲比較與對照研究，然經聯絡各館均表示館務忙碌，無法接納長時間駐館研究者，僅能以代爲安排短期參觀活動及與部分工作人員的訪談爲主。後經館內同仁介紹與 MLA (Museums, Libraries, and Archives Council, 原 Resource, 自 2004 年 2 月起更名, 故本文自此均以 MLA 稱之) 之 Director of Learning and Access, Sue Wilkinson 女士推薦，獲得賀立門博物館 (Horniman Museum) 同意本研究進行的四個月期間可以代爲安排觀摩其爲學校團體安排的博物館教學活動，本計劃始方得以成行。因此改以賀立門博物館 (Horniman Museum) 爲主要觀摩對象，再擴及自然史博物館、大英博物館做爲比較與對照。

### 計畫目標：

1. 觀察了解賀立門博物館對學校參觀教學提供的各類型教育活動、資源與服務，並探詢其發展、執行與評量過程，包括相關人員彼此間及與學校教師間如何互動，以實踐其理念與目標。並注意博物館教育政策、教育人員的理念，及其與學校教育的關係如何影響相關業務的推展。再擴及自然史博物館、大英博物館做為比較與對照。
2. 為加強前項之目標，亦將收集了解英國 MLA 所推展之「Inspiring Learning for All Framework」架構下，由 University of Leicester 博物館學研究所之「Research Centre for Museums and Galleries」所發展之學習成果評量工具（The generic learning outcome system）。並收集了解 MLA 所推展之另一計劃「Renaissance in region」中 London Hub Museums 為加強中小學生團體在博物館中的學習所進行的相關研究與發現。
3. 針對「中小學生在博物館中的學習」議題收集相關文獻資料。

## 第二章 參訪研究機構簡介與觀察重點

### 一、賀立門博物館（Horniman Museum, [www.horniman.ac.uk](http://www.horniman.ac.uk)）

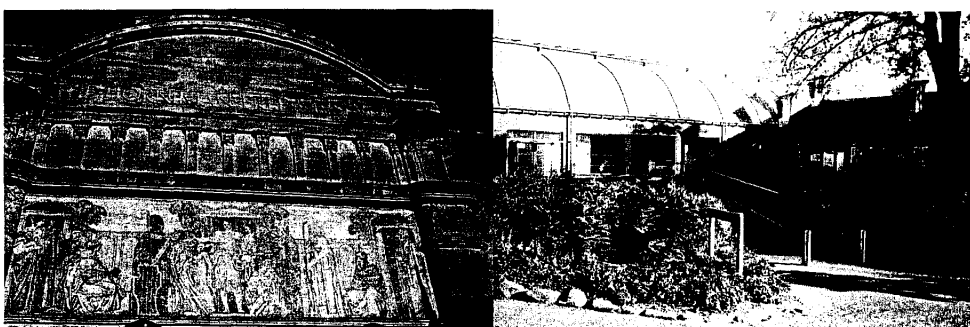
賀立門博物館是由一位 19 世紀成功的英國茶葉商人 Frederick Horniman（1835-1906），將其個人收藏與家園改建為博物館捐給倫敦市政府的，於 1901 年起即成為一座永遠免費提供給倫敦市民參觀的地方博物館，所以該館又稱為 Horniman Free Museum。該館蒐藏以民族學、自然史及樂器為主；擁有英國最完整的樂器與民族音樂紀錄的蒐藏，其戶外還有一個佔地 16 畝的花園及一小段自然保留區步道，原均是 Horniman 先生家的花園。

賀立門博物館位於倫敦市南區的邊緣，由倫敦市中心搭地鐵約需 1 小時。每年約有近 25 萬觀眾，但以附近社區的居民與中小學生為主，觀光客不多。觀眾多採自由參觀的方式，展場中沒有提供解說服務，週間常可見高中生來此進行繪畫課程。

除了解其展示與一般的教育活動內容，教育政策及理念，並以其為學校

團體參觀教學所規劃設計的教育活動、教師研習、博物館教學輔助資源等相關業務為觀察探究重點。曾多次參與觀察其在動手學習中心(Hands on Base)以及樂器教室中所進行針對不同年齡層學生團體之不同主題的博物館教學活動。特別以擁有豐富的教育用標本，鼓勵學生觸摸、觀察、探究學習的 Hands on Base 為觀察重點，注意其主要內容、呈現方式、進行的教育活動，並追蹤其發展過程。

該館亦為 Renaissance in the Regions 計畫下的四個 London Hub Museums 之一。Renaissance 計畫近期的首要任務即在於「加強博物館與學校間的合作，促進學生在博物館中的學習」，也試圖探知該館在該計畫下將有哪些改變。



賀立門博物館外觀與其戶外庭園。

左上圖建築牆面上由 1901 年起即標示著：The Horniman Free Museum，強調其免費服務大眾的堅持。

## 二、自然史博物館 (Natural History Museum, <http://www.nhm.ac.uk>)

由 2002 年起即注意其網上資源並嘗試與該館聯絡。先是 2002 年上旬由其網路上注意到該館撤除了教師資源中心，之後得知其負責學校教育小組的經理辭職，接著網路上也出現暫時無法提供教師有關博物館教學的諮詢服務，一直持續到今天。2003 年初該館的學習組的主任也是 Investigate 的策劃人 Roy Hawkey 退休，由 Honor Gay 博士接任。也許是在新舊交接過程中考慮修改教育政策與方向，我所期望參與的教育活動與面談一直未獲得積極回應。因此加入成為該館會員，除以會員方式參與會員專屬的教育活動，並以觀眾立場認識其展示內容與提供給一般大眾的教育活動，包括新推出的 Darwin Centre 所推展的活動與演講，同時積極尋找機會直接與展場工作人員討論。最後終於在負責探索室 (Investigate) 學習的經理 Dan Wornald 同意下觀摩了一次學生團體的教學，並得以與其以及另一為負責管理探索室解說員 (explainer) 之經理 Margarta Petri 討論，試圖了解探索室之規劃理念、發展過程、經營理念與做法、解說員的訓練、管理與職責分配等情形。

## 三、大英博物館 (British Museum, <http://www.thebritishmuseum.ac.uk>)

獲得教育組副主任也是該館學校相關業務負責人 Richard Woff 的支持得以參與觀察該館針對學生團體分別於展場中和教室中進行的教育活動，以及其為學校教師與職前教師推展的教師研習。收集了解其組織架構、負責學校業務者的教育理念、及其為學校參觀教學所設計提供的各種資源、服務與設施。

## 四、英國博物館檔案與圖書館審議會 (MLA: Museums, Archives and Libraries Council, <http://www.resource.gov.uk>)

英國博物館檔案與圖書館審議會 (MLA) 成立於 2000 年 取代 the Museums and Galleries Commission (MGC) 原擔任的角色，並結合全英的圖書館與檔案機構，成為代表三者的中央決策機構，推動政府的政策，並向相關政府機構爭取經費與認同，期使這三類型機構的蒐藏與服務均能直接影響每個

人的生活。

探討追蹤 MLA 針對博物館所推動之「Inspiring Learning for All Framework」以及「Renaissance in the regions」兩項方案中與本研究議題相關的部分，並請 Director of Learning and Access : Sue Wilkinson 女士協助引介相關機構與人員，收集相關資料。

五、倫敦大學博物館與蒐藏 (University College London, UCL Museums and collections <http://collections.ucl.ac.uk>) 包括有豐富古埃及蒐藏的 Petri Museum, 與有豐富自然史標本的 Grant Museum, 以及地質蒐藏館、美術蒐藏館、考古蒐藏館、與科學蒐藏館等。

「倫敦大學博物館與蒐藏」是倫敦區獲選參與 MLA 所推展之「Inspiring Learning for All」實驗研究的兩所博物館機構之一，因此也試圖接觸了解隸屬該機構的 Petri Museum 與 Grant Museum 的基本展示內容，其為學校學生提供的教育活動內容，並了解其參與 MLA 所推展之「Inspiring Learning for All」的過程。同時特別注意其為中小學發展的教學外借箱，包括其發展過程、基本重要內容，並實際到校觀察其教學及向學校教師推廣的過程。

六、帝國戰爭博物館 (Imperial War Museum, <http://www.iwm.org.uk/lambeth/index.htm>)

帝國戰爭博物館也是倫敦區獲選參與 MLA 所推展之「Inspiring Learning for All」實驗研究的兩所博物館機構之一，故也試圖了解該館參與 MLA 所推展之「Inspiring Learning for All」實驗研究進行的過程、困難與影響，包括其針對學習成效評量工具所進行的館內教育訓練之過程與課程內容。

七、倫敦博物館 (Museum of London, <http://www.museumoflondon.org.uk/>)

該館在 Resource 推動之 Renaissance in the regions 計畫下擔任 London Hub Museums 研究規劃的中心，收集其所推動有關學校參觀教學之相關研究的發現。



八、倫敦大學教育學院 (Institute of Education University of London, [www.ioe.ac.uk](http://www.ioe.ac.uk))

10/16- 12/11 每週三小時旁聽科學教育研究所之「科學教育的基礎」課程，蒐集並了解與科學學習有關的理論、概念與文獻。

九、研討會：9/1-9/6 至 Manchester 參加 GEM (Group for Education in Museums) 2003 年研討會 Representation: Inside and outside the museum: who is representing whom?

10/6-10/8 至 Brighton 參加 2003 英國博物館學會 (Museums Association) 的年會收集與本研究有關之資料，並尋找可支援本研究與資料收集的相關人員。

### 第三章 賀立門博物館中小學生團體參觀教學的相關紀錄

#### 一、教育組簡介：

教育組的工作人員不多，包括主任與職員只有9位。主要以規劃推動親子、社區與學生團體的活動及教學為主。不負責展場的觀眾服務工作，所以該館也沒有提供解說服務。其中有四人負責學校業務，兩位是教育人員職稱分別為School Education Manager與 Education officer，負責教學活動的規劃設計、教育資源的開發、與教學活動的授課等。另兩位職員則負責與學校聯繫，教學的預約安排與確認，學生來館時的接待等。因人力有限，該館於週末或假日所推出豐富而多樣的親子或成人教育活動，包括展場中定期推出的說故事活動，多數是外聘館外臨時人員（Freelancer）支援。這些活動可由該館每三個月出版一本的What's On Guide（附錄二之6）看出。

#### 二、教育政策與理念：僅節錄部分重要內容，詳如附錄一。

「博物館擁有的實物（objects）是博物館最獨特的教育潛力，因此教育活動應該是以實物為基礎，探索它們所能提供的許多故事和解釋。賀立門博物館的教育使命是幫助我們所有的觀眾和我們所擁有的實物建立關聯性，以激發出有意義的學習。而學習應是一個積極的過程，它能評價和整合概念、態度與情感，且提出關鍵性問題，並能增進對自我、他人和廣闊世界的理解。」

「教育是博物館的核心，所有的博物館員工都應該支持教育性活動。而所有的教育活動都應有明確的目標，也應有諮詢與評量以作為後續活動發展的依據。」



賀立門博物館展場中敘寫著 Horniman 先生的名言：「只觀看而沒有看見的人離開博物館時，他的智慧沒有增長。」

### 三、 為學校團體提供的教學活動：

該館提供給學生團體的教育活動完全是由博物館學校教育小組的兩位教育人員負責，因此課程形式很單純，她們自稱是「Object-based talk」（以實體為基礎的講解活動），是免費的活動。每天視人力提供 3 至 6 堂，每堂 45 分鐘。當兩人都不在時則會臨時聘用館外有經驗的教育人員（Freelancer）擔任教師。適用對象包括 Key stage 1-3，相當於台灣幼稚園到國中二年級，但主要以國小學生為主。每年平均只能服務 2000 多位學生。博物館教學活動的主題包括：古埃及、動物類群、認識非洲、世界的面具、世界的樂器、世界的劇偶、北美原住民的生活、世界各地的玩具與遊戲等。除於網路上公告介紹之外，目前仍於每學期初發函附近的學校。主要是在動手學習中心（Hands on Base）及 2002 年才完成的樂器展示廳旁的樂器教室中進行。

### 四、 範例說明：

以在樂器教室中所進行「認識世界各地的樂器」的博物館教學活動為例說明。

活動目標：藉由問與答的過程，學生針對以下各點探究認識樂器。

- 聲音如何產生？
- 樂器的製造材料
- 如何彈奏發聲？
- 這個樂器是從哪裡來的？
- 音樂的功用：儀式、娛樂、傳訊、伴舞、戲劇等。

並期藉此引導學生思考生活在其他不同地域與不同年代人們的生活方式，並認識一些具有不同習俗與價值觀的人們。

活動特色：

- 豐富且精采的實體：本活動準備了許多學生難得一見，來自世界各地的傳統樂器。
- 優秀的引導者：有豐富的表情與動作，口語清晰，聲調聲音大小變化豐富，能針對不同樂器問不同的問題、演奏並適時地營造感人或驚奇的氣氛。透過本身對標本的珍惜與慎重的態度影響學生也己能愛護這標本。給予不同的學生參與的機會，並事實地注意到在邊緣有些分心的學生邀請其出來示範，並給予特別的鼓勵。一位具豐富博物館教學經驗來該館代課的 Freelancer(博物館工作自由業者)，Danny Staples 先生即表示：賀立門博物館一直堅持由博物館教師直接教導來館的學生，因為只有具專業的博物館教師才較知道如何引導學生針對實物學習，藉由這些實物啟發心智、增長見識、誘引興趣。
- 善用故事並鼓勵學生參與：上課的教師常會提到一些與標本有關的背景故事，甚至包括這個標本當年怎麼來到博物館等，例如木乃伊的包布，是最早還沒有賀立門博物館之前，Horniman 先生將他從埃及帶回來的木乃伊在家中邀請考古學家及他的朋友們一起拆解包布時留下來的片段。運用故事傳遞出的場景或問題討論誘出與標本相關的經驗感動學生，再以表演活動鼓勵學生的積極參與。
- 課程節奏變化豐富：課程的前 30 分鐘以問答互動、示範參與、表演、與說故事等方式交替進行。最後再以一個精采的但學生還不認識的樂器演奏與說明結束。
- 直接觸摸操作 (Hands on) 的體驗：後半段全體學生分為 5 小組，每組約 4-5 位學生由一位家長或老師負責，輪流操弄或彈奏不同的樂器。

活動評量：

每位帶學生來博物館上課的學校老師均會收到一份博物館教學的評量表。該表一開始既表達期望學校能珍賞這個「Object-based talk」（以實體為基礎的講解活動），為改進服務請老師能詳填這份評量表。表格設計則是針對學生的學習程度、內容與學校課程的關聯性、博物館提供的資訊與服務設施是否合宜詢問老師意見。學校老師針對「樂器」與「古埃及」課程填寫的意見各一份，其中一份還包括學生寫給博物館教師的感謝信，均收於附錄二之 5。

#### 五、 課程資料檔案的結構：

每一個主題課程其備課的資料檔案內容均很豐富，分析其基本結構均包括：課程目標，可用的標本清單（清單內容包括編號、名稱與簡介、存放位置、財產歸屬、大小與數量、標本材質與狀況描述、與使用時應注意事項），針對標本與課程目標的好問題、或適合進行的活動、有時也包含教學建議，每一個標本的相關資訊與背景知識（最好有故事），可在學校進行的準備或延伸活動之建議，展場中其他與此主題相關的標本介紹等。每位上課教師是依據這個課程結構備課，再根據個人特色與學生反應自行調整課程內容，因為課程強調學生的參與和互動，所以他們並沒有一個須照著講解的解說腳本。

#### 六、 支援博物館教學的其他輔助資源與服務

- 完成預約後的聯繫：完成預約的學校教師來館前均會收到一份確認單，說明當日流程、安排引領參觀的注意事項、活動評量表，三份資料收於附錄二之 3.4.5。有時也會視主題郵寄或引介網路上與該主題相關展示區的學習手冊給老師，期能輔導教師規劃參觀前的準備活動、在博物館中可配合進行的參觀或其他學習活動，以及參觀後的延伸活動等。
- 相關設施：午餐室以及存放學生衣物與午餐盒的空間，同時約可容納 4

個班級，因此只有預約博物館教學的班及才能使用。午餐室位於 2002 年才蓋好的教育中心內，隔間可彈性移動，目前也是假日親子與成人課程的上課地點。

- 網上資源：詳列預約辦法，各主題課程內容簡介包括適用對象及其與國家課程標準相關的部分，安排引領參觀的注意事項，針對特定主題或展覽發展的學習手冊（Education Pack 或 Learning Pack）。學習手冊內容豐富主要是為教師編寫，有心的家長或社區活動領導人也可參考利用。通常包括參觀活動建議、學生用的展示活動單、相關學習活動、相關主題實體展品簡介、重要詞彙、參考書目、與國家課程標準的關聯性。這些資料會視情況於參觀前郵寄給已預約博物館教學活動的學校教師。該館現今負責學校教育的經理（School Education Manager）Isabel Benavides 小姐 表示其發展過程可視時間人力與經費調整。初期先發展重要且必要之項目，至於相關活動的內容則可視能力再豐富充實之。目前已完成九個主題，主要是針對特展或永久展示區的主題設計，包括非洲、恐龍、劇偶、自然史等。



左圖：教學活動運用到來自世界各地的傳統樂器。課程結束後樂器便收到後面的櫥櫃中。

右圖：博物館教師引導學生敲鼓時用手壓或放鼓旁的弦，可改變鼓音的高低，再配合節奏使它成為一個會說話的鼓。



左圖：教師指導學生敲一個來自西藏的鐘。學生全體閉上眼睛靜聽，可聽到鐘聲持續2分鐘之久。

右圖：學生分小組操作。



左圖：在認識非洲的主題活動中教師讓學生穿上傳統服飾。

右圖：教師與學生各持一個「會說話的鼓」，以鼓對話。



左圖：小朋友到館後先在午餐室了解活動流程，並由家長協助將活動單填好名字。

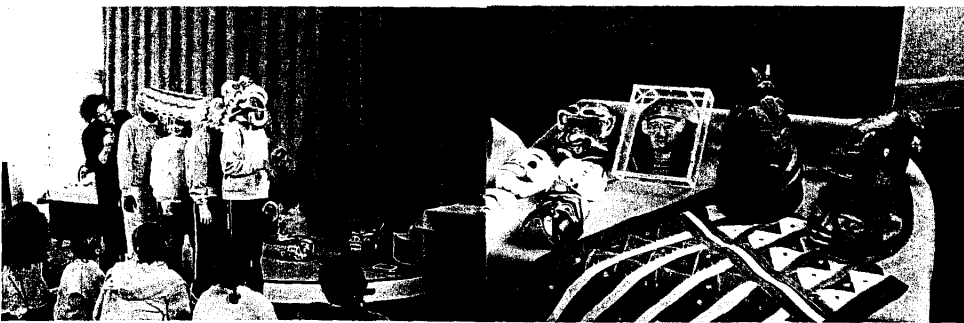
右圖：除了博物館教學的課程外，許多老師還會要求學生在展場中選擇一個最喜歡的相關主題展示畫下來，以繪畫的方式加強學生的觀察。



左：教師引導學生以布偶表演「三隻小豬與大野郎」的故事。兩位臨時出場的同學居然能一搭一唱演出故事中的對話。 右：分組活動時間，三位小朋友合力操作一個日本偶。



左圖：在「古埃及」的活動中教師情學生活作示範手中的棺木板與木乃伊的關係。  
右圖：木乃伊的包布，教師要求學生愛惜這些珍貴的標本，傳遞時一定要雙手拿著。



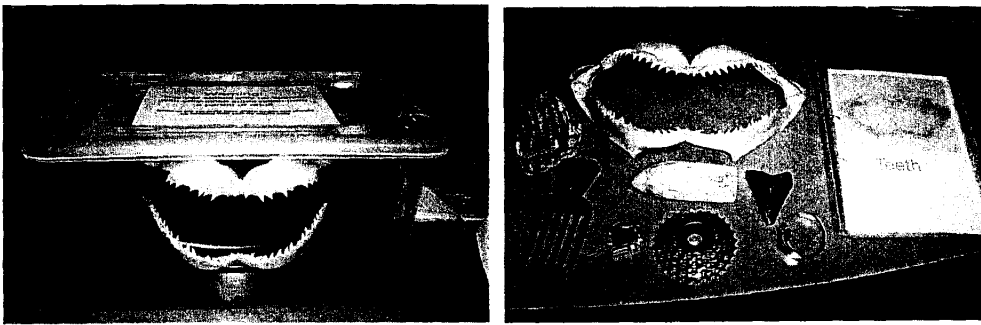
左圖：在「世界的面具」的活動中，教師協助學生合作示範中國舞獅。  
右圖：來自世界各地的面具，包括木乃伊的面具。教師會要求學生找出它與其他面具的最大不同點（沒有眼孔）。



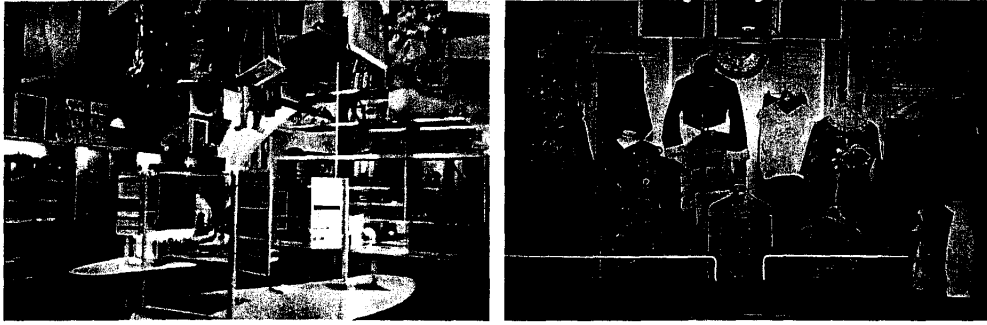
### 七、動手學習中心（Hands on Base）與發現箱（Discovery Box）：

這個中心收集了來至世界各地約四千件的教育用標本，有樂器、面具、劇偶、衣飾、埃及古物、以及自然史類的化石、骨骼、果實種子等類教育活動用的藏品。其目標是鼓勵觀眾充分運用感官體驗，自由觸摸把玩，期能讓學習者有一愉快並持久的學習經驗。目前不論是假日親子活動、社區團體活動，或學生團體教學均是由博物館教育人員或館外博物館教育自由業者主導教學，活動內容和進行方式與學生團體教學類似。活動後半段觀眾雖能分組輪流觸摸把玩或操作這些在活動主題下由博物館教育人員提供的標本，但觀眾並不能隨意自由探索其他的標本。所以每次的活動均是在規劃好的架構下進行。

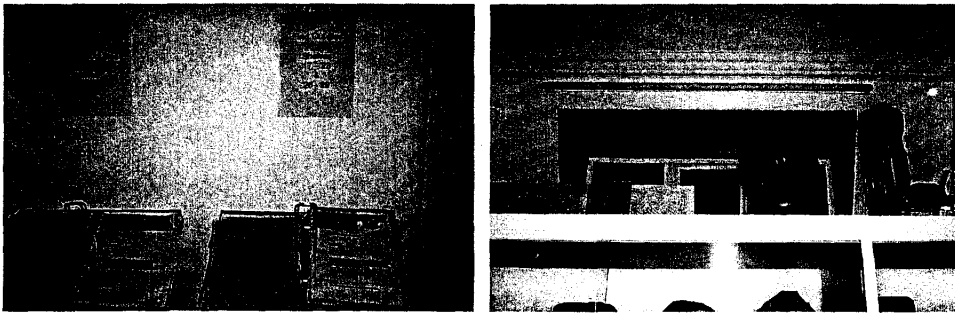
目前該館正在發展不同主題的發現箱。每一箱即是一個主題學習活動，在一個主題下收集相關標本。例如牙齒發現箱中除了動物的牙齒還包括齒輪、齒梳等。學生則依學習手冊中的問題進行討論。例如找出這些齒在構造上有何相似與不同之處？它們分別有什麼功用？為什麼他們都叫「齒」？...。這樣的發現箱目前已有 10 個主題，目前尚在開發階段，還需經試用、評量與修正的過程。未來該中心希望能開放給學校教師自行引領學生團體進行發現箱的探索活動。



左右二圖：目前尚在發展中的發現箱之形式與其內容。

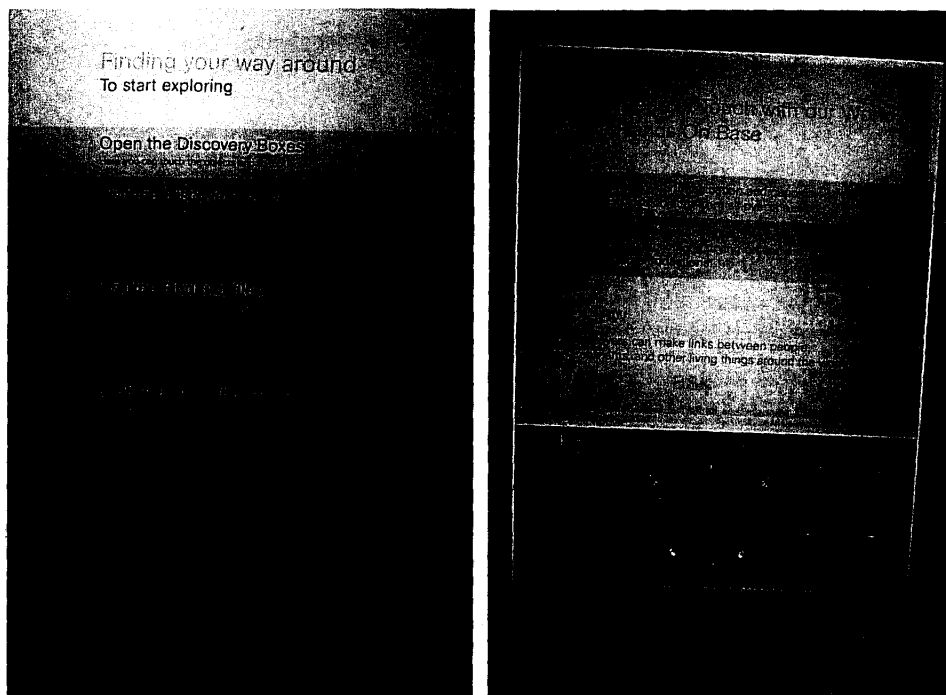


左右圖：動手學習中心的部分景觀與佈置。



左圖：動手學習中心入口處的 Find Out Files，有詳細的各標本有關的介紹。右邊夾子呈現的那一面，介紹的是編號 18 號的中世紀武士頭盔。

右圖：放置於架上，編號 18 號的中世紀的武士頭盔



左右二圖是動手學習中心入口左右兩邊的告示牌，說明該中心鼓勵自由探索與觸摸，可見其原來設計目標是允許觀眾和學生團體自由參觀探索，而非僅止於進行主題活動。

#### 八、 教師研習：

2003 年該館只有為劇偶特展舉辦了一次教師研習，雖未能參加，但仍可由收集到的資料（附錄三）看出其課程設計結構。該館學校教育經理 Isabel Benavides 表示，此課程的目的是幫助教師能利用博物館的實體與資源教學。只是以劇偶特展為主題，所以課程內容包括參觀動手學習中心介紹其免費提供給學校團體的教學活動，如何製作與操作劇偶並應用於教學，劇偶活動與學校課程的相關性，並同時推廣介紹博物館發展的相關活動與教材資源。

## 第四章 自然史博物館的探索室及其內學生團體教學的紀錄

英國自然史博物館雖然目前尚未聘用學校教育的專職經理，對學校教師也暫時不提供有關博物館教學的諮詢服務，但有關學校參觀教學的業務畢竟已累積相當豐富的資源。所以不論是輔助參觀教學的指導手冊（附錄五-2）、展場中的學習活動單與教師手冊、支援學校參觀教學的服務與設施、網上教學資源等，與賀立門博物館相較均更具規模。該館最具特色的教育活動當為其新推出的「達爾文中心」（Darwin Centre），以及兩個擁有豐富標本的學習中心，「探索室」（Investigate）與「地球實驗室」（Earth Lab）。「達爾文中心」目前以服務每天到館的一般觀眾為目標。「地球實驗室」則是一個是擁有豐富礦物岩石標本的開放實驗室，提供設備、標本、圖書與資料給對此主題有興趣或有疑問的個人研究者一個深入探究的環境。因前兩者目前均非屬學生團體學習的場域，故不多述。僅針對「探索室」及其內中小學生團體的教學活動加以介紹。

### 一、探索室（Investigate）

探索室是由該館原學習組的主任 Roy Hawkey 所策劃，設置目標為：

- 提供觀眾直接研究真實的自然界實體標本的機會。
- 合宜地激發屬於觀眾自己的開放式探索活動。
- 提供一個能促成未來學習並長久記憶的經驗。

由其解說員訓練手冊（附錄六-2）可看出探索室是依建構論的學習理念而設計的。博物館在此只提供一個能誘導學習的環境，包括豐富且非常精采的自然史標本、簡要的觀察工具與設備、探究問題卡、藏有各標本背景知識的電腦、可供參考查閱的參考書籍等，鼓勵觀眾或學生自由探索、自行推理發現，博物館在此不提供知識教導的教學。在經營上頗接近本館的自然學友之家。但其每個標本盒的內容較有結構與設計，都有一個主題，不同的標本會被收放在一個盒內，一定有一個緣由或依據。例如都是化石、或表皮（動物的皮毛、龜殼、蛇皮）、或果實、或牙齒等，鼓勵學生可以自行取出觀察。每一盒標本均設計有探究問題卡，但是不放在盒內，卻刻意的置於中央的探索桌上。學生可以在觀察探索的過程中自己發現問題，也可利用每一標本盒

外標示圖的顏色與形狀找出它們與問題卡的關係，並根據這些問題一步步深入探究。在探索桌的電腦中學生也可依據標示圖找出該標本盒中每一個標本的相關資訊。其內的解說員（explainer）僅給予鼓勵、協助與誘導，盡量不直接提供相關的知識，也被提醒不要引導學生到電腦中找答案。負責探索室學習活動的經理 Dan Wornald 甚至表示，若可能他真希望將這些電腦拆除，因為探索室設置的目的就不在供應知識與答案。

該館目前共聘用 10 位解說員，有幾位還是以部分時間聘用，主要職責是協助探索室與地球實驗室（Earth lab）的學習活動，並支援相關教學活動的開發。因此探索室每時段均有 2 至 3 位的解說員在場協助觀眾或學生。他們的職責在其訓練手冊中指出是引導學習者而非教學者，這一角色與賀立門博物館的博物館教師是明顯不同的。

解說員訓練手冊特別強調探索室中的學習是 **Learning from objects not learning about objects**（從實物學習而非認識實物）。鼓勵學習者像博物館中的科學家一樣，能運用合宜的設備，透過觀察、比較、分析、歸納、推論...等科學方法，自行由實體標本的探索活動中，找出一些發現。只要能在其研究實體標本的過程中，找到支持自己發現或推論的合宜依據，就應被讚許。所以學習的重點不在學到有關這些實體標本目前已經知道的知識，而是強調探索的方法、過程與經驗。

探索室目前週一至週五上午提供給學生團體教學用，每日三場，每次 45 分鐘至 1 小時。下午 2 點至 5 點與週末假日則開放給一般觀眾使用，主要為 7-12 歲的親子觀眾使用這個區域。以去年為例，平均一年來此參觀學習的親子觀眾（約 7000 人）是學生團體觀眾（約 1000 人）的 7 倍。

## 二、探索室內的學校教學活動紀錄：

**活動參與者：**約 35 位 9 至 10 歲的學童，包括學校老師有 5 位成人陪伴，博物館解說員 2 位。

**活動目標：**學習做一個自然科學研究者。

**活動進行結構：**

1. 環境、工具與目標簡介，以及探索要領的說明：（由一位解說員負責）  
今天大家在此有機會學習做一個自然科學研究者！  
自然史博物館中有超過 300 位的科學家，他們找到標本後通常會仔細觀察、提出一些問題、紀錄發現、....（解說員並示範如何運用探索桌上的紀錄單紀錄）  
你們將以小組合作的方式一起觀察嗎？科學家通常組成合作團隊，彼此互相討論！告訴對方自己的發現..  
科學家通常使用工具幫助他觀察，這裡可以用的工具有.....（解說員並示範如何操作）  
分組活動前學校老師提醒學生要紀錄下在這裡做了什麼？發現什麼？回校後的語文課程大家要寫一封信給家人或朋友。
2. 分小組自由探索：（由兩位解說員與老師和家長分別協助之）  
這是什麼？這是真的嗎？（學生用放大鏡去看，放在立體顯微鏡下看，並猜他是什麼。）（解說員鼓勵該組學生拿去與一旁完整的鱷魚標本對照。）  
啊！這是真的鱷魚頭骨！你看牠的牙齒！（學生把它拿去秤重，紀錄它的重量）.....這時有同學注意到旁邊有人在做實驗什麼形狀的物體在水中移動得最快，大家就跑過去了，....試了兩次，發現兩位負責實驗的同學沒辦法一起行動使得結果不明顯，所以決定用計時法，...要分析結果時卻發現紀錄的同學記了時間卻沒有記形狀，無法判斷誰是比較快的，...這時有同學注意到旁邊的陸龜殼，大家又跑過去了....。
3. 分享與發問：（由一位解說員負責）  
解說員鼓勵孩子們說出自己的發現或問題，但因每小組觀察的主題均不同，所以各發言之間沒有交集。解說員也試著回答一些孩子的問題，並鼓勵學生週末假日請父母帶他們再來，並介紹博物館的網站和書籍，可能可以幫助他們多認識這些標本。

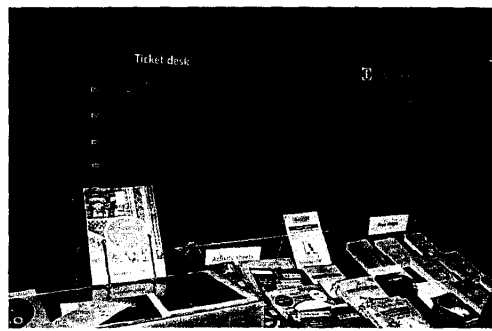
#### 活動分析：

這個學習環境的設計很好，已足以誘發學生的好奇與探究興趣。但就學

習活動的目標「學習做一個自然科學研究者」而言，如何由觀察中發現問題，有了問題又如何往下探究，學生還需要適當地引導，否則學生很容易被多樣而豐富的標本所吸引，不斷地更換注意的對象，就不容易真正經歷科學家追根究底探究過程，以及有新發現的快樂。

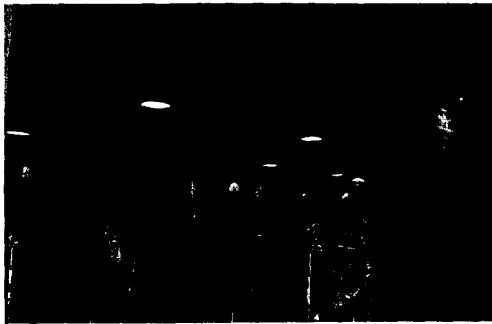
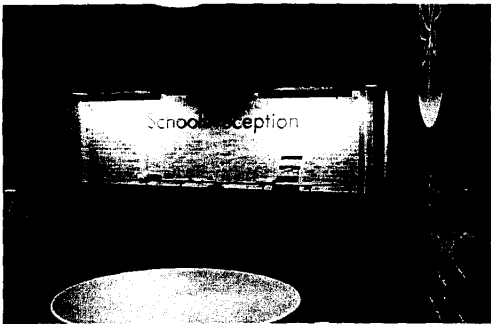
倒是該校教師為這個活動所設定的目標非常有意思。訓練學生學習用適當的語詞、時態與連接詞，描述今天在博物館中發生的事，以寫一封信的方式表達出來。

### 三、自然史博物館的影像紀錄與說明



左圖：英國自然史博物館正門，這棟建築完成於1881年，以自然的聖殿（Cathedral of Nature）自許，牆面上鑲嵌了許多動植物的雕塑和圖像。

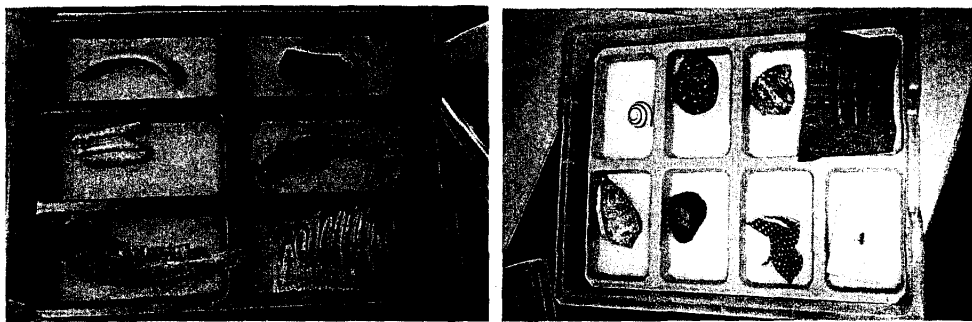
右圖：入口的服務台除了參觀指引，也販售展示活動單。



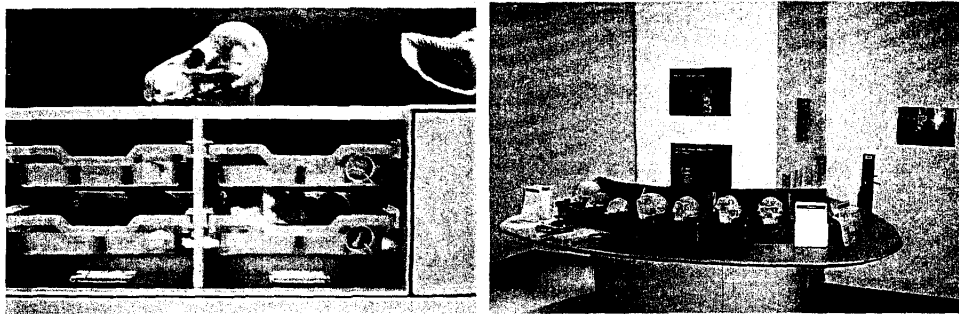
位於地下室的學生團體接待中心，和其他博物館一樣有儲物櫃與餐桌椅，假日則提供給一般自備午餐的家庭觀眾來此用餐。



探索室全景，觀眾在此可以自由的選取有興趣的標本觀察研究。



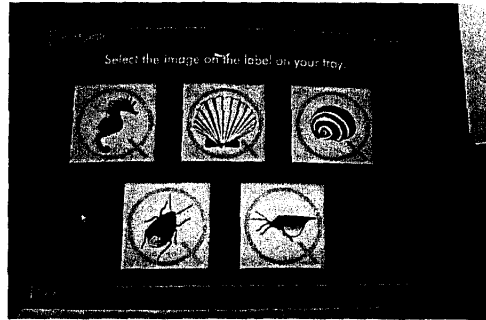
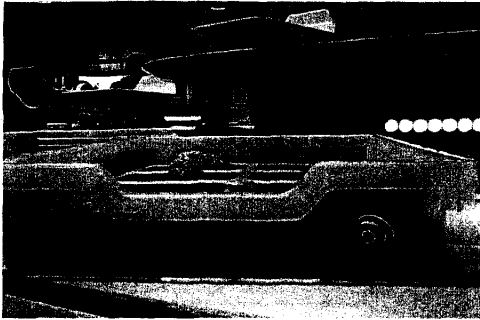
探索室中每一盒標本都有一個主題，不同的標本會被收放在一個盒內，一定有一個緣由或依據。左圖是牙齒，右圖呢？動物的外皮！？



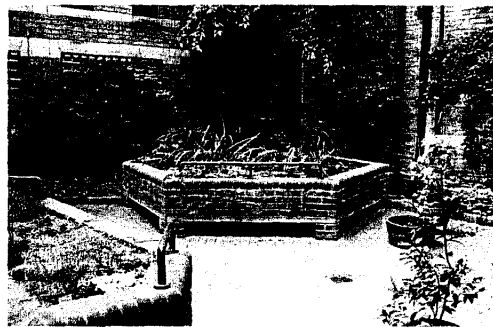
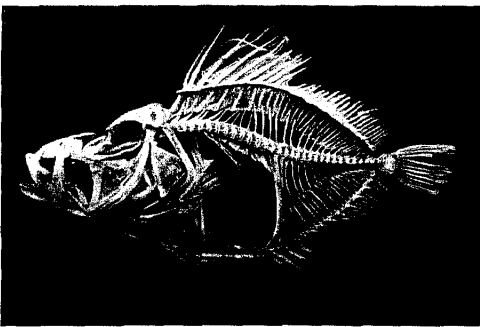
左圖：探索室牆面的櫥櫃中以這樣的方式收存了近百盒的標本。

右圖：探索室中的一角，每月推出一個不同的主題活動。圖中活動是比較靈長類動物的頭骨。除了腦容量不同之外，你還能發現什麼？



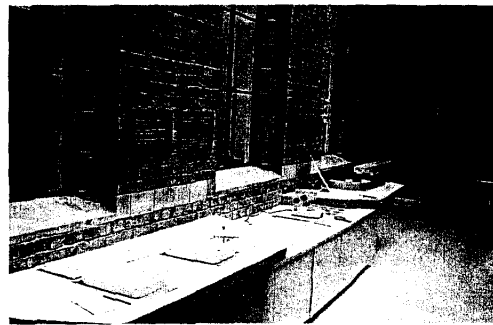
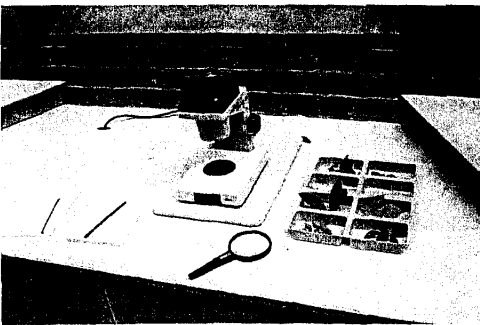


探索室的每一盒標本都能以盒子旁邊的圖示在電腦中找到相關背景知識。

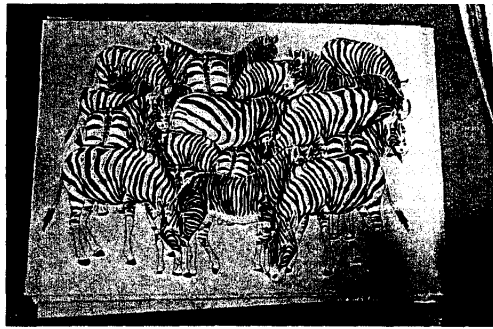
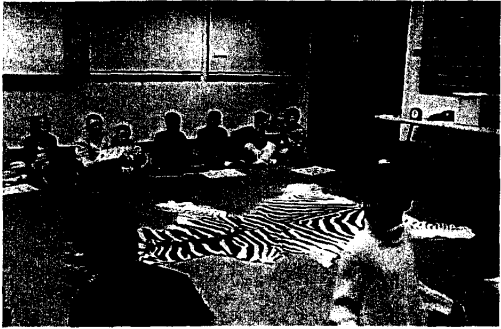


左圖：探索室的牆面或周圍的桌子上還有一些較大型的動物個體標本，可與盒中局部構造的標本做比較。

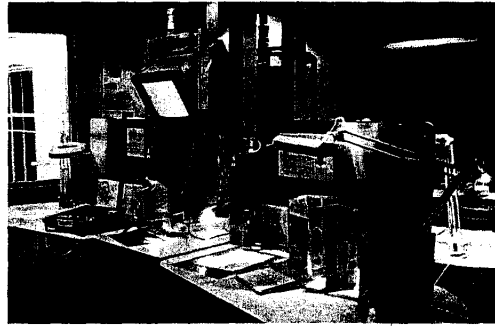
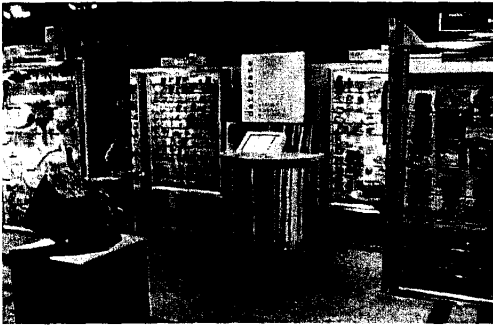
右圖：探索室旁邊有一個小小的戶外植物園，裡面還有兩個小水池，種了不少水生植物，提供觀眾活體觀察的材料。



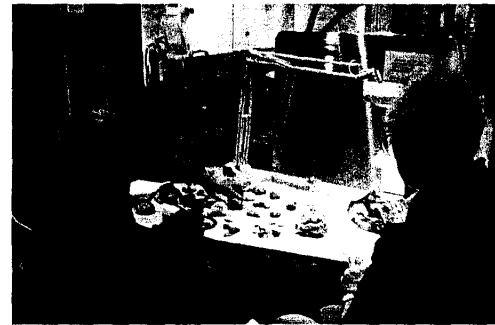
植物園旁的探索桌上每季都會更換不同的活體動植物，鼓勵觀眾自己觀察比較。



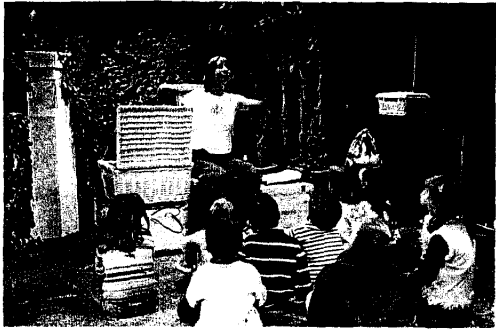
活動教室中的假日親子活動，也提供給中低年級的小學生團體預約教學，以斑馬的皮毛介紹「迷彩裝」。圖中到底有幾隻斑馬呢？



自然史博物館中另一個擁有豐富標本的學習中心「地球實驗室」(Earth Lab)。它是一個以礦物岩石標本為主的開放實驗室，提供設備、標本、圖書與資料，給對此主題有興趣或有疑問的個人研究者，一個深入探究的環境。



左圖：「地球實驗室」的一角。 右圖：左邊的年輕人是一位小學老師，他帶來許多岩石分類的課程中他與學生都無法鑑別的岩石，試圖找出鑑別的方法。



假日的親子說故事活動（左圖），與林奈先生說故事（右圖），均臨時外聘館外人員負責。前者也提供給低年級的小學生團體預約教學。

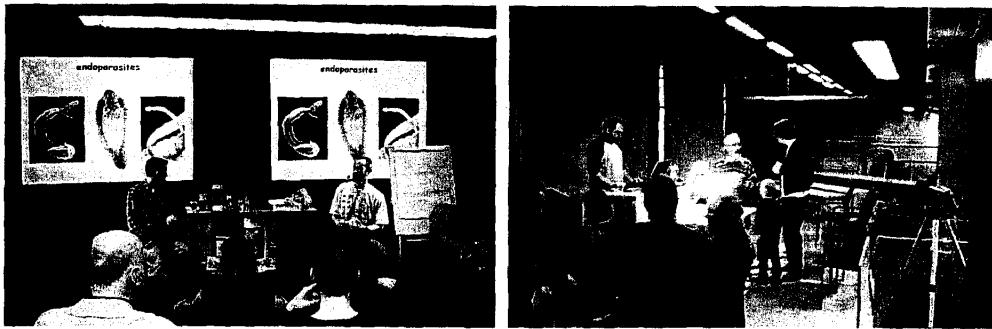


在哺乳動物展示廳河馬展示旁的活動站，兩位博物館解說員準備了哺乳動物的頭骨與牙齒與一些問題卡，引導觀眾觀察。右圖中小朋友正摸著河馬的牙齒，感受牙齒平滑的切面。



「達爾文中心」(Darwin Centre) 是自然史博物館的新蒐藏研究中心，第一期以動物浸液標本為主，已於 2002 年九月完成並開放大眾參觀，每天五場由工作人員帶領進入參觀，

認識博物館蒐藏研究人員幕後工作的內容與意義。「達爾文中心」每天還有兩場的科普演講，由專業研究人員主講。每場都會錄影存檔，放在該館網站上供觀眾隨時查閱觀賞（右圖）。



每場演講也都必有一位主持人負責串場、發問，切割演講，鼓勵觀眾發問，幫助觀眾與講者互動。演講中或演講後都常見小朋友發問。

## 第五章 大英博物館展場中學生團體教學活動的相關紀錄

大英博物館針對中小學生的參觀有相當完整的服務與教育資源系統。不但每年均為學校與教師出版活動通訊（附錄七-2：2003-2004 Information and Events for Schools and Teachers），清楚陳列有關的服務與教育資源項目。有每天可容納 1000 名學生的在其內用餐與存放物件的學生中心（Ford Centre for Young Visitors），有良好的預約服務管理系統，也有由博物館教師負責教學的各式教育活動，該館網站中也有豐富的教學資源。這些部分三所博物館都有些類似，只是在程度與範圍上有些差異，故不再多述。

該館最特別的一點則是教育人員引領學生在展場中進行的教學活動。所觀摩的三所博物館均針對展示場設計了許多主題的學習活動單或教師手冊，用以引導學生在展場中學習；也都認為一般提供給成人觀眾的解說服務，不適合學生團體；但卻只有大英博物館的教育人員直接利用展場進行的教學活動。而且該館更以此類型的活動作為培訓教師的示範活動，這一點很值得參考學習，因此以其中的一個主題活動為範例於下說明之。

## 一、學生團體展場中的教學活動範例介紹－希臘神殿雕塑探索活動：

### (Celebrating Athena's Birthday)

主要是配合國小五六年級 (KS2) 希臘古文明課程需要而發展此活動。活動時間 1 個小時，在希臘神殿雕塑展示區中進行，由教育組副主任 Richard Woff 先生為孩子上課。事前 Richard 就已將上課需要的材料以及他的小椅子搬至雕像後放好，才去接待學生 (29 位五年級學生，另有包括教師在內的五位成人)。

課程進行結構：

- 基礎背景認識：

展場周圍牆面上的雕塑是從哪裡來的？

看看這些雕塑你發現什麼？..這兩邊陳列的雕像有什麼不同？..由外型能不能分類？....漸次引導學生將整個展示廳中的雕塑分為三大類型。3D 立體的 (in round)、單面凸起較高 (high relief)、單面凸起較低 (low relief)。並注意到各類型雕塑的內容主題也明顯不同，依次為神像、爭戰、很多人車馬一起的行進活動 (大遊行)。

再以照片簡介希臘神殿，什麼是 Parthenon？大約什麼年代建的？並介紹其基本建築的型態，以及與本展廳雕塑有關的三種牆面在神廟構造圖中的位置與名稱。

- 認識三種型態的雕塑分組活動

學生每四人一小組，分組在這個展區中尋找出所拿到圖片指定的雕塑面，並選擇適當答案以黏貼方式回答三個問題，它屬於哪一類型的雕塑？它呈現什麼內容？它來自於神廟中哪一部份的牆面？這樣的活動有助於學生綜合整理前面討論後的發現。

- 聚焦觀察神廟 frieze 牆面上的大遊行

先介紹故事背景，在每年 Athena 生日時，全雅典城的人幾乎都到街上參加或觀賞大遊行，將 Athena 的生日禮物一件新衣以及其他祭品送到山上的神廟中。.....

並說明這些雕像上原來是彩色的，如花瓶。也有一些外加的構造，如標

槍，現在只看見一個插標槍的洞，....也可由一個（Richard 表演射箭）的動作推想他手上握有？.....等 試圖激發孩子的想像力！

分組活動：每組拿到一個袋子，袋子中有六種不同的材料（大理石、硬皮革、馬鬃、陶片、葉子、繩子、布、銅片……等 12 種不同材料，各組選出不同的 6 種），再到指定的區塊由牆面的大遊行雕塑圖中找出，有什麼東西當時是用這個材料做的？ 誘引孩子仔細觀察。

各組分享發現與討論：馬鬃可能在銅製的頭盔上、布做的衣服、葉子編的桂冠、皮做的韁繩、木做的車輪、…有助於學生體認：原來仔細看能發現這麼多！

● 延伸觀察討論：選一個寬闊的 frieze 牆面再全體一起觀察分享

說說看你看到什麼？先由指出單一的物件或個體開始，..有一位武士！

你怎麼知道他是武士？..有一頭牛！……

他們之間可能發生什麼事情？.....這隻牛不願意往前走，這兩個人要拉他向前，.....

你如果是當時遊行隊伍旁的觀眾，你可能會聽到什麼聲音？

你如果是當時遊行隊伍旁的觀眾，你可能會有什麼感覺？

這個活動拓展了孩子的想像力！Richard 於教師研習時指出如果時間許可，可先示範到第二個問題後，讓學生分組就一個指定區塊觀察並就提示的問題進行小組分享討論，再集合報告。

● 說故事：

神廟每一面的三角眉飾（pediment）上的雕像都有一個神話故事。學校老師可由大英博物館數位典藏網站 Compass 上以 Parthenon 查詢到需要的資料。部分範例如附錄八-1。引發學生繼續學習希臘文明與其傳說故事的興趣。

## 二、與教學活動配套的「博物館探索者組合包」教師研習：

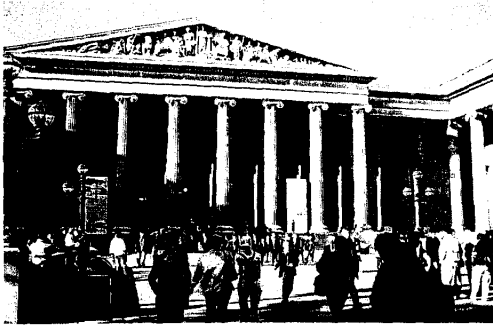
前述活動是該館推出的「博物館探索者組合包」（Museum Explore Pack）四個活動中的一個。該系列活動在網路上以及「學校與教師活動通訊」中推

廣時即強調「這是一種參觀博物館的新策略，將你的學生轉變為博物館的探索者！」並提出五個執行步驟建議：

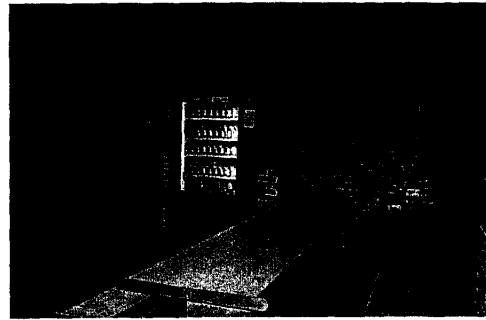
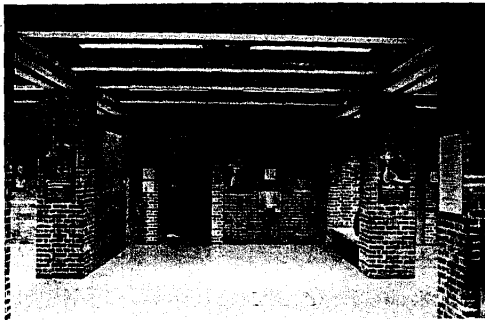
1. 為你的班級預約一個「博物館探索者組合包」活動，或只是前來觀摩活動的進行。
2. 觀摩有經驗的博物館教師如何利用「博物館探索者組合包」引領活動的進行。
3. 取得這個活動相關的書面資料與計畫。
4. 與其他教師一起於課後參與一小時的訓練課程，並預約使用「博物館探索者組合包」引領自己的學生。
5. 帶領自己的學生實際到館教學，如果你願意，在你第一次的嘗試引領活動時，本館員工可在旁給予協助。

這個活動是收費的，每班 30 英鎊，非帶班之教師參與觀摩每人 20 英鎊，但教師研習免費。每個活動由該館教育人員教學 6 次後辦理一次教師訓練，邀請曾帶班級學生參加活動的老師與參與觀摩的老師在一起來討論。教師研習只有約一個小時的時間，以討論課程結構的方式進行。前述活動 Richard 以附錄八-1 的資料，協助教師回想教學活動的過程，再依次說明重點，主要目的在幫助老師建立信心，並提出可能需要的協助。Richard 期待藉由觀摩與後續討論的過程，培養學校教師掌握如何引導學生針對博物館的實體展示學習的要領，不但能對自己的教學有新的啟發，未來老師也能以類似方式直接引領學生在博物館中學習，而不再需要依賴有限的博物館教育人力。以上活動進行的結構即是根據研習資料與討論寫出，在兩次實際觀摩的過程中，都因為時間不夠只能進行到第三階段即要準備結束，後面活動只好以簡要敘述並協助學生整理概念的方式結束。如果是由老師自己引領時間就可以再充裕些。研習中 Richard 也特別強調參觀前學生學習動機的準備很重要，他建議可以故事或與古希臘神廟有關的物件做起點，引起學生的注意與好奇都是好主意。

### 三、大英博物館的影像紀錄與說明



左圖：大英博物館自稱是屬於世界的博物館，每天都有許多來自世界的觀光客免費入館參觀。右圖：學生團體入館後會先至福特教育中心將他們的衣物、午餐放入櫥櫃後，才進行學習活動。

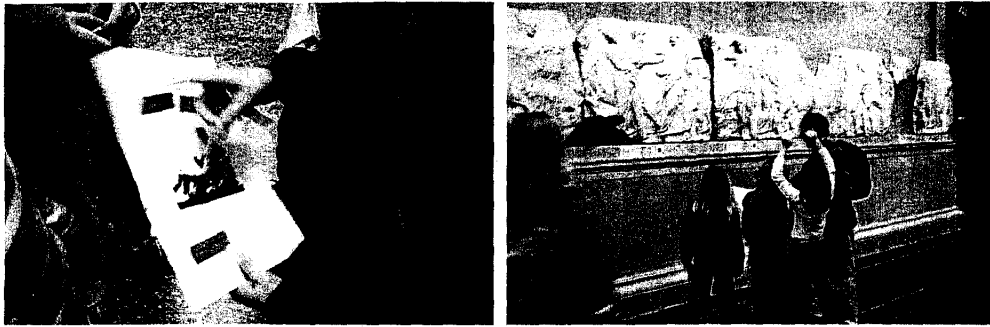


位於地下室的福特教育中心，學生團體可以收存他們的衣物，也可來此午餐休息。假日還可在這辦理親子活動。

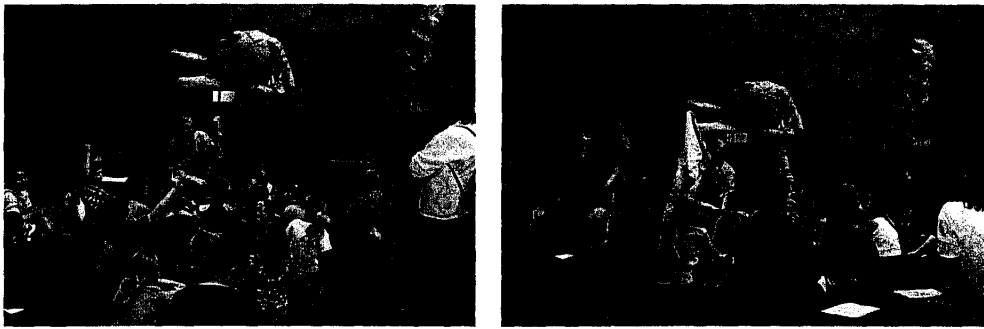


大英博物館教育組副主任 Richard Woff 先生引導學生在希臘神殿雕塑展示區中進行探索觀察的活動。





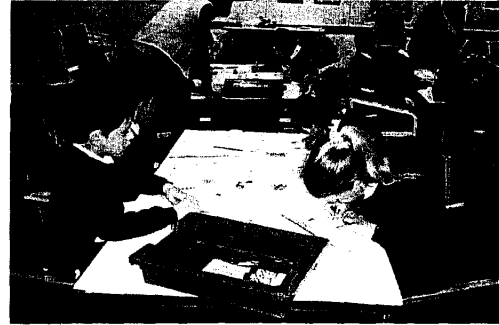
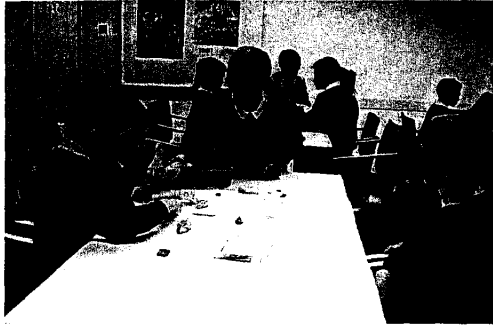
學生分組找出圖片指定的雕塑，並選擇適當答案。以黏貼方式回答三個問題，它屬於哪一類型的雕塑？它呈現什麼內容？它來自於神廟中哪一部份的牆面？



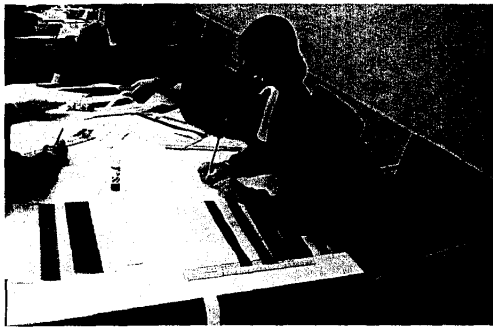
學生分組到指定的區塊由牆面的大遊行雕塑圖中找出：有什麼東西當時是用這些材料做的？回來後大家急著分享！



另一個「博物館探索者組合包」(Museum Explore Pack) 活動，Richard 引導學生由展場中早期曾進駐英國的羅馬人遺留下來的雕像、器物與書信，推論出當時的人們吃什麼？喝什麼？



大英博物館一個有關埃及古物挖掘的活動課程，這班五年級的學生在看了埃及古墓挖掘過程的影片後，試著將桌上這些真實的埃及古物與資料卡配對，再根據資料卡上古物所屬的年代，將各物件畫在時間年代表上。



Layer	Type	Depth	Time period	Description
1	Sand	2 cm	200 year ago	newspaper
2	silt	6 cm	6000 year ago	pottery
3				

學生以不同的色帶代表不同的地層，貼在畫有古物的年代表上。再一層一層的從上往下打開，代表挖掘，並記錄下發現，右表為老師在白板上所做的範例。



課程結束前，影片當中那位當年負責埃及挖掘的考古學家來到學生當中，回答學生各樣的問題。雖只有 15 分鐘，但因這時學生對考古挖掘已有了解，學生與研究人員的直接對話有相當的啟發與激勵的效果。



大英博物館收存其教育活動用之標本與教具的櫥櫃。



大英博物館的義工常會在某些展場推出一個小小的藏品觸摸站 (Hands On)，提供了一些與周圍展品有關的真品，由義工負責導引與互動，讓觀眾有直接觸摸把玩歷史文物的機會。除增加了展場的活動性，也能誘發觀眾對主題展示的興趣與想像。左圖是在大英博物館圖書閱覽室的入口處。

## 第六章 心得與發現

### 一、博物館教育與學校教育的關係

參訪的數個博物館均將觀眾分為幾個不同類型，並分別為其發展並提供不同的教育活動、服務與資源。觀眾類型大致區隔為一般參觀大眾、學生團體、家庭親子觀眾、社區團體、成人與老年教育等，因為不同類型的觀眾有各自的特色與獨特的需求。因此各博物館都必有一組工作團隊，專為學生團體，針對該館的展示或蒐藏發展主題式的教育活動，並由博物館教育人員或

外聘合格的博物館教學專業人員（Freelancers）直接教學，觀摩研究的三個博物館以及倫敦大學博物館，其博物館教學的部分均不假手義工。賀立門博物館與倫敦大學博物館是屬於地方性博物館，人力資源有限因此展場沒有解說導覽服務，但卻以服務學校團體的教學與學習之工作為第一優先。理由是學校教育是全民教育，博物館有職責支持國家政策，運用博物館特有資源，普及地栽培教育國家未來的公民。而且他們相信每一位已能享受博物館學習經驗的學生又有可能一輩子不斷地再來博物館，並將他的家人與父母帶來博物館。另一方面博物館一般的觀眾通常侷限於社會中社經背景較高的一群，但透過義務教育中學校教師所引導的學生團體，將使得每位國民不分種族、不論社經背景的高低都有機會參觀認識博物館。因此英國博物館學會（Museums Association）目前正積極籌款並推動一提案，要讓每一位英國的學童每年都能有一次機會，免費參加博物館專為學生團體規劃的教學活動。經費將包括博物館教學環境與設施的設置（上課的教室、衣物間、午餐的地點）、博物館教學之人力與材料的支出，學生參觀博物館的交通費、門票、參觀前的準備與參觀的後延伸活動材料費用、以及成效評量研究所需經費等。由此可見英國博物館普遍視支援學校教育為其重要的教育使命之一。

## 二、博物館教育性服務相關人力資源的運用

綜觀筆者所觀摩學習的三個博物館，與展場中教育性服務有關的人力資源約可分為以下數類型：

- 義工：所參訪的三個博物館目前僅大英博物館在博物館展場的教育性服務工作運用義工，自然史博物館與賀立門博物館均以聘用的人員擔任各項工作。大英博物館義工除支援服務性工作外，另有約 100 位的解說義工經訓練後負責展場的主題解說或精要展品解說（Eye Opener），還有一些義工是負責在某些展場推出一個小小的藏品觸摸站（Hands On），通常是一個小桌放了一些與周圍展品有關的真品，由義工負責導引與互動，讓觀眾有直接觸摸把玩歷史文物的機會。除增加了展場的活動性，也能誘發觀眾對主題展示的興趣與想像。

這樣的資源應用與活動設計，很值得學習。

- 博物館專業研究人員 (Curator)：各館專業研究人員通常都會不定期的支援館內的成人教育課程、會員活動、及開放給社會大眾與展示相關各類型演講、研習活動、研討會等活動課程。但自然史博物館的 Darwin Centre 每天兩場的科普演講，以及大英博物館幾乎是每天輪流在不同展示區推出的展場短講 (Gallery Talk)，主要也都是由博物館本身的專業研究人員輪流擔任講員。這種由專業研究人員負責展場短講的設計，不但讓展場的解說更有深度，增加了活動的多樣性，筆者認為它也可以同時做為訓練解說義工的課程，本館也可適度的參考採納。
- 博物館教育人員：隸屬於博物館教育或學習部門，負責規劃、開發、設計並執行與觀眾之學習有關的工作。活動的開發與執行主要是以學校教師、學生團體、親子家庭觀眾、與社區推廣為重。至於成人教育、會員活動及開放給社會大眾與展示相關各類型演講、研習活動、研討會等部分則多僅扮演規劃、協調或引介者的角色。筆者所參訪的三個博物館的教育人員均沒有直接參與導覽解說的工作，大英博物館是由義工、館外導遊、與專業研究人員分別擔任不同層次的解說導覽工作，自然史博物館是由隸屬於觀眾服務部門的教育服務人員負責導覽，賀立門博物館則不提供人員的導覽服務。各博物館雖也都會在展場推出教育活動，但主要是針對親子團體，通常以表演或觀察實物的活動為主，而非解說導覽性質。
- 博物館教育服務人員：隸屬於觀眾服務部門，負責各服務台，以提供並引介各類型資源 (包括摺頁出版品、語音導覽和人員導覽)，導引觀眾參觀，確保觀眾的安全與愉悅為目標。很特別的是自然史博物館提供給一般觀眾收費的定時導覽，也是由教育服務人員擔任。筆者也發現大英與自然史博物館展場的解說導覽服務僅提供給一般參觀大眾，學生團體均不利用這項資源，兩館的教育人員均表示一般的解說導覽活動僅適合遊客，深入的主題解說則較適合成人，兩

者都不適合學生團體的學習。

- 博物館工作自由業者 (freelancer)、導遊 (Tour Guides) 或館外專業人員 (Specialist)：在博物館人力精簡又要維持活動的多樣性時，博物館通常會與館外一些資格已被認可的教育工作者或專業人士合作。如賀立門博物館為親子家庭觀眾推出的所有活動、或成人教育課程均是以合約方式聘請館外人士。大英博物館需付費的精要導覽 (Highlights tours)，即是由倫敦旅遊局合格的導遊 (London Tourist Board registered guides) 負責，並可應需要提供不同語言的導覽。自然史博物館教育學習組除了教育策劃人員，他們稱為 Educational Officers，也聘有近 12 位的解說員 (Explainer) 負責教育活動的開發與執行。但其展場中需要某些特殊技能或專業的教育活動如說故事活動、歷史人物的現身說法與表演活動 (例如林奈先生)、恐龍動畫製作、或當人力不足調配時，也會臨時聘用自由業教育工作者 (freelance educator)。為此英國博物館教育協會 GEM (Group for Education in Museums) 還成立了一個自由業教育工作者的網絡系統 (freelance network)，提供全英各地合格的自由業教育工作者的名單、履歷與專長。如今台灣各博物館人事均不斷縮編的情形下，類似工作人力資源系統的建立應值得參考。

### 三、依對象定期出版活動手冊公告學校教師與大眾

各博物館每二至四個月均定期出版一本博物館教育活動摺頁或小手冊 (What's On)，將適合一般參觀大眾、親子家庭觀眾與成人觀眾參加或利用的教育活動、服務與資源彙集整理於內，置於各館服務台免費提供給觀眾索取，以方便觀眾迅速了解該館當季或當天有哪些活動可以參加。大英博物館則是每季還會另外分別針對不同觀眾出版活動手冊，如為成人出版 "Adult Learning"，為家庭親子出版 "Family Fun"。至於針對學校學生團體的參觀教學，則是彙整教師引領學生參觀教學時需注意的相關訊息，以及博物館提供的所有教育活動、服務與資源，每年編輯出版一本 "Information and Events for

Schools and Teachers ”，免費提供給學校與教師參考。這些資料通常在博物館網站上也均能看到，這樣的做法對使用者有重要意義值得參考效法。

#### 四、博物館教學活動的特色：

各博物館為學生團體規劃設計的教學活動課程通常具有以下特色：

- 由博物館教育人員直接負責教學：因為一般學校教師通常較缺乏運用實體展示或博物館標本實物教學的訓練。
- 有明確的且範圍不大的活動主題與目標，清楚標示與國家課程相關的部分：主題通常與博物館的某一展示或蒐藏特色有關，並與英國的學校國家課程標準所設定的某些概念或內容相關。這樣較有利於學校進行行前的主題熟悉活動與後續延伸活動的發展，也較能吸引學校教師利用。
- 標本精采豐富，因活動的開發是建基在豐富的教育用標本蒐藏資源上：好的標本能傳遞豐富的訊息，也能感動人。當孩子手中拿到一隻真正的鱷魚的頭骨或一個兩千年前的木乃伊鳥時，很少人會無動於衷。賀立門博物館與自然史博物館中都有一個擁有豐富教育用標本的學習空間，類似本館的自然學有之家，但內容要充實得多。雖然基於不同的學習理念，兩者在其內推展的博物館教學活動，做法上有些不同，但包括大英博物館在內，三館豐富的教育用標本之蒐藏均是其發展親子教育活動或學校教學活動的基礎。
- 標本實物是學習的主體與基礎：英國博物館界普遍認為沒有蒐藏的機構不能算是博物館，因此博物館最大的特色即為其藏品。因此所有博物館中的教育活動通常是以針對標本與實物的學習為主體，它可以是展品，也可能是特別為這個活動預備的標本實體。這一點也是賀立門博物館的教育政策所明示的。擁有物件與透過物件所給予的啟發，是博物館教育與學校教學最主要不同之處，也是博物館教育活動最應強調的特色。
- 鼓勵直接接觸實物標本，並由此誘發討論與發現：參觀展示時通常

不能觸摸展品，因此教育活動通常會準備一些學生可以接觸的物件，鼓勵學生細心的觀察、觸摸與體驗，誘導學生積極參與探究，提出問題。教學者也多能誘導鼓勵學生說出想法，並能適時的給予適當背景知識的引導，藉此誘發出學生的好奇與想像，並於有新發現的成就感中引發出繼續探究的興趣，培養出在博物館中自主學習的能力。例如當觀眾自己看展覽時，除了這是什麼？這是真的嗎？之類的問題之外，能有興趣並有能力多問幾個問題，如這個器物使用了哪些材料？可能是做什麼用的？製造的人可能有什麼想法？我還能看出什麼？...等。在倫敦的博物館中常能見到一些成人觀眾很安靜地在一個展示前停留頗長的時間細細地觀察，這代表他們已有在博物館中自主學習的能力，懂得自行透過觀察獲得新的發現；這也是國民文化素養的表徵。這部分是台灣博物館教育可以多著力的部分，筆者將續由觀察到的範例與收集到的博物館教師訓練教材，並與博物館教學活動的發展過程與參與人員部分做較深入的說明。

- 在一個較不受干擾的活動空間中進行：不論是在展場或博物館中的教室，都需要有一個較安靜的空間讓全班學生至少能偶爾坐下來，專心的進行觀察、討論與活動。

##### 五、專業研究人員在博物館教學活動中的角色：

博物館的專業研究人員在博物館教育活動的發展過程中常扮演知識與標本供應者或指導者的角色，多數博物館也會請專業研究人員直接面對成人觀眾。聽眾中偶爾也有兒童，他們也會勇敢的發問，縱使是很基本的問題講者也都會很有耐心的回答。但是博物館通常不會讓研究人員直接對學童團體演講或教學，Darwin Centre 每天兩場的科普演講，由博物館的專業研究人員主講，但每場演講也都必有一位主持人負責串場、發問，切割演講，鼓勵觀眾發問，幫助觀眾與講者互動，因此每場演講後半部的內容，往往是由觀眾的問題引導發展。另一個比較特別有趣的例子，是一個大英博物館提供給學生有關埃及古物挖掘的活動課程，當一班五年級學生在看了埃及古墓當地挖掘



與資料收集過程的影片，也參與了運用真實的埃及古物所進行的模擬操作活動與比較研究，認識了古物與時間年代表和挖掘地層的關係之後；影片當中當年的那位考古學家即來到學生當中，回答學生各樣的問題。雖只有 15 分鐘，但因這時學生對考古挖掘已有了解，學生與研究人員的對談有相當的啟發與激勵的效果。因為學生常能問出精采的問題，該考古學家表示他也樂此不疲。

#### 六、中小學生團體在博物館中學習，應由博物館教育人員負責教學或培訓教師主導教學？何者較優先？

博物館中教育人員人力資源有限，以大英博物館為例，來館參觀的學生團體僅有約 15%能參與利用博物館提供的教學課程，其餘均由教師自行引領。目前一般教師的活動設計仍以知識的學習或繪圖為主，非常需要博物館給予輔導與支援。該館除於” Schools and Teachers”手冊中提供基本原則、建議與資源外，也針對特展和重要展示區編寫教師資源手冊。可惜使用情形不甚理想，教師仍需要博物館給予培訓。該館負責學校教育的教育組副主任 Richard Woff 也認為教師訓練雖然耗時耗力，且每次受益人數不多，仍非常值得投資心力。因為教師是唯一能幫助學生將博物館中的學習與其在學校中學習做適當搭配融合的人。且若能幫助一位教師懂得引導學生在展場中針對實體展品進行互動式的探究與學習，不但每年他都能自行帶領學生善用博物館教學，這種針對實物的互動學習方式，也必將有助於他個人的教學。所以大英博物館不但針對在職教師提供訓練課程，也與師資培育機構合作，在教師職前訓練的課程（Post Graduate Certificate Education）中加入博物館教學的訓練。有關訓練課程細則與要領，筆者將再依實際觀察過程與閱讀資料另行撰稿。 另一方面根據在 Renaissance in the regions 計畫下負責主導 London Hub Museums 的倫敦博物館所做有關學校教師對博物館學習的看法（附錄十一-3）之研究發現，教師普遍期待在學生來館參觀學習時，至少有部分的時段能參與由博物館教育人員負責的教學活動。因為教師與學生都能經歷新的學習方式，對教師也是一種學習與訓練的機會。且在博物館中由學校

教師之外的另一成人負責教學，常能帶給學生新的啟發，教師也較可能以旁觀者觀察學生學習的過程中發現學生不同的潛能。因此在現階段台灣教師普遍仍不懂得如何利用博物館進行教學時，不論是開發由博物館教育人員主導的教學活動或發展教學輔助資源並培訓教師兩方面的工作，博物館均應同時並重。

#### 七、與博物館教學活動配套的教師研習：

如前所述大英博物館有關希臘神殿雕塑的「博物館探索者組合包」活動範例，在博物館教育人員教學的活動過程中同時考慮培訓學校教師，這樣的構想非常好，等於是在幫老師釣魚的同時也教老師如何釣魚。因為如果參加博物館教學活動前帶班的老師就已有企圖心這個課程將來他要自己上，當博物館教師上課時他就不會只是一個閒置的旁觀者，他會更用心注意課程的結構與進行方式。一位前來觀摩的學校教師即表示原來博物館的參觀可以只聚焦在一個小地方較深入地進行，而且這樣的活動才較易與學校教學結合。而且學生不必有填寫活動，卻能用心觀察。老師不再需要很累的管秩序，學生的發現卻能較深入而有趣。只是大英博物館這個類型的活動參與的人很少，以希臘神殿雕塑的活動為例，有六位老師帶班參加這活動，只有一位老師繳費來觀摩，而教師研習時卻只有三位老師前來參加。如何誘引學校教師願意積極參與可能還需要構思，也許上課與觀摩的費用都轉成保證金，只要老師有參加研習並實際帶班級活動一次，即將費用退還給學生與老師。設計些鼓勵措施，可能教師願意會較高。當然博物館教育人員本身必須不斷成長，確實掌握博物館教育的精隨，能引導學習者針對實物學習，共同挖掘出在博物館中學習的樂趣，才能期待學校教師在觀察博物館教學活動的過程中得著啟發。

#### 八、學習成效評量與評量工具

在筆者參與的教育活動中，教學者或活動負責人多數都會要求教師或參與者填寫評量表或意見表，說明他們非常重視活動參與者的反應與意見。只是這

評量表應如何設計，且針對何人進行評量則仍值得就目的和效能面再討論。根據 University of Leicester 博物館學研究所之「Research Centre for Museums and Galleries」為 MLA 推展之「Inspiring Learning for All」架構所發展之學習成果評量系統（The generic learning outcome system），認為在博物館中教育活動的學習成效可以下面五個項目含括，並可依這五個項目進行評量分析：

- 增進了知識與了解
- 增進了技能
- 態度與價值有所改變
- 表現出愉悅、啟發或創造力
- 呈現出某些行為、活動或進步

參與實驗階段的帝國戰爭博物館（Imperial War Museum）與倫敦大學博物館與蒐藏（UCL Museums and collections）均認同這樣的歸類可使得學習活動的成效評量較簡易可行，也能藉此呈現出自己博物館學習活動獨特的價值。例如帝國戰爭博物館學生在參觀大屠殺（Holocaust）展示後的學習成效，在態度價值與行為改變上的成效均較多於其他方面。帝國戰爭博物館也發現這樣清楚歸類的學習成效，不僅有助於成效評量，該館也將這五個要項作為規劃新活動時擬定目標的依據。倫敦大學博物館與蒐藏的教育同仁 Saira Ahme 也表示，以問題引導學生回憶學習內容與成效，有助於學生反思並重新整理學習內容，這樣的評量研究其實對學生的意義甚至勝過對研究者。至於如何收集學習者的看法並加以分析歸類，參與實驗研究的機構多表示執行者還需要訓練、協助與練習。故 MLA 近期將於網站中陳列相關訊息，包括練習的範例。

## 第七章 建議

- 一、博物館教學活動應加強標本實體的運用，並以培養學生針對實物自主學習的能力與興趣為目標。台灣多數的博物館均不同於英國博物館，不是由豐富的蒐藏為基礎開始發展，因此過去的展示與教育多以知識概念的傳達為主，標本實體為輔。然而標本實體是博物館最獨特的教育資源，也是培養國民針對實物學習、欣賞珍惜文化資產之素養的最佳環境。因此博物館教育人員首先應積極地培養並發展自己針對實體標本學習與教學的能力，進而幫助引導觀眾與學生。因為我們怎麼學，就會怎麼教。
  
- 二、博物館應建立運作良好的教育用標本的蒐藏與管理政策，以利於教育用標本的充實與運用。好而的精采的標本往往是活動成功的關鍵。收集到好的標本需要有機緣，因此要靠時間的累積。而教育活動的推出又往往有其需配合之展示或事件的時機性。要能在活動中及時找到好的標本，最好要能有豐富的教育用標本為支持後盾。這需要長時間持續收集的累積，因此需要運作良好的教育用標本的蒐藏與管理政策，以確保收入的標本均能被良好對待、管理、有效的流通與運用。本館已有良好的研究用標本的蒐藏與管理政策，實可考慮在現有架構下增加教育與展示用非永久登錄標本（non-accession objects）蒐藏與管理的制度的建立。前人種樹後人乘涼，這個制度的建立不會立即發揮功效，但我們需要現在開始。
  
- 三、博物館教學活動可參考 MLA 所發展的學習評量系統，擬定活動目標與簡易的評量執行方法。評量可促使我們反思，不論是是對活動策劃人、教學者、或學習者都有重要意義。評量也使我們能在數字之外拿出能說服人的證據。只是如何簡易的施行，又能真正發揮效益，使其自然成為每一項教育活動必經的過程，還需再構思。MLA 所發展的學習評量系統已分析出博物館中學習成效五個基本的方向，應是一可考參考的架構。

四、博物館教育部門應有專為學校服務的團隊，並為學生團體發展專屬的博物館教學活動。過去博物館往往僅考慮到對學生團體的服務，但未考慮學生團體學習上的特別需求。以本館為例雖有兩位職員負責學校與團體的預約與行政業務，十位教育研究人員中僅有三位是以部分時間及個人的性向，試圖協助學生團體學習。在全組所推展的教育活動中也僅有劇場教室的教學較適合學生團體的學習，然而活動設計上與學校教學類似，未能充分發揮博物館教學活動的特色。所以看似花了許多地功夫服務學校，學生觀眾在數量上非常多，學生卻未必對博物館留下良好的學習經驗，也未必培養了在博物館中針對實體自主學習的能力與興趣。因此博物館如果真的有心協助學校教育，在今重視培養學生能力的教育新趨勢中，發揮博物館教育獨特的價值與功能。博物館實有必要重整並組合工作團隊，共同學習成長。針對博物館特有的教學資源與環境，與學校教師合作，為學生團體發展並推動以實體展示與標本為主體的系列學習活動。期待每個孩子在國民義務教育的過程中，都能享受到在博物館中快樂學習的經驗，並培養出針對實體自主學習的能力與興趣。

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111-121

公務出國報告

(出國類別：專題研究)

# 中小學生團體在博物館中的學習

## 【附錄】

服務機關：國立自然科學博物館

出國人職稱：助理研究員

姓名：左曼熹

出國地區：英國

出國期間：92年9月～92年12月

報告日期：93年2月

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## **Education Policy 1999-2002**

### **Summary**

Education is at the heart of the Horniman Museum and Gardens and this policy has been developed, in consultation with staff from all sections, to encompass the activities of the whole organisation and is not restricted to the Education Section alone.

This paper establishes the framework within which the education policy operates, then sets out the Museum's education mission and the principals governing the development of education programmes and services.

### **Introduction**

The Trustees of the Horniman see the principle activity of the Trust as...

'The provision of a public, educational museum and gardens to encourage a wider appreciation of the world, its peoples and their cultures, and its environments'

(Trustees report March 1998:3)

This aim acknowledges education's place at the heart of the Museum and reflects Fredrick Horniman's original vision for his Museum and Gardens – that they were a free gift to the people of London for their 'recreation, instruction and enjoyment'.

The Trust is committed to serving the needs of people – its visitors, other users and potential users, at present and in the future. This can be achieved through a broad range of appropriate services and programmes based on the collections and the depth of knowledge within the organisation.

The Museum's Association's definition of a museum also emphasises education's central role and the importance of collection development, stewardship and research...

'Museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard and make accessible artefacts and specimens, which they hold in trust for society.'

(Museums Association AGM 1998)

## Relationship to corporate policy and planning

The Education Policy is intended as a companion to the Corporate plan and will inform relevant departmental objectives and individual work plans across the Museum and Gardens.

This document should be read in conjunction with the Museum's Access, Equal Opportunities, Customer Care and Exhibitions policies.



## Education mission

The Horniman aims to encourage the establishment and development of connections between all our audiences and our objects<sup>1</sup> such that meaningful learning results.

Learning is seen as an active process of evaluating and integrating concepts, attitudes, feelings, physical knowledge and facts – addressing key questions, which increase understanding of self, others and the wider world.

## Principles guiding educational practice at the Horniman

These can be divided into three areas...

### Education theory

The unique educational potential of the museum lies with its objects. Educational activities should therefore be **object-based** and explore the many stories and interpretations that they offer.

Programmes should recognise that people have different types of intelligence<sup>2</sup> and learn in different ways<sup>3</sup> and so provide **multiple ways of exploring and responding** to objects.

Motivation is important for effective learning. Experiences should be **stimulating, enjoyable, relevant and appropriate** for the visitor, setting museum objects in a contemporary framework.

For learning to be useful in the long term new information must be linked to the visitors' existing knowledge. **Interdisciplinary approaches** tap into a range of existing experiences and create new links and understanding.

Intellectual **progression** should be provided within particular programmes and within the museum as a whole, such that visitors are challenged, stimulated and can develop.

## **Programme and service development**

As a centre for **lifelong learning**, our education services should strive towards providing **access for all**, regardless of age, sex, social status, ethnic origin or ability. Strategies that improve access for particular user groups will often have wider benefits.

Education programmes and services should reflect the **diversity** of cultures and environments globally and locally. They should increase **inter-cultural understanding** and tolerance, whilst challenging discrimination, inequality and racism.

Committed **collaboration** with our existing and potential audiences is crucial in providing appropriate educational experiences and making the most of the Museum's potential.

Self-representation by the community is essential and engenders **respect, trust, understanding and empowerment** in these groups, other visitors and museum staff.

In order to develop new and existing audiences **specific, targeted programmes** may be appropriate, identified by **research**.

The museum should provide a **forum for debate** where differing perspectives can be explored, preconceptions challenged and critical thinking developed – within a framework where visitors' physical, emotional and intellectual needs are met.

We should **demystify the institution** by exploring and challenging its own and other perspectives on its history, purpose and processes.

## **General management**

As education is central to the museum **all staff** should support educational activity.

Educational considerations should be given due weight in all appropriate Museum **decision making**. Education staff should be involved at all stages of planning public provision e.g. exhibitions, events, publications.

Education programmes should have clear **aims and objectives**. Consultation and **evaluation** should always take place and be pivotal in the development of subsequent activities.

We should be aware of ongoing **developments in the wider world**, particularly the spheres of education, politics, social and cultural studies and technology, which can improve Museum practice.

Services should be of **high quality** and provide **value for money**.

Endorsed by the Trustees of the Horniman Museum and Gardens  
8 December 1998

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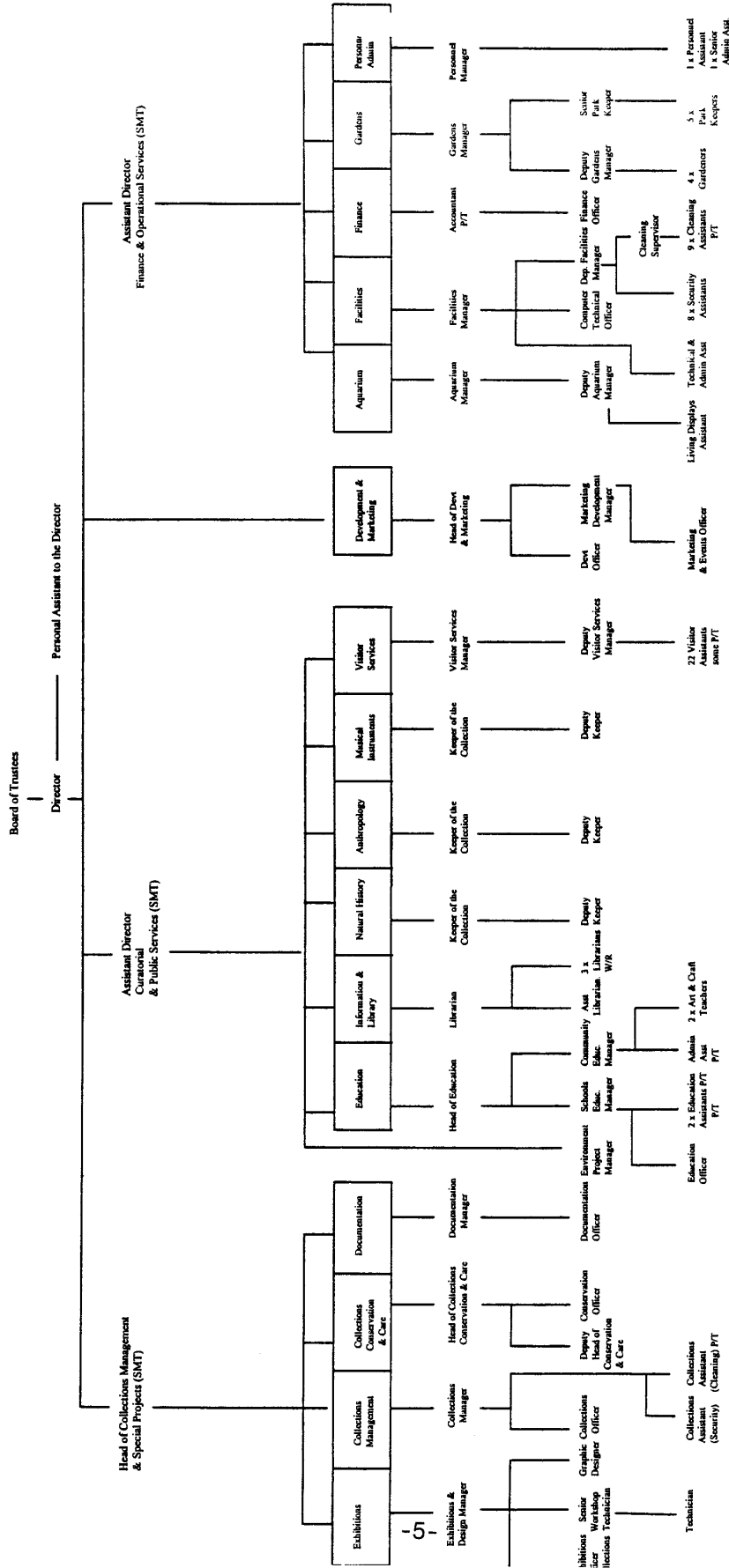
<sup>1</sup> At the Horniman by 'objects' we mean natural history specimens and the living collections of the aquarium and gardens along with constructed anthropological and musical items.

<sup>2</sup> The work of Howard Gardener has identified at least seven types of intelligence: linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal and intrapersonal. There is ongoing debate about the exact number and subdivision of these intelligences but the important concept is the plurality and variety of each individual's intellect.

<sup>3</sup> Bernice McCarthy proposes four learning styles: dynamic, imaginative, common-sense problem solver and analytical. Individuals will have preferences for particular learning styles.

# The Horniman Museum and Gardens

## Organisational Chart – 1<sup>st</sup> June 2003



Key = Senior Management Team  
 SMT = Senior Management Team  
 P/T = Part time  
 W/T = Weekend Relief

**THE HORNIMAN PUBLIC MUSEUM AND PUBLIC PARK TRUST**  
(Company limited by guarantee)

**TRUSTEES' REPORT for the year ended 31 March 2003**

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The Trustees present their annual report and the audited consolidated financial statements for the year ended 31 March 2003.

**PRINCIPAL ACTIVITY**

The principal activity of the Trust is the provision of a public, educational museum and gardens. Its aim is:

'to encourage a wider appreciation of the World, its peoples and their cultures, and its environments'.

**BACKGROUND**

The Horniman Museum and Gardens were given in 1901 to the London County Council in trust, as representing the people of London, by Frederick John Horniman MP. They were dedicated to the public forever as "a Free Museum for their Recreation, Instruction and Enjoyment" and were registered as a charity from the outset (The Horniman Museum and Public Park Foundation).

The Museum is housed in a striking art nouveau building by Charles Harrison Townsend and set in sixteen acres of beautiful gardens.

The collections include musical instruments, ethnographic collections and natural history.

**LEGAL AND ADMINISTRATIVE DETAILS**

The Trust was incorporated on 29 December 1989 as a company limited by guarantee and is governed by its Memorandum and Articles of Association. On the 1 April 1992, following the abolition of the Inner London Education Authority, the Trustees' functions relating to The Horniman Museum and Public Park Foundation ("the Foundation") were transferred to the new charity (The Horniman Public Museum and Public Park Trust) and the trust property of the Foundation was vested in the new charity, to be held on existing trusts, under the terms of Statutory Instrument No. 437. In addition, the Statutory Instrument transferred certain former local authority property to The Horniman Public Museum and Public Park Trust free of trusts. The Charity Commissioners have agreed that the Foundation may be treated as a subsidiary charity of the charitable company which administers the property of both charities and is funded by the Department for Culture, Media and Sport (DCMS).

**TRUSTEE APPOINTMENTS**

There are up to twelve Trustees, four of whom are nominated by the Secretary of State for Culture, Media and Sport. They serve for a four-year term, after which they may be re-elected for a further four years at the Annual General Meeting (AGM) of the Trust held in September.

During the year Professor John Mack was re-elected at the AGM for a further term. Ms Genie Turton joined the Board on the 15 July 2002, filling a vacancy, and her appointment was confirmed when she was elected at the AGM. His Honour, Brian Galpin retired from the Board on the 16<sup>th</sup> September 2002 having been a Trustee since the Board's foundation in December 1989. His contribution to the work of the Board was very significant, particularly in the advice he was able to give in legal matters but also on issues relating to the musical instrument collection.

None of the Trustees has any material interest in the charity and receive only minimal travel and subsistence expenses for attending meetings.

**AUDIT COMMITTEE**

The work of the Committee included the detailed perusal of the Annual Accounts and Schedules thereto, and consideration of Internal Audit Reports.



THE HORNIMAN PUBLIC MUSEUM AND PUBLIC PARK TRUST  
(Company limited by guarantee)

TRUSTEES' REPORT for the year ended 31 March 2003 (continued)

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As well as the regular annual reports of assurance to the Accounting Officer on the systems of internal controls the following reviews were accepted: Ordering, Receipt and Payment; Payroll; Health and Safety; Security; Income from Exhibitions; Estates Management; Corporate Planning/Risk Management; Budgetary Control and General Ledger; Establishment and Personnel; Collections Condition and Control.

#### FUNDRAISING STRATEGY COMMITTEE

During the year, the work of the Fundraising Strategy Committee concentrated its attention on the Horniman's new corporate identity and the launch events for the Centenary Development in June. This Committee was set up to deal with the funding of the Development Project and thanks are due to it for guiding the fundraising process so successfully. Its work completed, the Committee was wound up at the Trustees meeting on 15 July. Any strategic fundraising issues will in future be brought to the Board of Trustees.

#### GENERAL PURPOSES COMMITTEE AND PROJECT BOARD

The Committee, constituted as the Project Board, oversaw the Horniman 2001 Project (Centenary Project) on behalf of the Board of Trustees and this formed the major part of its work during the year until the Project was completed. The members of the Board were thanked for their excellent oversight of this major new development.

#### REVIEW OF THE YEAR, 2002/2003

##### 1. OVERVIEW

The 'New Horniman', born of the £13.5m Centenary Project, has now had its first full year of operation. Its success has been marked by excellent visitor figures. In the 12 months since the opening on 14 June 2002, 284,705 visitors to the Horniman have enjoyed the new extension with its galleries, modern facilities, lovely views and improved access to the 16 acres of beautiful Gardens. Market research undertaken during the year showed that 96% of our visitors thought their experience had been good or very good.

The Trust addressed the key objectives highlighted in last years report, not just by exceeding projected visitor figures of 250,000, but also through the completion of its world class Music Gallery and the launching of its new temporary exhibition programme. Our overriding priority for the year was to achieve a period of stability on site, giving our stakeholders the opportunity to enjoy the full benefit of the new development and the much loved historic museum free from the succession of major and minor building works which have dominated the site for the last 8 years. This stability was achieved and also allowed us to concentrate on staff training and to undertake the reorganisation of our front of house operations, in order to help us provide a first rate service to visitors.

##### 1.2 Grant in Aid

The year 2002/3 was the second year of the new three-year Funding Agreement with the Department for Culture, Media and Sport for the years 2001/2, 2002/3 and 2003/4. Grant in aid of £3.1m for each of the three years was proposed but Trustees were delighted that an increase of £60,000 for year two and £75,000 for year three was subsequently allocated in recognition of the costs of front of house staffing for the new galleries and new main entrance. This grant in aid does not however, take into account cost inflation over the three years, in particular the increase in salary levels required to keep pace with rising London salaries.

##### 1.3 Regional Hubs

The Government has provided additional funding to support a new system of nine Regional Museum Hubs across England. The London Regional Hub consists of the Museum of London as Lead Museum, the Geffrye Museum, London's Transport Museum and the Horniman. We worked with our colleagues to see how this significant new opportunity might best be used to benefit the people of London.

## 2. MARKETING

### 2.1 Visitors

The opening of the new Centenary Development led to almost a 100% increase in visitor numbers this financial year. There were 250,387 visits, despite the new facilities and galleries not being available to the public until June 2002, and the new Music Gallery not being available until December 2002.

The summer months of July and August were particularly busy with nearly 80,000 visits, and this momentum was maintained across the rest of the year with the highest weekly visitor figure of over 10,000 being recorded for February half term 2003.

### 2.2 Promotional Campaign

A concerted marketing campaign around the opening of the Centenary Development in June 2002 and the new Music Gallery in December 2002 helped to deliver the increase in visitor numbers. The campaign included targeted advertising on London tubes and buses, extensive public relations activity undertaken by Brunswick Arts and a London and South East leaflet distribution programme. More than 600 different pieces of media coverage were received during the year with strong features and listings in national, local and specialist media including BBC London News, Classic FM, Radio 4, The Independent, The Times and the Evening Standard.

Several initiatives were undertaken to grow the mailing list by 25% to 4,500 individuals during the period.

### 2.3 Events

The Horniman ran a high quality events programme in 2002-03 which focused on the sixteen acres of Gardens and appealed to wide and diverse audiences.

The highlight was the World Tea Party in the Horniman Gardens in July 2002, in collaboration with Lewisham Council. 4,000 people attended an event which included contemporary art installations as part of the London Biennale, live music, a tea dance and hat making workshops for children on the theme of the Mad Hatter.

Other large scale events included a Friends of the Horniman Plant Sale and the Horniman Christmas Concert, both of which attracted more than 1,000 people.

These were supplemented with smaller scale events throughout the summer months with themes linking directly into the collections. A series of children's performances attracted over 1,500 people, while "Chill Out Sunday" concerts on the bandstand were equally well attended and reflected the diversity of the music collection with Irish, Latin and traditional brass band music represented.

The Museum was the venue for a host of smaller scale activities throughout the year including a celebratory launch weekend for the new development with music performances, adult tours and children's activities. Black History Month in October featured Caribbean cookery classes, guest lectures and African storytelling.

## 3. FUNDRAISING

Much of the work of the Development Section during the year focused on the successful planning and organising of the events to launch the Centenary Development in June 2002 and on the opening of the Music Gallery in December. In addition, considerable effort was invested in seeking funds for an Environment Project Manager. Bridge House Trust generously awarded funding of £90,000 to support this post for three years from April 2003.

The fundraising potential of Museum visitors and the general public was also explored; a new collection box was installed in the Museum's new main entrance, and material promoting a forthcoming Benefactors'

scheme was produced and circulated. The response to both initiatives was very encouraging and the Museum plans to develop these areas further in the coming years. Finally, as part of the Museum's plans to develop corporate sponsorship opportunities, a new corporate brochure for the Horniman was produced. The Trustees of the Horniman are grateful to Barclays Bank for kindly agreeing to fund the design and production costs of this new flagship document for the Museum.

The Museum was also fortunate in obtaining a £157,000 grant from Resource under the Designation Challenge Fund scheme for the research, conservation and display of its important textile collections, due to be exhibited in 2004.

#### 4. EXHIBITIONS

##### 4.1 Music Gallery

The Music Gallery was officially opened by Baroness Blackstone as the Minister for the Arts on 9<sup>th</sup> December 2002.

The gallery displays a large selection of our Designated musical instrument collection with some 1,600 musical instruments from all around the world on view. The gallery also showcases our ongoing fieldwork, displaying recently acquired material from Uzbekistan amongst other areas. Visitors to the gallery can also listen to high quality recordings of selected instruments. A series of video presentations help to display the music collection in its proper context, sometimes showing actual instruments as they are being played in the field.

Adjoining the gallery is a hands-on space where members of the public can learn to play a selection of instruments. The gallery also contains a performance space, which is used for teaching, performances and workshops.

Since its opening in December the Music Gallery has received a large amount of critical and popular acclaim. The gallery has proved to be very popular with our schools, family and specialist audiences.

##### 4.2 Temporary Exhibitions

The first exhibition in our newly built gallery, 'Monster Creepy Crawlies', ran from the 14<sup>th</sup> June to the end of October 2002 and proved extremely popular with our visitors, particularly over the summer months. The Marketing section ran a programme of allied talks and events in conjunction with colleagues in Education and Natural History. Approximately 23,000 visitors saw the exhibition during this period and box office takings totalled £54,045 excluding VAT.

Our next exhibition, 'Puppet Worlds' opened, to good press reviews, on the 15<sup>th</sup> February 2003. The exhibition focuses on the Museum's puppet collections and displays approximately 150 puppets in three sections: strings; rods and gloves and shadow puppets. There are 'hands-on' areas where visitors can make their own puppets or put on puppet shows and a series of related events have been scheduled throughout the school holiday periods between February and the end of October 2003 when the exhibition closes.

##### 4.3 Balcony Exhibitions

###### 'Souvenir'

The beginning of the year saw the installation of the work of our final artist in residence, Huw Locke, as part of the 'My Africa Your Africa' programme. The artist installed a dramatic piece called 'souvenir' on the Balcony representing a package recently delivered to the Museum. The exhibition was accompanied by very successful workshops with adults and children.

**TRUSTEES' REPORT for the year ended 31 March 2003 (continued)**

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'A Sense of Belonging', an exhibition by children's author and photographer Ifeoma Onyefulu of sixty photographs of Africa, was displayed concurrently with Huw Locke's installation.

#### **4.4 Aquarium**

The Aquarium continued to build on its popularity with the public. Staff interaction with the public developed both within the Aquarium itself and in insect handling sessions in the 'Creepy Crawlies' Exhibition.

The Aquarium was successful in retaining its Zoo Licence after a full inspection was carried out in May 2002 and the improvements in the Health & Safety conditions, as well as the high standards of animal husbandry, were an important factor in this achievement. An Ethical Review Committee was established, in line with recommended good practice, which agreed a new Aquarium Acquisitions and Disposal Policy.

Contacts with other Aquariums were developed including London Zoo, the Hancock Museum, The DEEP (Hull), the Blue Planet Aquarium (Liverpool) and the Melbourne Museum. Representatives from the Marine Aquarium Council in the Philippines visited the Horniman with a request that we should collaborate with them in future conservation work (providing sustainable harvested and certified marine animals).

A pilot research project on visitor informal learning and participation in the Aquarium was undertaken with The Work, Interaction and Technology Research Group, King's College London, and this was followed up with a Colloquium in which the Horniman participated.

### **5. EDUCATION**

#### **5.1 Teaching Service**

The year 2002/03 saw the return of class teaching on site with the opening of the new Education Centre in June 2002. The museum recruited new Education staff through the Autumn and by January 03 had a full team in place. School provision was planned to increase incrementally over the Autumn term with full provision – i.e. capacity teaching of 6 classes daily to begin in January. The museum offers the sessions to visiting schools across Key stages 1-6, each session can be adapted to suit different key stage groups. The main topics covered are; Ancient Egypt; Animals in their Groups; Around Africa; Introduction to Benin; Masks from around the World; Musical Instruments from around the World; Puppets from around the World; Traditional Life of the first North Americans and Toys and Games from around the World. New resources were written for the re-launched Horniman web site and an on-line schools diary booking system was piloted during the period.

#### **5.2 Community Education**

The Community Education section was responsible for a wide range of new programmes developed in the period 2002-2003. During Adult Learners week in May we tried out new initiatives such as a family literacy programme. Special events were planned to coincide with Refugee week in June. We continued to build on our relationship with Southwark Muslim Womens Group to stage an exhibition for Ramadan in December. New innovative courses such as our Caribbean cookery day and our African drumming course, which were targetted at non-traditional visitors, proved popular with the public. In addition we continued to offer many of our popular sessions and courses eg Raise the Roof singers, gardening course and family arts and crafts.

#### **5.3 'Hands On Base'**

The new 'Hands On Base' was launched in June 2002. This innovative learning space displays a significant number of our 4000 strong handling collection. Visitors to the 'Hands on Base' can explore the collection through special sessions and self-directed visits. The 'Hands On Base' also contains links to all the other galleries and offers great opportunities for future partnership working with outside agencies.

Throughout the year the Museum used the 'Hands on Base' every day for school sessions and in weekends and evenings for family and community learning sessions. The museum also trained some community leaders

**TRUSTEES' REPORT for the year ended 31 March 2003 (continued)**

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in the use of the 'Hands On Base' and piloted self-discovery learning sessions in the space between January and April 2003.

**6. GARDENS**

The Gardens staff made excellent progress in completing the restoration of the areas of the Gardens adversely affected by the building works and subsequently maintaining the newly planted areas to provide an attractive entrance to both the Museum and the Gardens. Work on the 'South Downs' area improvements continued, in consultation with members of the Tewkesbury Lodge Residents Association, and the area will be developed as a quiet retreat with new planting over the next few years. The Gardens' staff also contributed to the overall educational work of the Trust, providing the public with popular horticultural demonstrations and advice through the year.

An application was made for a Green Flag Award, a scheme which provides a national standard of quality for parks and gardens, but the judging had not been completed at the end of this year.

**7. ENVIRONMENTAL INITIATIVES**

The mission of the Horniman is "to encourage a wider appreciation of the World, its peoples and their cultures, and its environments". In pursuit of this aim the Board of Trustees approved an initial draft Environmental Policy in 1995 and since then a number of initiatives have been undertaken.

During 2002/03 planning proceeded on the development of a new Environment Room. The Environment Room examines the relationships between various elements of the world whether natural or man-made. Many of our objects have cross-disciplinary appeal eg a feathered head-dress has cultural importance as well as clear links to Natural History. The Environment project draws together our three collections and offers new ways to interpret them, which will allow our visitors to make connections between objects and link to trails across the Museum and Gardens. The Environment Room will also offer visitors a chance to respond to the ideas that are discussed through using our responses wall. This exciting project will be open to the public in 2003. A generous grant of £90,000 from Bridge House Estates in April 2003 has allowed the Museum to appoint an Environment Project Manager for three years in order to take this exciting new project forward.

We continued to operate a green housekeeping policy purchasing green cleaning products where possible and recycling paper and cardboard. We also signed up to the Office of Government Commerce's 'Watermark' project, which monitored our water bills and provided additional advice on energy saving methods.

The Gardens have continued with their composting scheme for all green waste. The scheme was publicised both to local authority parks staff and the general public in order to raise environmental awareness and demonstrate good practice.

The Centenary project building had energy efficiency as a key objective and, as far as it is practicable for a building, which is designed to last well into the new Millennium, the materials used have been from sustainable sources.

**8. COLLECTION DEVELOPMENT**

**8.1 Research**

***i. Anthropology.***

Over the past year the Keeper of Anthropology conducted research for a new exhibition featuring our Caribbean related material. Provisionally entitled 'From the Amazon to the Caribbean' this exhibition will generate further research through fieldwork and acquisitions.

Fiona Kerlogue, the Deputy Keeper, conducted a three-week fieldwork trip to Thailand to make a collection of about 50 items. The collection is mostly representative of the textile traditions of North-eastern Thailand and

**TRUSTEES' REPORT for the year ended 31 March 2003 (continued)**

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**Margaret Birley**

'The development of the new musical instrument gallery', at the Horniman Museum's seminar for Exeter Museum's staff, Horniman Museum, February 18 2003.

**Dr Bradley Strauchen**

'Opera benefits and the benefits of opera in the career of Giovanni Puzzi, London's "fashionable horn player" ', presented as part of London University's postgraduate seminar series: 'Music in Britain: A Social History Seminar', Senate House, Malet Street, London WC1, June 2002.

'Instrument as Informant' at the Annual Meeting of the American Musical Instrument Society, Boston.

**Dr Hassan Arero**

Paper entitled: 'The Snake and the Phallus: Interpreting a Borana Ritual Object', presented in January at the Pitt Rivers Museum.

Paper entitled: 'Keeping the Peace of Borana: Ideology and Applications of a 'Traditional' System', presented at SOAS in February.

**Dr Fiona Kerlogue**

'Museums and the Kris: Power, alliance and the exchange of gifts', at the 9<sup>th</sup> International conference of the European Association of Southeast Asian Archaeologists, Sigtuna (Sweden) 26<sup>th</sup> May – 1<sup>st</sup> June 2002.

## **9. COLLECTIONS MANAGEMENT**

### **9.1 Designation Challenge Fund**

In July 2002 the Museum was extremely fortunate to be awarded a grant of £157,000, to be spent between 2002-04, from the Designation Challenge Fund. The main aim of the project is to improve physical and intellectual access to the Museum's textile and costume collections, with the following objectives:

- Improve the storage of the textile collections by re-packing and re-housing them in purpose-made mobile racking.
- Complete an inventory of the textile and costume collections, including a physical inventory, conservation condition surveys, digital photography and location recording.
- Research parts of the collections in preparation for dissemination via the Museums web site, temporary exhibitions, education packs and publication in journals.
- Enable public access to the collections via the Museums web site and via a rotating display of both the textile and costume collections in purpose made cases in a specially designated gallery in the Museum.

Work on the storage and documentation aspects of the project started in January 2003 and detailed records are now being developed for the textile items within the Museums collection.

### **9.2 Documentation of the Collections**

The majority of the work carried out by Documentation staff this year contributed towards increasing public access to the Museum's Collections. They developed and maintained records for objects intended for display in the Music Gallery and the 'Puppet Worlds' exhibition. They created records for other priority areas of new acquisitions and continued with inventory of other existing groups of the collections. A total of 1,000 new acquisition and inventory records were created during the year. Project management of the Web site continued to enable development of areas such as the musical instrument database and the educational content for the web site.

Both the Documentation and Collections Management teams provided significant in-put into the installation of the 'Hands on Base', Music Gallery and 'Puppet Worlds' to ensure that objects were installed with their correct documentation and location records completed.

**TRUSTEES' REPORT for the year ended 31 March 2003 (continued)**

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The Documentation Team are now managing the inventory of the textile and costume collections as part of the new Designation Challenge Fund project.

**9.3 Collections Storage and Management**

As with the Documentation team, Collections Management staff have been heavily involved throughout the year with the retrieval and movement of objects for display in the Music Gallery and the 'Puppet Worlds' exhibition. They have also administered loans in and out of the Museum.

Storage space continues to be at a premium and the Museum is still renting specialist storage space to supplement our storage facility in North Greenwich. As new acquisitions continue to be brought into the collections, the Museum is looking at new ways of making space, by the use of more compact storage techniques and exploring the possibilities of long-term loans to other institutions.

**9.4 Conservation**

The work of the Conservation Section this year has concentrated on the completion of musical instruments for the Music Gallery, including working closely with the mount makers to ensure that objects to be displayed are mounted in an appropriate manner. Much time was spent closely monitoring the environment within the new building, particularly the new galleries, to ensure environmental stability for the long-term care of the collections. The section also completed work on the puppets to be displayed in 'Puppet Worlds' and provided input into the development of the mounts for this exhibition.

At the beginning of the year the Head of Collections Conservation and Care was given a 4-month sabbatical to complete her PhD on the analysis of brass wind instruments. Her work is now completed and has been submitted for examination.

**9.5 Loans**

The Museum continued to maintain and expand its loans to other organisations throughout the year. There are currently six long-term loans of our collections with other museums, including the Geffrye Museum; Bankfield Museum; the British Engineerium, Hove; Dean Heritage Museum Trust; Birmingham Museum and William Herschel Museum.

Short term loans during the period included the loan of two musical instruments to the Musee de la Musique in Paris; a loan of eighteen objects from Africa, Asia and Oceania to the Empire and Commonwealth Museum in Bristol and twelve objects from Somalia to Croydon Clocktower. The Museum also received several loans in, to complement our collections within the Music Gallery and the 'Puppet Worlds' exhibition.

**10. PREMISES**

**10.1 Health and safety**

Much effort has gone into the effective management of Health and Safety identifying possible hazards across the Organisation, but particularly the new site. Revised emergency procedures had to be produced which identified new evacuation routes and risk assessments relating to the new galleries and the use of other new areas were carried out. An increased level of traffic through the gardens, needed to service the Café and other parts of the new building, has also had to be addressed.

**10.2 Information Technology**

IT commissioned a comprehensive systems review with a consultant. The report and recommendations have been accepted and resulting changes in our telecommunications and information systems will be rolled out over the coming year, which will enable staff who need it to have internet access on their desks.

## 11. STAFF

### 11.1 Investors in People

The Trust achieved the Award in July 2000 and continued to devote both time and resources in the training and development of the staff. Training was provided in all areas to enable staff and managers to understand the requirements imposed by new legislation, to develop generic and specific skills as needed to meet institutional objectives and provide for continuing personal development and academic achievement. The Trust will apply for reassessment of the Award during the year 2003.

### 11.2 Training Working Group

The Training Working Group focused chiefly on the training needs of those groups, which had previously received fewer training opportunities. It included representatives of managers and the staff working directly with the public on the Reception, the Galleries, Security and cleaning and in the gardens as well as the Personnel Manager, the Health & Safety Officer and Senior Management.

Much progress was made during the period in achieving National Vocational Qualifications for staff dealing with the public and a total of 10 staff have now gained their level 2 NVQs (including 4 as Assessors). In addition, the gardening staff continued work on their NVQs in Horticulture at Hadlow College, which enabled them to have access to the facilities at Hadlow and stimulated great interest. A review of the NVQs was undertaken to assess the suitability of the ones currently undertaken by Visitor Services and Security staff and a new system of training units was produced which, it is hoped, may be used in future as part of an NVQ.

### 11.3 Management/Staff Consultation Arrangements

Bi-monthly meetings of the Joint Management Staff Consultative Committee (JMSSCC) were held at which all matters affecting staff were discussed. Progress was made with policy development on the Equal Opportunities and Bullying and Harassment Policy.

All negotiations with regard to pay were carried out between management and the recognised trade union (GMB).

Communication and consultation with staff generally took place through quarterly Heads of Section and Senior Management team meetings, monthly Heads of Section meetings and monthly staff meetings within sections. Annual budgeting, Corporate planning, Funding Agreements as well as Business Risk Assessment and internal controls were all dealt with and cascaded through these regular sessions.

The previous years experiment in holding 'Vision Days' at which all staff were invited to attend and given the opportunity to contribute their ideas for the future of the Horniman was repeated. These days were much appreciated by staff.

### 11.4 Visitor Services

A new Visitor Services Section was established in May 2002. The primary reason for establishing the section was to improve the quality of customer care for our visitors. The development of a targeted training programme for front line staff was identified as a key tool to improving customer care standards.

The core concept for Visitor Services training was that staff would be trained to provide a welcoming and courteous service to agreed operational and behavioural standards. The Visitor Assistants themselves contributed to the development of these standards, against which they can now be assessed. The aim was to develop a customer care culture within the section, which was owned by all the staff.



**TRUSTEES' REPORT for the year ended 31 March 2003 (continued)**

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The initial stages of this process were completed in 2002/3, standards have been agreed, a training resource pack has been compiled, and the Visitor Services Manager and his deputy have been given instruction in how to deliver a training programme to the Visitor Assistants.

In addition, the Museum entered into dialogue with staff at Greenwich Community College to develop a bespoke version of the N.V.Q. in Heritage Care which could operate alongside our own training, giving staff a recognised qualification relevant to their work.

#### **11.5 Facilities Section**

A new Facilities Section was formed during the year, which became responsible for premises, cleaning, security and IT. New roles for staff within the Section meant a year of increased training activity in all areas learning about new equipment and establishing new working practices. The smooth transition has been achieved as a result of the hard work and co-operative attitudes of staff. The new building had to be incorporated into existing maintenance and security regimes

#### **11.6 Organisation Structure**

The current staff structure is shown in Appendix III.

#### **11.7 Equal Opportunity and Disability Policies**

The Trust pursued a policy of equal opportunity both with regard to staff and to visitors to the Museum and Gardens.

Good practice in recruitment, including equal opportunities monitoring, was carried out and training for all managers and staff in equal opportunities awareness and the law was begun during the year.

An internal staff team continued to look at issues of access in all its forms within the museum and it is hoped that the completion of the redevelopment of the Museum will enable the Trust to deliver great improvements in disability access and thus encourage more people with disabilities to apply for jobs at the Horniman.

### **12. RISK MANAGEMENT**

Trustees reviewed the major risks to which the Trust is exposed and the measures taken to mitigate them, where possible. The Senior Management Team also reviewed these risks regularly during the year.

Risk Management was also maintained across the organisation. Risk lists were drawn up for all sections and reviews of the risks were put on the agenda of the quarterly meetings held between the Heads of Sections and the Senior Management Team.

### **13. FUTURE DEVELOPMENTS**

The overriding priority, having regard to the interests of our stakeholders, is to ensure a second year of stability, after some eight years of disruption on site. The Trust intends to continue to concentrate on making the very best use of its new galleries and facilities so that its visitors can fully enjoy their experience of the Museum and Gardens.

In aiming to achieve this the key objectives are:

- to achieve our baseline figure of at least 250,000 visitors for the year

- to work with our museum sector colleagues and our partners in the London Regional Hub to produce plans for 2003 to 06 aimed at improving services to London's schools and the wider community
- to continue to develop a really attractive and successful Temporary Exhibitions programme
- to put in place new activities designed to increase our commercial income
- to foster projects aimed at using the unique combination of our collections and gardens to inform and encourage debate on the links between people and the environment

Success in achieving these objectives will be dependent on ensuring that sufficient resources are available to fund the increased range and scale of the Trust's operations.

Our major long term aim is to ensure that the Horniman is able to meet the demands of our audience and our sector in the 21<sup>st</sup> Century. Priorities over the next 5 to 10 years include deciding on the future of our Study Collections Centre in Greenwich and on the timing and nature of the redisplay of the popular Horniman Aquarium.

#### 14. INVESTMENT POLICY

Investments are held in accordance with Trustees' powers and the Museum's investment policy. Cash deposited in Charities Aid Foundation and COIF Charities Deposit funds earn interest at Money Market rates, whilst retaining liquidity, which is required for the payment of current liabilities and future obligations.

#### 15. RESERVES POLICY

The current year's deficit on revenue income and expenditure (see page 20) was budgeted and arose principally from expenditure on the completion of the 2001 Project and the launch of the new extension. It was financed from funds raised in previous periods and designated for this purpose.

General reserves stood at £242,122 at 31 March 2003. The Trustees consider that, given the virtual certainty of the receipt of the Museum's annual Grant-in-Aid before budgets are set, the risk of income not meeting expenditure each year is low and therefore the level of reserves required is minimal. Accordingly they have resolved that £100,000 of the general funds will be retained as a contingency fund to cover any uninsured losses not likely to be met by the DCMS. The surplus over £100,000 will be used to fund essential expenditure, not met by Grant-in-Aid and other income, during the three years of the next Funding Agreement.

#### 16. PAYMENT POLICY

As a result of introduction of The Late Payment Of Commercial Debts (Interest) Act 1998, which came into force on 1 November 1998, the Trust has adopted the Better Payment Practice Code, replacing the previous CBI Prompt Payment Code. Accordingly all contracts entered into on or after 1 November 1998 have complied with the Act. No interest payments have been made under the terms of the Act.

The Trust undertakes to pay all bills, except for those under dispute, in accordance with the contract terms or otherwise within 30 days. Payment procedures are to be agreed with suppliers before goods and/or services are ordered. In practice, invoices are paid weekly, except where more immediate payment is required.

During the year 89% of invoices, not in dispute, were paid within 30 days or supplier terms (2002 – 95%).

**APPENDIX II: VISITOR NUMBERS**  
**Group and Company**  
**For the year ended 31 March 2003**

	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
General Public	9,116	7,470	18,896	27,549	36,280	14,311	19,695	11,914	10,636	13,686	19,750	14,297	203,600
Visitors in groups	397	384	101	937	968	340	1,266	550	442	473	558	1,617	8,033
Community Education	640	550	927	923	1,521	809	1,238	1,200	329	1,338	1,770	1,246	12,491
Formal Education	177	526	1,181	2,199	0	368	1,093	1,249	913	1,380	1,445	2,586	13,117
Garden Events	-	1,800	500	4,900	3,475	-	1,000	-	1,000	-	-	-	12,675
Conservatory Events	-	-	150	85	-	135	101	-	-	-	-	-	471
<b>Total 2002/2003</b>	<b>10,330</b>	<b>10,730</b>	<b>21,755</b>	<b>36,593</b>	<b>42,244</b>	<b>15,963</b>	<b>24,393</b>	<b>14,913</b>	<b>13,320</b>	<b>16,877</b>	<b>23,523</b>	<b>19,746</b>	<b>250,387</b>
<b>Total 2001/2002</b>	<b>948</b>	<b>15,687</b>	<b>20,015</b>	<b>12,304</b>	<b>21,815</b>	<b>7,889</b>	<b>11,578</b>	<b>7,140</b>	<b>6,401</b>	<b>7,216</b>	<b>10,849</b>	<b>8,739</b>	<b>130,581</b>

APPENDIX II: VISITOR NUMBERS  
For the year ended 31 March 1997  
Group and Company

HORNIMAN MUSEUM & GARDENS		VISITOR NUMBERS 1996/7												TOTAL
	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March		
General Public	13,451	14,677	8,529	12,656	18,831	9,435	14,153	11,269	6,921	9,553	16,113	12,358	147,946	
Visitors In Groups	580	759	939	1,918	1,444	511	680	880	464	495	845	1,126	10,641	
Community Education	711	687	548	717	1,403	398	1,086	1,043	291	1,411	1,459	937	10,691	
Taught In Ed. Centre	1,136	1,810	2,805	1,458	-----	2,231	3,432	3,316	1,587	2,530	1,895	2,055	24,255	
Gardens Events	320	6,422	4,718	5,920	6,219	512	280	628	680	20	-----	45	25,764	
Hiring of conservatory	---	293	270	208	843	763	100	85	198	----	-----	100	2,860	
<b>TOTAL</b>	16,198	24,648	17,809	22,877	28,740	13,850	19,731	17,221	10,141	14,009	20,312	16,621	222,157	

HORNIMAN MUSEUM & GARDENS		VISITOR NUMBERS 1991/2 TO 1999/2000									
	1991/2	1992/3	1993/4	1994/5	1995/6	1996/7	1997/8	1998/9	1999/2000	2/201	
General Public	139,316	146,198	120,233	127,448	135,000	147,946	145,000	127,000	147,000	147,000	147,000
Visitors in Groups	12,773	9,152	9,212	10,508	9,300	10,641	10,000	10,000	10,000	10,000	10,000
Community Education	6,002	10,460	13,536	10,802	10,300	10,691	10,000	10,000	10,000	10,000	10,000
Taught in Ed Centre	18,652	27,454	24,425	25,390	23,000	24,255	23,000	23,000	23,000	23,000	23,000
Gardens Events & Cons.hire.	7,000	10,665	18,526	24,469	20,000	28,624	15,000	15,000	15,000	15,000	15,000
<b>TOTAL</b>	145,283	183,743	203,929	185,932	198,617	197,600	222,157	203,000	185,000	205,000	205,000

Note 1: Gardens events are highly dependent on the weather  
 Note 2: 'Visitors in Groups' includes school parties that have not been booked through the Education Centre.  
 Note 3: \*\* South Hall closure led to a predicted fall in visitor figures in 1994/6. This improved in 1995/6 despite continued closure. The South Hall reopened in January 1997 with the temporary exhibition 'Normads'. The re-closure of the South Hall for the major re-display of ethnography falls mainly across 1998/9 adversely affecting visitor figure projections for that year.

General Headings	Year Groups	Ages
Under 5s	NURSERY YR R (RECEPTION)	Up to 5 years. If a school, usually 4.
<b>PRIMARY:</b>		
KS1 (Also known as Infants)	YR 1 YR 2	5 – 7 years
KS2 (Also known as Juniors)	YR 3 YR 4 YR 5 YR 6	7 – 11 years
<b>SECONDARY:</b>		
KS3	YR 7 YR 8 YR 9	11 – 14 years
KS4/GCSE	YR 10 YR 11	14 – 16 years
6 <sup>th</sup> FORM	YR 12 YR 13	16 -18 years

# HORNIMAN MUSEUM

## Free school sessions

The school sessions are 45 minutes long, free of charge and led by a member of the Schools' Education Team. All schools booked on a talk will be provided with lunch space and cloakroom allocation.

Talks are recommended for Nursery through to Key Stage 3 aged children and relate to National Curriculum suggested areas of study. All talks include the opportunity to handle objects in the museum's education handling collection.

**For more information or to book, please telephone Schools' Education on 0208 699 1872 ext 157. Alternatively, visit [www.horniman.ac.uk/education/sch\\_talks.cfm](http://www.horniman.ac.uk/education/sch_talks.cfm) or email [schools@horniman.ac.uk](mailto:schools@horniman.ac.uk). Please specify talk topic, year group and possible days you would like to visit.**

### Foundation (Nursery and Reception)

Animals in their groups  
Masks from around the World  
Musical Instruments from around the World  
Puppets from around the World  
Toys and Games from around the World

### Key Stage 1 (ages 5 - 6)

Animals in their groups  
Around Africa  
Masks from around the World  
Musical Instruments from around the World  
Puppets from around the World  
Toys and Games from around the World

### Key Stage 2 (ages 7 - 11)

Ancient Egypt (Kemet)  
Animals in their groups  
Around Africa  
Introduction to Benin  
Masks from around the World  
Musical Instruments from around the World  
Puppets from around the World  
Toys and Games from around the World

### Key Stage 3 (ages 11 - 14)

Introduction to Benin  
Musical Instruments from around the World  
Traditional life of the first North Americans

## Details of talks in alphabetical order

### **Ancient Egypt (Kemet)**

KS2 History 2 a-b; Geography 3 a-e

Mondays 10.30 – 11.15; 11.45 – 12.30; 1.30 – 2.15

Location: Hands On Base

A look at Ancient Egyptian culture, beliefs and achievements using handling examples of relevant objects including amulets, papyri, shabti figures, stelae, mummified materials and a coffin fragment illustrated with hieroglyphs. Examples of Ancient Egyptian artefacts from the museum's main collection can be found within The African Worlds Gallery.

### **Animals in their groups**

Nursery to KS2 Sc2 4 a-b, 5 a-c (KS1); 4 a-c, 5 a-c (KS2)

Thursdays 10.30 – 11.15; 11.45 – 12.30; 1.30 – 2.15

Location: Hands On Base

An introduction to simple classification and animal adaptation using taxidermy and skeletal specimens from the museum's handling collection. This talk ties in closely with themes inherent in The Natural History Gallery.

Nursery to KS1:

- Identifying similarities and differences between different animals i.e.: fur, feathers, wings, shells, beaks, teeth, backbones etc. relating back to their own bodies.
- How the different environments in which these animals live and the ways in which they move and eat may explain these differences.

KS2:

- Identifying the main characteristics of different classes of vertebrate and invertebrate and the similarities and differences between them.
- How the different environments in which these animals live and the ways in which they move and eat may explain these differences.

### **Around Africa**

KS 1 and 2 History 2b, 3, 4 a-b (KS1); 2 a-b, 3 (KS2); Geography 2c, 3b (KS1&2);

PSHE 4b (KS2)

Wednesdays 10.30 – 11.15; 11.45 – 12.30; 1.30 – 2.15

Location: Hands On Base

An introduction to traditional ways of life around Africa using relevant parts of the handling collection, including everyday objects, musical instruments, masks, toys and games and textiles. This talk ties in closely with themes inherent The African Worlds Gallery.

KS1 & 2:

- Focusing on themes relating to everyday life, customs and ritual, celebration and religion and beliefs relating to children's own lives and experiences.
- The talk focuses closely on materials and designs used.

### **Introduction to Benin**

KS2 History 2 a-b; Geography 3 a-e

KS3 History 12 (the West African Empires); Geography 3 a-e

Thursdays 10.30 – 11.15; 11.45 – 12.30; 1.30 – 2.15

Location: Hands On Base

An introduction to the culture, beliefs and achievements of the ancient African kingdom of Benin. The talk will be illustrated using handling examples of relevant objects including brass figures and plaques. Examples of Ancient Benin artefacts from the museum's main collection and a video explaining the brass casting process can be found within The African Worlds Gallery.

### **Masks from around the World**

Nursery to KS2 History 2 a-b (KS2); Geography 2c (KS1 &2), 3b (KS1), 3c (KS2); PSHE 4b (KS2)

Wednesdays 10.30 – 11.15; 11.45 – 12.30; 1.30 – 2.15

Location: Hands On Base

An introduction to the different functions, designs and materials of masks from different cultures and areas of the world including African, European, Central and South American, Indian, Chinese and Indonesian. Other masks from the main museum collection can be seen within The African Worlds and Centenary Galleries.

#### Nursery to KS1:

- Comparing design and materials of different masks i.e.: What colours decorate it? Can you identify some of the materials? Does it copy anything from nature such as an animal? How do you wear it and how do masqueraders see through it? How might you act wearing it? etc.
- Similarities and differences between different masks.
- Some masks may be intimidating for small children so every effort is made to begin by focusing on those aspects which they may find more familiar ie: masks with animal characteristics, masks from known celebrations or contexts etc.

#### KS2:

- Comparing design and materials of different masks and the similarities and differences between them.
- Examining their function and purpose in relation to cultural context including how they are worn and used.

### **Musical Instruments from around the World**

Nursery to KS3 History 2 a-b (KS2); Geography 2c (KS1 &2), 3b (KS1), 3c (KS2); Sc4 3 c-d (KS1), 3 e-g (KS2); PSHE 4b (KS2)

Mondays, Tuesdays or Fridays 10.30 – 11.15; 11.45 – 12.30; 1.30 – 2.15

Location: Music Gallery performance space

An introduction to a variety of instruments and their materials from different cultures and areas of the world. Other musical instruments from the main museum collection can be seen within The Music Gallery where more examples of handling instruments and touch responsive tables with samples of sounds from a variety of



instruments from around the world can be found.

Nursery to KS1:

- Looking at the different ways in which sounds from musical instruments from around the world can be made and those which share the same way of producing a sound ie: by hitting, plucking, blowing etc.
- Looking at some of the characteristics and qualities of materials from which the musical instruments are made.
- Discussing contexts in which these musical instruments may be used, relating to their own lives.

KS2:

- Looking at the way of categorising musical instruments according to the way in which sound is produced and how we comprehend the sound i.e.: vibrations.
- Examining materials they are made from and the similarities and differences between them.
- Thinking about different contexts within which musical instruments may be used relating to their own lives.

KS3:

- Looking at the way of categorising musical instruments according to the way in which sound is produced and how we comprehend the sound ie: vibrations.
- Examining materials they are made from and relating that to the sound produced.
- Examining contexts within which the musical instruments may be used relating to their own lives.

**Puppets from around the World**

Nursery to KS2 PSHE 4b; D&T 5a; Geog 2c; Hi 2 a-b; Sc3 1, Sc4 2b (KS1), 2d (KS2). (Also other aspects of D&T 1-5; Ma3 4 a-c and En1 4 a-c for classes planning to make puppets)

Tuesdays 10.30 – 11.15; 11.45 – 12.30; 1.30 – 2.15

Location: Hands On Base

An introduction to a variety of puppet styles from different cultures and areas of the world. Suitable as a general introduction for classes planning to make puppets. Other puppets from the main museum collection can be seen within The Centenary Gallery.

Nursery to KS1:

- Looking at the different ways in which puppets can be operated using strings, hands/fingers, rods, light and shadow.
- Comparing designs and materials of different puppets.
- Looking at some contexts of where different puppets are used.

KS2:

- Looking at the main ways to categorise puppets from around the world – string, glove/finger, rod, shadow.
- Looking at designs and materials in context of where the puppets come from and the stories they illustrate.
- Looking at the function of puppets in different cultures around the world.

## **Traditional life of the first North Americans**

KS3 History 12

Tuesdays 10.30 – 11.15; 11.45 – 12.30; 1.30 – 2.15

Location: Hands On Base

An introduction to the cultures, beliefs and achievements of indigenous peoples of North America covering: Plains, North West Coast, South West, Eastern Woodlands and the Arctic (Inuit). The talk uses examples from the education handling collection including decorated clothing, tools, weapons and domestic items. Other relevant artefacts from the main museum collection can be found in The Centenary Gallery.

## **Toys and Games from around the World**

Nursery to KS2 PSHE 4b; D&T 5a; Geog 2c; Hi 2 a-b; Sc3 1, Sc4 2a-b (KS1), 2d (KS2). (Also other aspects of D&T 1-5 and Ma3 4 a-c for classes planning to make toys and games)

Tuesdays 10.30 – 11.15; 11.45 – 12.30; 1.30 – 2.15

Location: Music Gallery performance space

An introduction to the use and variety of toys from different cultures and areas of the world. Suitable as a general introduction for classes planning to make toys and games.

### Nursery to KS1:

- Looking at the ways in which different toys and games from around the world work and their 'rules' for play.
- Identifying some simple materials.

### KS2:

- Comparing different toys and games from around the world and their similarities and differences. Looking at the ways in which we might define 'toys' from 'games'.
- Identifying materials that have been used and the technology behind how they work.

Please log onto our website to access education materials to help plan and use on your visit

[www.horniman.ac.uk/education/sch\\_learning\\_packs.cfm](http://www.horniman.ac.uk/education/sch_learning_packs.cfm)

You will need to install *Adobe Acrobat Reader* version 4.0 or above which you can access on the *Museum Trails* page.

Schools' Education Department,  
Horniman Museum, 100 London Road,  
Forest Hill, London SE23 3PQ

# HORNIMANMUSEUM

Horniman Museum  
100 London Road  
Forest Hill  
London SE23 3PQ

Telephone  
+44 (0)20 8699 1872  
Facsimile  
+44 (0)20 8291 5506

Email  
enquiry@horniman.ac.uk  
Internet  
www.horniman.ac.uk

Dear

## Confirmation of Booking a Talk at the Horniman Museum

Thank you for your request to book a talk with handling objects at the Horniman Museum and Gardens. We will be delighted to welcome your groups as follows:

Date:.....	Date:.....	Date:.....
Session time:.....	Session time:.....	Session time:.....
Topic:.....	Topic:.....	Topic:.....
Yr Group:.....	Yr Group:.....	Yr Group:.....
No:.....	No:.....	No:.....
Teacher:.....	Teacher:.....	Teacher:.....
Coat & bag drop-off time:.....	Coat & bag drop-off time:.....	Coat & bag drop-off time:.....
Lunchtime:.....	Lunchtime:.....	Lunchtime:.....

Please let us know as soon as possible if you need to cancel your visit. We may then be able to offer the space to another school group.

We have enclosed an **information sheet** to help you plan your visit, which includes a map of the Museum and Gardens. We have also enclosed a **School Evaluation Form** and would really appreciate feedback about how you feel the day went, after your visit. We hope you and your pupils enjoy your visit to the Museum and we look forward to meeting you.

Yours sincerely

Director  
Sue Vitmayer  
Schools Education Department  
020 8699 1872 Ext. 157  
Horniman Public Museum  
London Public Park Trust  
re-funded by the Department  
for Culture, Media and Sport  
Company registration no. 2456393  
Registered office as above  
Registered charity no. 802725



Teacher's name:	Name & date of session:	Session time:
		10:30am

# HORNIMAN MUSEUM

Thank you for booking this facility. Please read the following information.

The main entrance into the Museum for all visitors is via the Gardens from London Road or Horniman Drive. **Please do not arrive at the front entrance of the Museum before 10.15am.** If necessary, shelter is provided at the front entrance or under the Dutch Barn in the Gardens (see Gardens' map attached).

## Your museum day...

- Your arrival time: 10:15am**  
Please go to the main entrance, where a member of staff will meet you.  
Any additional Information:
- Your coat and bag drop-off time: 10:15am – 10:25am**  
A member of staff will show you where to drop off your coats and bags.
- Your session time: 10:30am – 11:15am**  
A member of staff will guide you to the Hands On Base or Music Gallery Performance Space for your session.
- Your gallery time: 11:15am – 11.55am**  
You may wish to use this time slot to visit some of the museum's galleries. For learning packs and museum trails, please log onto our website at:  
[www.horniman.ac.uk/education/sch\\_learning\\_packs.cfm](http://www.horniman.ac.uk/education/sch_learning_packs.cfm)  
You will need to install *Adobe Acrobat Reader version 4.0* or above which you can access on the **Museum Trails** page.
- Your lunchtime: 12:00pm – 12:30pm**  
A space has been reserved for your class and this is your time-slot. Please go to the **School Group Meeting Point**, in the main entrance foyer at **11:55am**. A member of the education team will meet you there and guide you to the lunch space. Please note that teachers and adult supervisors are responsible for overseeing lunchtime.
- Your tidy-up time: 12:25pm – 12:30pm**  
Please ensure that the lunch space is left in a clean and tidy state, as other groups will also be using this space.
- End of day: Any time up to 2:15pm**  
Please use the Education Centre door security code (we will provide this on the day) to access your coats and bags.

**To avoid congestion, please do not enter if there are already two classes collecting their belongings.**

*(For Museum Reference: Group 1 and 2)*

**In order to get the most from your visit, it is very important for you to read and follow the guidance set out below**

### **Behaviour**

We endeavour to provide **all** visitors with a safe and enjoyable environment. Teachers and adult supervisors are responsible for the behaviour and safety management of their group at all times both in the Gardens and the Museum. **Please ensure that adults accompany and supervise pupils, at all times.**

### **Preparation for your visit**

- We recommend a ratio of 1 adult to between 5 and 8 pupils depending on age.
- To support the interactive handling session we recommend that, in advance, the class be divided into 5 or 6 small groups - each led by a named adult.
- Please also ensure that pupils visit the **Museum Shop** in small adult-led groups (ideally 1 adult per 5 pupils).
- We also suggest that teachers bring name labels for pupils. These can be worn during the object handling session and removed to walk around the museum's galleries.

### **Galleries**

The **African Worlds** Gallery, **Natural History** Gallery, **Aquarium**, **Centenary** Gallery and **The Music Gallery** are all available free of charge.

The temporary exhibition space is our only charging gallery. Please visit our website at [www.horniman.ac.uk](http://www.horniman.ac.uk) or telephone 0208 699 1872 for details of the temporary exhibitions programme.

### **Horniman Gardens**

The 16 acres of Gardens include a picnic area, animal enclosure and public toilets (with a wheelchair accessible facility). Pupils are welcome to exercise in the games areas, but please ensure pupils are supervised and do not run in the Sunken Garden or on flowerbeds. If weather permits, the picnic area in the Gardens is available on a first come, first served basis. (Attached map shows the games areas, quiet areas and picnic area in the Gardens). **Please eat packed lunches in the picnic area only and place all litter in the bins provided. Please do not feed the animals.**

### **Horniman Library**

The reference library is available for teachers, small groups and individuals, to research areas represented by the Horniman's collection.

**N.B The library can only accommodate 8 people at any one time.**

For reading lists go to:

<http://www.horniman.ac.uk/collections/references.cfm> or telephone 0208 699 1872 ext.108. Please ask the Information Desk about access to the library, for wheelchair users.

*(For Museum Reference: Group 1 and 2/Session One)*

# HORNIMAN MUSEUM

## School Session Evaluation Form

We hope you enjoyed the object-based talk/s you received from the Schools Education Team.

To help us improve our service, we would really appreciate feedback about how you feel the session went.

<b>Name of School:</b> ROYAL PARK PRIMARY	<b>Year Group:</b> 2 (2, classes)
<b>Talk title:</b> Music 2 sessions 10.30 and 2.30.	<b>Date of Visit:</b> 27/6/03

<b>Name of tutor (please circle name):</b> Louise Palmer/Isabel Benavides/Danny Staples/Other tutor: _____
---

**Level:** Was the session delivered at an appropriate ability and interest level for your pupils? If not how might it be improved?

Children thoroughly enjoyed talk and using the unusual instruments. Very good session - all children participated and stayed on track!  
Good introduction to vibration + constant repetition.

**Content:** How did the session support the National Curriculum areas of study you expected for your term's work?

Very well - recognising sounds can be made in different ways eg by blowing, plucking, shaking, and vocalising + recognise music comes from different times and places.

**Information:** Was the information you received prior to and on arrival sufficient?

General museum information very useful.  
Hands on Space information sheet arrived on day of trip so received it after trip.  
Otherwise informative.

Ref. 060203WCL

**Any other comments:**

A very enjoyable day.

**Venue:** Were the venue and facilities suitable for your needs? If not how might they be improved?

Super!

Please hand this form in to a member of the **Education Team** or the **Information Desk** before you leave or please post/fax to:  
**Schools' Education Department, Horniman Museum, 100 London Road,  
Forest Hill, London, SE23 3PQ Fax: 0208 291 5506**

Ref. 060203WCL

# HORNIMAN MUSEUM

## School Session Evaluation Form

We hope you enjoyed the object-based talk/s you received from the Schools Education Team.

To help us improve our service, we would really appreciate feedback about how you feel the session went.

Name of School: Birk Beck	Year Group: 4
Talk title: Egyptians	Date of Visit: 3.3.03

Name of tutor (please circle name): Louise Palmer/Isabel Benavides/Danny Staples/Other tutor: _____
--

<b>Level:</b> Was the session delivered at an appropriate ability and interest level for your pupils? If not how might it be improved?
Yes

<b>Content:</b> How did the session support the National Curriculum areas of study you expected for your term's work?
Historical work on Ancient Egypt

<b>Information:</b> Was the information you received prior to and on arrival sufficient?
Yes





**Birkbeck Primary School**

Alma Road  
Sidcup  
Kent DA14 4ED  
Tel: 020 8300 4161  
Fax: 020 8302 6878

Headteacher  
Deputy Headteacher

Mrs. B. A. Godfrey M. A.  
Mrs. H. D. Lilley B. Ed.

To Staff at the Education Department,

Please find enclosed a selection of children's letters from Class 4LS. They all thoroughly enjoyed the museum and in particular the talk.

It has made a powerful impact on the children's understanding of this historical period. Some pupils have already taken their parents back to share the experience!

Please pass our thanks onto all of your staff who made the day a real success,

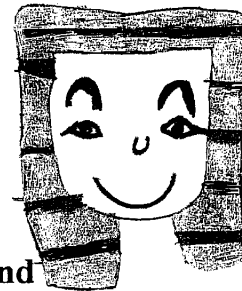
yours sincerely

Helena Lilley

Bexley Council  
Directorate of Education and Leisure Services



Birkbeck Primary School  
Alma Road  
Sidcup  
Kent  
DA14-4ED  
Friday 7<sup>th</sup> March



**To Horniman Museum,**

Thank you very much for showing our class, 4 L/S around your amazing museum on the 3<sup>rd</sup> of March 2003, also I would like to say thank you to Isabel for showing us the Ancient Egyptians treasure they were really cool. In the museum I thought that everything was in quite good condition (especially when they're over 3,000 years old.) It was really exciting when we sat in the circle and passed around all the artefacts especially the bird that was mummified, (but it was really smelly.) My favourite item in the African Gallery was the real mummy (it was a bit scary though.) It was really fun counting the birds on the coffin (I found 10.)

Yours sincerely  
Chelsea Li  
Class 4 L/S

P.S While looking at the mummy was scary too!



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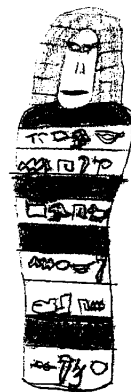
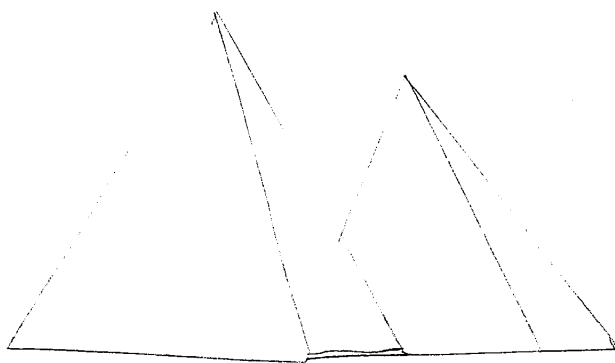
Birkbeck Primary School  
Alma Road  
Sidcup  
Kent  
DA14 4ED

Friday 7<sup>th</sup> March 2003

Dear Isabel,

Thankyou very much for talking to us about the Ancient Egyptians. I learnt alot from you and the museums treasures. I can't believe that some 3,500 year old things are around today. When I come back, I can tell my family alot of things they didn't know. I didn't know that Tutankhamun had 365 doll/servants in his coffin with him, it must have been very big! Please thank the staff for making the museum so good. I found the birds, but I found 9! I liked the big walrus and said "Hello!" to it for my mum! The aquarium was good and I found a funny fish!

yours faithfully  
Hannah Johnston  
Class 4L/5xx



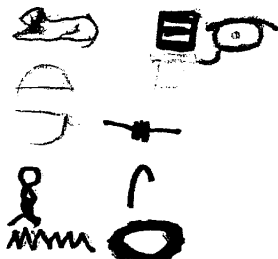
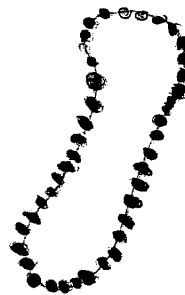
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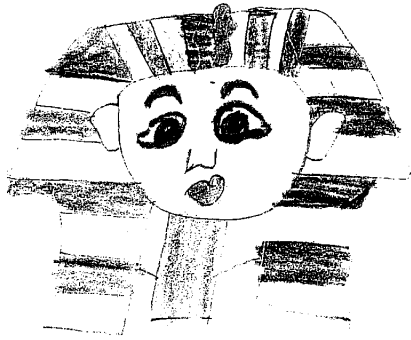
Burbeck Primary School  
Alma road  
Sidcup  
Kent  
DA14 4ED  
7.03.03

To Isabell

Thank you for showing and talking to us about those three and a half thousand year old Egyptian stuff like the bird or the mini servant. I enjoyed it there and I liked the fox, I want to go there again. I bought a ring and I liked the mummy.

Yours sincerely  
Luke and  
Class 4L/5





Birkbeck primary school  
Alama  
Road  
Sidcup  
Kent  
Dally Ted  
4/3/03

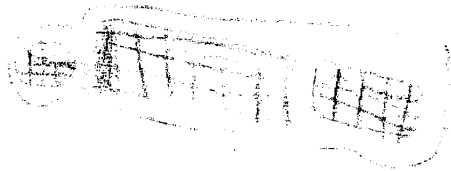
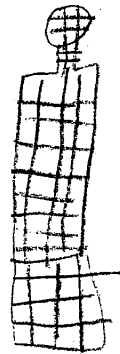
Dear Hornumans museum

Thank you for letting us visit your museum.

We enjoyed Isobels talk, especially ~~when~~ when we could hold old things from Egypt. We really liked all the things we saw like the stuffed animals.

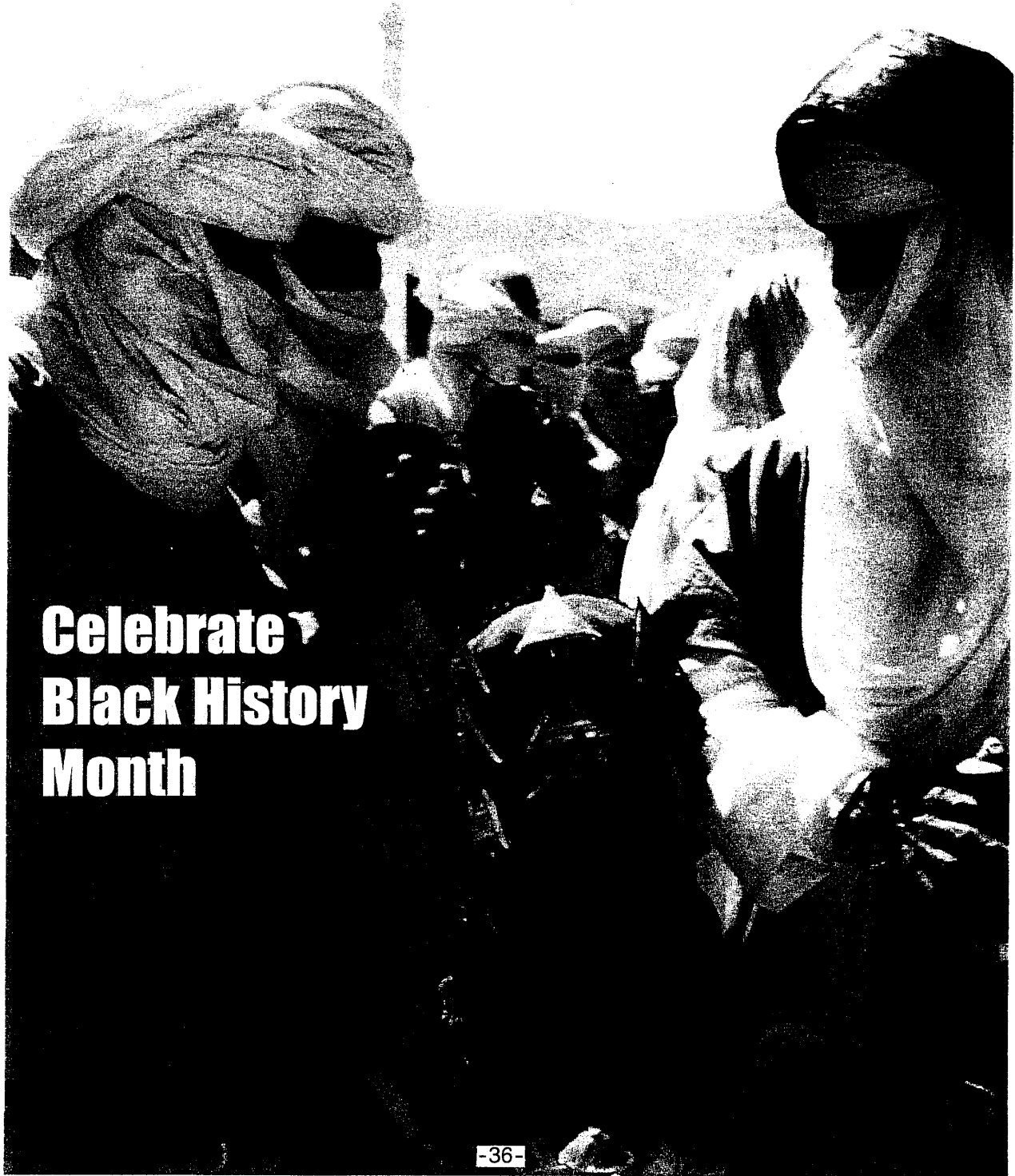
From

Daniel T.  
class 4LS



# HORNIMAN MUSEUM

What's On Guide Sept – Dec 2003



**Celebrate  
Black History  
Month**

# Welcome to the new Horniman



(above)

The new Music Gallery

photography:

© Peter Cook/VIEW

(front)

The fabled 'Blue Men' of the Sahara,

so-called because the

dye from powdered

indigo on

headaddresses turns

their skin blue.

photography:

© Marion Bull

Victorian tea trader Frederick Horniman founded the Horniman Museum in 1901, and his original vision of linking the Museum and Gardens was realised in 2002 with the opening of the new Centenary Development.

The new Horniman has much more to see and to explore:

Sound out the new **Music Gallery**

Discover world cultures in the **Centenary Gallery**

Explore the magic of puppets in **Puppet Worlds**

Touch and explore real objects at the **Hands On Base**

Celebrate Africa's diversity and history in **African Worlds** – with spectacular objects from Brazil to Zimbabwe including Africa's largest mask

Observe aquatic life up close in the **Aquarium**

Step back in time in the **Natural History** gallery

Find out more about the collections in the **Library**

Enjoy the new **Café and Shop**

Relax in the **Gardens** with panoramic views over London

Supported by the  
Heritage Lottery Fund



## Temporary Exhibitions • *Puppet Worlds*

### **Puppet Worlds – Until 2 Nov**

The last chance to experience the magical world of puppets. One of the world's oldest theatrical traditions comes to life in this stunning temporary exhibition, now including the original *Bill and Ben* puppets from 1960s television. Traditional Chinese and Indian puppets sit alongside old favourites Punch and Judy, and Pinocchio.

Find out what goes on behind the strings, discover the secrets of the puppeteer, and try out some shadow puppetry for yourself. Many of the puppets have never been on display before and are from the Horniman's amazing collection, which is one of the largest in Britain.

*Bill and Ben, UK  
Estate of Freda  
Lingstrom,  
courtesy of the  
Museum of London*

*photography:  
© Andrew Baker*



Tickets: £3 Adults, £2 Children/Concessions, Under 3s free,  
£8 Family Ticket, £20 Family Season Ticket (2 adults, 2 children),  
Pre-booked school groups £1 per person.  
Call 020 8699 1872 for further details.

### **Special Events & Activities**

See p. 9 for information about the FREE *Puppet Worlds*  
family trail and puppet demonstrations.



## Temporary Exhibitions • Early Visions

### Early Visions of the Horniman - Until 28 Sept



(above)  
Museum opening  
29 June 1901

photography:  
© Horniman  
Museum

The last chance to see this fascinating exhibition of historic photographs of the Horniman from the 1870s – 1930s, and discover the history of the early life of the Museum and its founder Victorian tea trader Frederick John Horniman. From the construction of the original building and the first displays

including the Horniman's polar bear, to the trams which once stopped outside at the long closed Lordship Lane station, the exhibition provides intriguing parallels and contrasts between past times and the current day.

Free Admission

### Early Visions Tours

Free 45 minute Museum tours linked to the exhibition by the Friends of the Horniman,

Sat 27 & Sun 28 Sept 12pm, 2pm & 3pm

(below)  
Worker honey bee  
photography:  
© David Element



### Environment Room - Now Open

Explore the Museum's new Environment Room. Find out about the links between people and the natural world, and add your own thoughts. Plus see the bees in our observation hive.

Free Admission

## Temporary Exhibitions • Sahara

Sahara - Photographs by Marion Bull

Opens 4 Oct

A stunning exhibition by Marion Bull, showing unique images taken in the Tassili N'Ajjer, a 300-mile long volcanic plateau in central Sahara, in south eastern Algeria.

This extraordinary site, the largest open-air art gallery on earth, shelters Neolithic rock paintings dating from the end of the Ice Age. These historically important works not only record life in the Sahara before it was a desert, but also portray a wide range of artistic styles which span some 12,000 years.

The exhibition depicts the dramatic landscape in and around the plateau and the nomadic Tuareg herders, the Kel Djanti, who once inhabited Tassili N'Ajjer, before they were driven out by drought. The Tuareg now return to celebrate the ancient festival of the Sebeba, where traditionally Tuareg from all parts of the Sahara would have gathered below the plateau. Bull's images document how now, as in the past, mysticism, dance, symbolism and body adornments in the form of heavy jewellery are much in evidence.

Free Admission

See p.10 for information about a FREE concert of North African Berber 'N' Rai music and dance to celebrate the opening of the *Sahara* exhibition and Black History Month.

## Sept

## Oct

Every Sat **Family Storytelling** (p.17)

- Sat 6 Hands on our Animals (p.13)  
Drop in Discovery Session (p.14)
- Sun 7 Hands on our Animals (p.13)
- Sat 13 Yeonok Jang (p.8)  
Hands on our Toys (p.13)  
Hands on our Musical Instruments (p.14)  
Shakers and Maracas (p.15)  
Music Monkeys \* (p.18)
- Sun 14 Hands on our Toys (p.13)
- Wed 17 Inside the Internet \* (p.20)
- Thurs 18 Music Appreciation \* (p.20)
- Sat 20 Rūmī Ensemble (p.8)  
Open House Tours (p.9)  
Hands on our Masks (p.13)  
Drop in Discovery Session (p.14)  
Drums (p.15)  
Batik for Adults \* (p.20)  
Memory & Imagination \* (p.20)
- Sun 21 Open House Tours (p.9)  
Hands on our Masks (p.13)  
African Drumming \* (p.18)  
African Dance \* (p.18)  
African Dance \* (p.23)  
African Drumming \* (p.23)
- Tue 23 Raise the Roof \* (p.19)  
African Pre-Colonial History \* (p.19)  
Music in London, 1700–2000 \* (p.19)
- Thurs 25 Raise the Roof \* (p.20)  
Growing Fruit \* (p.23)  
Introduction to African Art \* (p.19)
- Sat 27 Vigaykumar Jagtap (p.8)  
Hands on our Musical Instruments (p.14)  
Rainsticks (p.15)  
Hands on our Puppets (p.13)
- Sun 28 Hands on our Puppets (p.13)

- Sat 4 Echoes of the Himalayas (p.8)  
Hands on our Animals (p.13)  
Drop in Discovery Session (p.14)  
Make an Egyptian Mummy Case (p.15)
- Sun 5 Farid Adjazairi (p.10)  
Hands on our Animals (p.13)
- Sat 11 Hands on our Toys (p.13)  
Hands on our Musical Instruments (p.14)  
Make a Midnight Robber (p.15)
- Sun 12 Kabudu (p.10)  
Hands on our Toys (p.13)
- Tues 14 Adult Winter Lecture (p.23)
- Sat 18 Heritage & Culture Memorabilia Show (p.10)  
Hands on our Masks (p.13)  
Drop in Discovery Session (p.14)  
The Big Draw (p.16)
- Sun 19 Hands on our Masks (p.13)
- Tues 21 Black History Month Talk (p.11)
- Sat 25 Hands on our Puppets (p.13)  
Hands on our Musical Instruments (p.14)  
Divali: The Hindu Festival of Lights (p.16)
- Sun 26 Soul Food 4 All (p.11)  
Hands on our Puppets (p.13)
- Mon 27 Puppet Demonstrations (p.9)  
Masks from Around the World (p.15)
- Tues 28 Black History Month Talk (p.11)  
Masks from Around the World (p.16)  
Family Gallery Tours (p.17)
- Wed 29 Masks from Around the World (p.16)  
Family Gallery Tours (p.17)
- Thurs 30 Masks from African Worlds Gallery (p.15)
- Fri 31 Puppet Demonstrations (p.9)  
Masks from African Worlds Gallery (p.15)

Horniman patron, Timothy Spall,  
gets to grips with Punch & Judy  
photography:  
© Andrew Baker

# Nov

# Dec

Every Sat **Family Storytelling** (p.17)

- Sat 1 Hands on our Animals (p.13)  
Drop in Discovery Session (p.14)  
Mexican Day of the Dead (p.15)
- Sun 2 Hands on our Animals (p.13)
- Sat 8 Hands on our Toys (p.13)  
Hands on our Musical Instruments (p.14)  
Guatemalan Kite Designs (p.15)  
Batik for Families \* (p.18)
- Sun 9 Hands on our Toys (p.13)
- Sat 15 Hands on our Masks (p.13)  
Drop in Discovery Session (p.14)  
Animals with Armour (p.15)
- Sun 16 Hands on our Masks (p.13)
- Tues 18 Adult Winter Lecture (p.23)
- Sat 22 Hands on our Puppets (p.13)  
Hands on our Musical Instruments (p.14)  
Beautiful Birds (p.15)
- Sun 23 Hands on our Puppets (p.13)
- Sat 29 Hands on our Animals (p.13)  
Drop in Discovery Session (p.14)  
Painting, Printing & Model Making (p.15)
- Sun 30 Hands on our Animals (p.13)

- Sat 6 Hands on our Toys (p.13)  
Hands on our Musical Instruments (p.14)  
Printing Patterns for Christmas (p.15)
- Sun 7 Hands on our Toys (p.13)
- Sat 13 Hands on our Masks (p.13)  
Drop in Discovery Session (p.14)  
Decorations for Christmas Trees (p.16)
- Sun 14 Horniman Christmas Concert (p.12)  
Hands on our Masks (p.13)
- Sat 20 Hands on our Puppets (p.13)  
Hands on our Musical Instruments (p.14)
- Sat 20 Winter Festivals Prize Trail (p.12)  
- Jan 4
- Sun 21 Hands on our Puppets (p.13)
- Sat 27 Hands on our Animals (p.13)
- Sun 28 Hands on our Animals (p.13)

## Key

Children's Events

Adult Events

Events for All



## Useful Information

### Opening hours

#### Museum

Open daily 10.30am – 5.30pm

#### Library

As above Tues – Sat, Sun 2 – 5.30pm

Closed Mondays and Bank Holidays

#### Gardens

Mon to Sat

Open from 7.15am

Sundays and Bank Holidays

Open from 8am

Close around sunset

Check Gardens noticeboards or [www.horniman.ac.uk](http://www.horniman.ac.uk) for exact closing times.

### Free entrance

Entrance to the Museum & Gardens is FREE – an admission charge applies to *Puppet Worlds*.

### Location

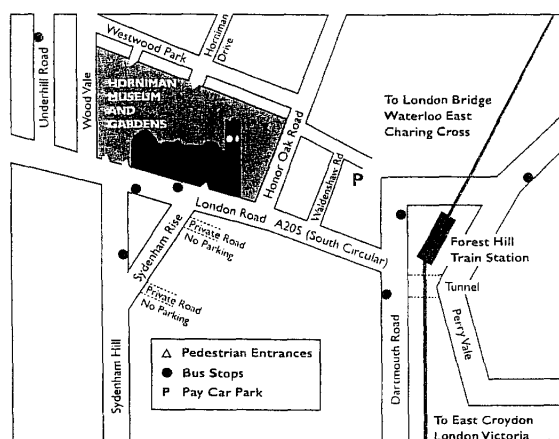
Situated on the South Circular Road (A205), five minutes walk from Forest Hill train station.

### Access

The Centenary Development and the Gardens are both wheelchair and pushchair friendly, as is the majority of the original building, with accessible toilets.

Limited on-site car parking is available for wheelchair users – call 020 8699 1872 for details.

A large print version of this booklet is available



### Free parking

Available in surrounding streets. A pay & display car park is also available locally behind Sainsbury's (see map).

### Public transport links

#### Buses

176, 185, 312, 356, P4 (stop outside)  
122, 363, P13 (stop nearby)

#### Rail

13 minutes by train from London Bridge. Other direct train services from London Victoria, East Croydon, Sutton and Purley.  
Contact 020 7222 1234 or 08457 484950 for train times.

### Contact us

The Horniman Museum,  
100 London Road, Forest Hill,  
London SE23 3PQ

Tel: 020 8699 1872

Fax: 020 8291 5506

email: [enquiry@horniman.ac.uk](mailto:enquiry@horniman.ac.uk)

[www.horniman.ac.uk](http://www.horniman.ac.uk)

All details are correct at time of going to press.  
Please telephone in advance to confirm.

## Teacher INSET Evenings Hands On Puppets

Tuesday 1 July 2003, 4.30pm – 6.30pm

Come and explore the use of puppets in classroom teaching through the Horniman Museum's handling collection, situated in the *Hands On Base*.

Upon arrival, participants will be given a brand new ***Puppet Worlds Education Pack***, which includes (in preparation for a class visit) free entry into the *Puppet Worlds* exhibition for up to 2 teachers.

Working with puppet specialists Anna Ingleby and Manju Gregory, the evening will include:

- A visit to the Hands On Base
- A puppet prototype making session
- Bringing puppets to life – techniques and movement
- Puppet links across the National Curriculum

**Cost per teacher: £2.50**

**To book your place please contact *Schools Bookings & Enquiries* on 0208 699 1872 ext. 157. Once you have booked your place/s you will receive written confirmation by post.**

25 August 2003

Dear

**TEACHER INSET EVENING, HANDS ON PUPPETS – TUESDAY 1 July, 4.30-6.30PM**

Thank you for booking a place on our Teacher INSET Evening, *Hands On Puppets*, taking place on Tuesday 1 July. Please come to the museum's main entrance Reception area for **4.25pm**, where a member of the education team will meet you at the ***Schools Meeting Point***.

The format of the evening, led by puppet specialists Anna Ingleby and Manjū Gregory, will be as follows:

4.30 – 4.35	Introduction
4.35 – 5.15	Demonstration – Movement and Making
5.15 – 5.25	10-minute break - tea/coffee
5.25 – 5.50	Puppet prototype making exercise
5.50 – 6.15	Bringing puppets to life - basic rules of puppetry
6.15 – 6.30	Summary – cross-curricular links and evaluate of session

Please find directions to the museum along with a map over page.

Should you wish to arrive early, the museum and café are open to the public until 5.30pm. Entrance to the museum is free. If you have any further enquiries do not hesitate to call.

We look forward to meeting you.

Yours sincerely,

Jennifer Dromey  
Education Assistant  
T: 020 8699 1872 ext. 157

# HORNIMAN MUSEUM

## Teacher INSET Evenings Evaluation Form

To help us improve our service, we would really appreciate feedback about how you feel the session went.

**Teacher INSET title: hands On Puppets**

**Date of Visit: 1 JULY 2003**

**Name of tutor (please circle name):**

Louise Palmer/Isabel Benavides/Other/s: **Manju Gregory and Anna Ingleby**

**Information:** Was the information you received prior to the INSET evening sufficient? If not what further information would have helped?

**Yes. It was fine. Great.**

**Yes, very clear.**

**Latecomer took another's place – so no information.**

**Demonstration:** Was the demonstration appropriate and useful? How could it be improved?

**It was appropriate – more practical doing rather than listening would have been better.**

**Wonderful 110% - good luck with your performances.**

**Excellent – very informative, packed in lots quickly, the time flew.**

**Very good but could have been more organised in hands on room.**

**Very good.**

**Demonstration.**

**Yes, any puppets from other continents?**

**More time to try things out.**

**Very enjoyable.**

**Excellent just more time.**

**It was great.**

**Very useful and informative.**

**Very good & clear.**

**Good and useful but (making exercise) not long enough as demo over-ran, but good.**

**Superb.**

Schools' Education Department, Horniman Museum, 100 London Road, Forest Hill, London, SE23 3PQ Fax: 0208 291 5506



# HORNIMAN MUSEUM

**Making exercise:** Was the prototype making exercise appropriate and useful? How could this exercise be improved?

**Yes. Very good & very practical. Brilliant ideas.**

**A larger time – maybe to make 2/3 types.**

**So useful – I want to know more.**

**I wanted to do more – maybe have a go at 2 types, however this would have resulted in too much fiddling – so a quick session was most appropriate.**

**Very good but not long enough!**

**Very good.**

**Perhaps more time.**

**Very useful – enough info sheets.**

**Yes, fantastic. If more time had been available that would have helped.**

**Very good. Longer would've been good but I understand time restrictions.**

**Very useful. To adopt in school with the classes.**

**Fun – more time? (Impossible I know)**

**More time spent puppet making.**

**Rushed but fun.**

**Content:** Did the INSET evening support the National Curriculum areas of study that you expected? How could content be improved?

**Yes. We need to brainstorm and plan a s a school how to use puppetry as a school focus next term to support/link with different curriculum areas.**

**Only to have the photocopy material when it's available. (Has been sent)**

**Excellent.**

**Very good.**

# HORNIMAN MUSEUM

## Introduction to the *Puppet Worlds* Education Pack

Welcome to the *Puppet Worlds* Education Pack. We hope that the information and activities included within this pack are both useful and enjoyable! The pack is suitable for school groups, with activities aimed at KS1 and KS2.

### In preparation for your visit we recommend that:

- School Groups book a visit to the *Puppet Worlds* exhibition by calling Reception on 020 8699 1872. If a booking is made in advance, the schools concessionary rate is £1 per school pupil/adult. If school groups fail to book in advance, cost of entry is £1.50 per school pupil/adult.
- Teachers familiarise themselves with, select and duplicate copies of the activity sheets and/or trails in preparation for visiting and exploring the *Puppet Worlds* exhibition
- Groups bring pencils and clipboards
- Teachers book a free 45-minute *Puppets from around the world* handling session, led by a member of the Schools' Education Team, in the Hands On Base. For further information or to book, please call the *Schools' Enquiries & Booking Line* on 020 8699 1872 ext. 157. Please be aware that places go quickly and that we book on a first come first served basis.
- Teachers may wish to explore the theme of *Puppet Worlds* in the classroom in advance of their visit to the museum.

#### **Make a Puppet Museum!**

Find out if the children have puppets of their own at home. Ask them to bring these puppets into the classroom to create a *Puppet Museum*, complete with information labels.

**Research could include exploring:** Materials used to make the puppets; different types of puppets and how to bring the puppets to life and the puppets' countries of origin.

-----  
This voucher entitles up to 2 teachers into the *Puppet Worlds* exhibition for a preparatory visit at the **HORNIMAN MUSEUM**. On arrival, please complete this voucher and hand it in at the Information Desk.

Teachers' names: \_\_\_\_\_

Name, address and telephone number of school:

\_\_\_\_\_  
(This voucher is valid until 2 November 2003)

## Guidance For Museum Visit

For an enjoyable school visit, please read and follow the guidance set out below.

### Behaviour

We endeavour to provide **all** visitors with a safe and enjoyable environment. Teachers and adult helpers are responsible for the behaviour and supervision of their group **at all times** both in the Gardens and the Museum.

### Horniman Gardens

The 16 acres of Gardens include a picnic area, animal enclosure and public toilets. Children are welcome to exercise in the games areas, but please ensure they are supervised and do not run in the Sunken Garden or on flowerbeds. If weather permits, the picnic area in the Gardens is available on a first come, first served basis. (Attached map shows the games areas, quiet areas and picnic area in the Gardens). **Please eat packed lunches in the picnic area only and place all litter in the bins provided. Please do not feed the animals.**

### Horniman Library

The reference library is available for teachers, small groups and individuals, to research areas represented by the Horniman's collection. **N.B The library can only accommodate 8 people at any one time.** Please ask the Information Desk about access to the library, for wheelchair users. For further reference a book list is included in the pack.

### Transport and Parking

**Buses:** P4, 176, 185, 312, 356 (stop outside the Museum), P13 and 63 (stop near the Museum) and 122 (stops in Forest Hill).

**Rail:** 5 minutes walk from Forest Hill station. The station provides direct services from London Bridge, East Croydon, Purley and Caterham. For times, contact London Travel Information on 0207 222 1234 or National Rail Enquiries on 08457 484950.

**Parking:** If travelling by coach, please use the red route bay directly outside the Museum on London Road, to set down and pick up only. Free parking is available in surrounding streets.

### Toilets & Cloakroom

Public toilets can be found to the left of the main entrance and downstairs between the Centenary and Music Galleries. All have a wheelchair accessible toilet and baby change facilities. Public toilets are also situated in the Gardens. The public cloakroom is situated next to the café. Access to lockers is available on request at the Main Entrance Information Desk.

### Access

The main entrance is wheelchair accessible from London Road as are the galleries and additional facilities via ramps, a lift and a stair lift (in the Aquarium). Please let us know in advance on 0208 699 1872 ext.157 if your need to bring vehicles to the front entrance for easier access, so we can advise on procedure.

### Safety Procedures & First Aid

*Emergency evacuation procedure:* Please follow museum staff direction and leave by the nearest exit. School groups must proceed to the school assembly point beside the **bandstand** in the Gardens (see Gardens' map). Adults should remain with their group. You will be informed of what is happening and when it is safe to return to the Museum. If you are a booked group, **please do not leave the grounds without informing a member of Horniman staff.** It is expected that groups will provide adequate first aid cover for their needs. However, assistance is available on site in an emergency. Please contact and report all accidents to a member of Museum or Garden staff.

# HORNIMAN MUSEUM

## ***Puppet Worlds* Education Pack Content**

### ***Puppet Worlds* Exhibition Activities**

We recommend the selection of 3 of the following activities for a 30-minute experience in the *Puppet Worlds* exhibition:

- ❑ **Activity 1: Voices and Movement – Hand**  
10-minute activity. Suitable for KS1 and KS2 with adult support for younger children
- ❑ **Activity 2: Voices and Movement – Object**  
10-minute activity. Suitable for KS2. In preparation for the visit please select and bring a range of objects. These might include: a *bunch of keys, a notebook, a pencil, a pair of sunglasses, a watch or a piece of jewellery*
- ❑ **Activity 3: Story Making – Make Your Own Story!**  
10-minute activity. Suitable for KS1 and KS2 with adult support for younger children
- ❑ **Activity 4: Observation – Arimba's face**  
10-minute activity. Suitable for KS1 with adult support for younger children
- ❑ **Activity 5: Observation – Arimba**  
10-minute activity. Suitable for KS2
- ❑ **Activity 6: Observation – What's in a Name?**  
10-minute activity. Suitable for KS2. Answer sheet available in pack

### **Trails**

We recommend the selection of a *Puppet Worlds* trail for a 30-minute experience in the *Puppet Worlds* exhibition. You may also like to explore the rest of the museum with a *Puppet Pathways* trail. All trails are divided into 3 parts. Answer sheets available in pack. Please start off small groups at different **Starting Points**. These are indicated at the beginning of each **Part**.

- ❑ ***Puppet Worlds* Trail 1**  
30-minute activity. Suitable for KS1 with adult support for younger children
- ❑ ***Puppet Worlds* Trail 2**  
30-minute activity. Suitable for KS2
- ❑ ***Puppet Pathways* Trail 1**  
30-minute activity. Suitable for KS1 with adult support for younger children

# HORNIMAN MUSEUM

## Glossary

The following glossary of words aims to support the text panels in *Puppet Worlds* exhibition. Words and terms are listed in alphabetical order. This glossary can be copied and given to older pupils/children.

### **BRAHMA**

Brahma is the Hindu Creator God. He is shown as having four faces and rides on a swan. He is sometimes known as the **Supreme Puppeteer** – influencing humans like a puppeteer does a puppet!

### **BURMA**

This is a country in South East Asia. It is now officially known as **Myanmar**.

### **CUDGEL**

A cudgel is a short stick used as a weapon. Mr Punch's cudgel is called a **slapstick**. It makes a 'slap' sound when it hits another puppet.

### **DALANG**

Dalang is the name for the **puppeteer** in Indonesian (Java and Bali) and Malay traditions. The dalang moves the puppets, tells the story with all the different voices for each character and also directs the gamelan or orchestra.

### **DYNASTY**

A dynasty is a line of hereditary rulers who are all descended from the same family.

### **GAIT**

A gait is a manner or style of **walking**.

### **GAMELAN**

An **orchestra**, known as a gamelan, sits behind the dalang (puppeteer) and accompanies the performance. The instruments include gongs, metallophones (series of tuned metal bars arranged in a single or double row), xylophones, bowed stringed instruments, flutes and oboes as well as choral singers, usually female, known as **pessiden**.

### **INDONESIA**

(Say IN-DOE-NEE-ZEA)

This is a country in South East Asia made up of many islands including **Bali** and **Java**.

### **KATHPUTLI**

(Say CAT-PUT-LEE)

Kathputli means **wooden doll**. They are puppets from Rajasthan that are moved using strings.

### **KERALA**

This is a state in South West India.

### **MANDARIN**

A mandarin is a Chinese court official, a bureaucrat or minister of state.

# HORNIMAN MUSEUM

## Bibliography

- |   |                                   |
|---|-----------------------------------|
| Art & craft magazine Sept '82                 | Puppets special issue             |
| Backstage at bunraku                          | Barbara C. Adachi                 |
| Bunraku                                       | Tokia Oga                         |
| Burmese puppets                               | Noel F. Singer                    |
| China's puppets                               | Roberta Helmer Stalberg           |
| Educational Puppetry Association Publications |                                   |
| Hand puppets & string puppets                 | W. S. Lancaster Dryad             |
| Javanese shadow puppets                       | J. Scot Kemball – British Museum  |
| Kargoz  | Metin And – Dost Yayinlari Ankara |
| Let's make puppets                            | Philpott – Evans                  |
| Making shadow puppets                         | E. Coleman Search Press           |
| Malay shadow puppets                          | Amin Sweeney – British Museum     |
| Punch & Judy                                  | George Speaight – Studio Vista    |
| Puppetry in the primary school                | D. Currell – Batsford             |
| Puppetry today                                | Helen Binyon                      |
| Shadow puppets                                | Olive Blackman                    |
| Simple puppetry                               | S. Jackson – Studio Vista         |
| The art of the puppet                         | Bill Baird                        |
| The Chinese puppet theatre                    | Segei Obraztsov – Faber           |
| The complete book of puppetry                 | D. Currell – Pitman               |
| The Punch & Judy show                         | Robert Leach                      |
| The puppet theatre                            | Jan Bussell – Faber               |
| The world of puppets                          | Simmen – Phaidon                  |
| Wayang puppets                                | R. L. Mellema                     |

*The majority of these books can be found in the Horniman Museum's library.*

## Acknowledgements

Written and developed by Horniman Education Section and puppet specialists, Anna Ingleby and Manju Gregory.

## Puppet Worlds Education Pack National Curriculum Links

One of the aims of the National Curriculum is to develop an understanding and appreciation of different beliefs and cultures. It requires children to, "Think about the lives of people living in other places and times, and people with different values and customs." The multicultural nature of the Horniman Museum collections provides teachers with a rich source, from which they can develop work to fulfil this aim.

All objects in the collection relate to people, the environment and cultural history. This is reflected in the museum's aim for:

*'The provision of a public, educational museum and gardens to encourage a wider appreciation of the world, its peoples and their cultures and its environments.'* (Trustees Report March 1998)

### Key Stage 1

#### **En1 Speaking and listening, Drama**

*4 a) use language and actions to explore and convey situations, characters and emotions*

#### **En1 Speaking and listening, Listening**

*8 a) telling stories, real and imagined*

#### **En2 Reading, Literature**

*6 c) retelling of traditional folk and fairy tales*

#### **Literacy Strategy, Year 1 Term 1, Text level work: Comprehension and composition**

*3 to notice the difference between spoken and written forms through re-telling known stories; 5 to describe story settings and incidents and relate them to own experience...*

#### **Art & design, Exploring and developing ideas**

*1 a) record from first-hand observation, experience and imagination...*

#### **Art & design, Knowledge and understanding**

*4 b) materials and processes used in making art, craft and design*

#### **Sc3 Materials and their properties, Grouping materials**

*1 d) find out about the uses of a variety of materials...*

#### **Design & Technology, Working with tools, equipment, materials...**

*2 d) assemble, join and combine materials and components*

#### **PSHE & Citizenship, Developing good relationships...**

*4 c) to identify and respect the differences and similarities between people*

# HORNIMAN MUSEUM

## Object Information Sheet: 20 Key Puppets in *Puppet Worlds*

### SRI LANKAN STRING PUPPETS

Most puppetry in Sri Lanka is based on comic folk opera, **Nadagama**, which spread from south India in the early 19<sup>th</sup> century. Puppet characters include characters from the court - such as the King, Queen, Prince and Konangi the clown - and the countryside - such as the farmer and his wife. The puppets are crafted from small blocks of kadura wood, which is lightweight, soft and easy to carve. The average height of puppets appearing on stage is around 4ft/1.2 metres but some of the key heroes can be life-size!



#### 1. Demon, String Puppet, Sri Lanka

This demon is of a similar design to some Sri Lankan 'Sanni' curing masks. These masks are used in ceremonies to overcome disease or sickness. Good demons are closely associated with Buddhist ideas.

### KATHPUTLI (pronounced CAT-PUT-LEE) STRING PUPPETS, RAJASTHAN (pronounced RA-JAS-TARN), N.W. INDIA

Heroes, snake charmers and court characters feature in Kathputli puppet theatre. Kathputli means **wooden doll** – their heads are made of wood and their bodies of stuffed cloth and/or free-flowing fabric.

#### 2. Amar Singh Rathore, String Puppet, Jaipur, Rajasthan, N.W. India

Most Kathputli drama centres around this real life local folk hero who lived in the time of the Moghul emperor Shah Jahan (1592 – 1666) – a member of a Mongolian Muslim dynasty in India. This nobleman is said to have committed heroic deeds against Moghul invaders.

#### 3. The Snake Charmers and Snake, String Puppets, Jaipur, Rajasthan, N.W. India

In Rajasthan, the Sapera people, known as the snake charmers, live and perform with snakes - considered to be the guardians of spiritual truth. Their influence spread to the puppet world where they became part of court entertainment. In performances the snake towers over the snake charmer, ending with the snake attacking the snake charmer by either biting or coiling round him! The exhibition photograph shows a puppeteer using these puppets along with **ghungru** bells that he plays.

#### 4. Hobby Horse, String Puppet, Udaipur, Rajasthan, N.W. India

Dancers at weddings in India traditionally perform the horse dance known as **Kachhi Ghodi**. The costume makes the dancer look as if he or she is riding a horse! The dancer brandishes a sword to act out mock fights. While this happens, a ballad is sung about the exploits of local heroes. The dance is very energetic, with nimble side stepping and pirouetting to the music. The puppeteers perform this horse dance with bells, also held in their hands. These are played in rhythm



## PUNCH AND JUDY HAND OR GLOVE PUPPETS, ENGLAND

Punch (short for Punchinello) originated in Italy as Pulcinello, a character played by a masked actor in Commedia del'Arte theatre. He was brought to England by Italian puppeteers as a marionette (string puppet). The first mention of a Punch and Judy show in England is in Samuel Pepys' diary of 1662. The performance took place in Covent Garden, London, where Punch and Judy performances are still held today. By the 19<sup>th</sup> century, Punch and Judy became the hand or glove puppets we now know, complete with a portable street booth. Similar puppet traditions exist in other parts of the world; Jan Klaassen in Holland, Kasper in Austria and Germany, Guignol in Belgium and Petrouchka in Russia.



### 9. Mr. Punch, Glove Puppet, England

Punch was a comic buffoon, a source of light entertainment. Over time, his character became more and more loud-mouthed and vulgar. His belly, nose and hunched back grew bigger, and his costumes became brighter. As marionettes became less popular in the 19<sup>th</sup> century, Mr. Punch was seen more often as a glove puppet, particularly at outdoor events that attracted crowds. Originally Mr. Punch was not intended for children and poked fun at authority. Mr. Punch is always operated by The Professor's (the puppeteer) right hand, with the other characters taking turns on the left.

### 10. Judy, Glove Puppet, England

Judy is the wife of Mr. Punch, known as Joan until the 1820s. She dances and squabbles with Punch, especially when Punch throws their **baby** out of the window for crying too much! She is the victim of Punch's slapstick and in the traditional story, is killed by him. She returns as a ghost and haunts him. In the past, Joan was a more aggressive character, with Mr. Punch 'playing' the victim!

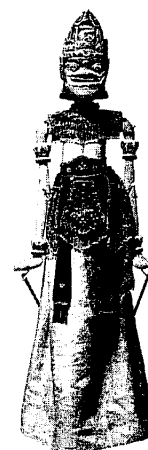
In the traditional story, the **Beadle** (also known as the Officer of the Law, the Bow Street Runner or the constable) then arrests Mr. Punch for her murder. Mr. Punch is sentenced by the **Judge** to hang but tricks the **Hangman** (sometimes known as **Jack Ketch**) into hanging himself. Mr. Punch is carried away to hell by the **Devil** who Punch defeats in a battle. Sometimes Mr. Punch tricks the devil into carrying away the hangman!

In some plays, Mr. Punch defeats the **Crocodile**. The crocodile made its appearance in the show in the 1960s and took over the role formerly associated with the devil. It is the crocodile who swallows Mr. Punch's slapstick and ends his 'reign of terror'!

## INDONESIAN ROD PUPPETS (WAYANG GOLEK)

The legends of gods and ancient heroes are often told in these puppet performances. The rod puppets from Sunda in west Java on display are from the **Mahabharata** (pronounced MA-HA-BA-RA-TA), a poem originally from India, detailing the historical battles between the Pandawa and Korawa families. These real battles were believed to have taken place in the 13<sup>th</sup> or 14<sup>th</sup> century BC. The poem was written, in its present form, around 400 AD and is believed to be the longest in the world.

The personality types, and therefore characters, are recognisable by the shape of their headdresses, the slant of their noses, the size and shape of their eyes and the presence or absence of fangs.



attached to Karagoz's headwear. With a quick flick of the puppeteer's wrist, Karagoz's hat can expose his bald head!

#### **14. Hacivat, Shadow Puppets, Turkey**

Hacivat is the reflective intellectual philosopher, not dynamic and energetic like Karagoz. He is shown with a pointed, turned up beard. He is respected by his neighbours for being knowledgeable about the principles of etiquette and protocol. This is in contrast to Karagoz who is often a victim of practical jokes and threats from the locals.

### **INDIAN SHADOW PUPPETS, KERALA, S.W. INDIA**

The puppets, each 2½ to 3 feet/0.75 – 1m high, are carved from scraped deerskin with supporting rods made of bamboo. The puppets are characters from the **Ramayana** (pronounced RAM-EYE-AR-NA), a famous story originating in India. It was written by Valmiki around 500-200 BC. The performances take place over 21 evenings. The performances take place in specially built theatres in temple forecourts and medical and dietary advice is sometimes given in amongst the narration.

The Ramayana tells the story of Rama (pronounced RAR-MA), prince and heir to the throne, who is banished from his home through the trickery of his stepmother. Rama along with his brother, Lakshmana and his devoted wife Sita (pronounced SEE-TA), are exiled for 14 years. One day Sita vanishes, kidnapped by a wicked demon named Ravana. Rama turns to an army of monkeys for help. The brave leader of the monkeys, Hanuman, agrees to help Rama and finds Sita in the city of Lanka (Sri Lanka) where the demon has taken her prisoner. With the help of the monkey army, Rama rescues her and eventually inherits his rightful kingdom. The well-known festival of Divali (festival of lights) celebrates Rama's return from exile, when the villagers of Ayodhya, carrying lights, greeted him.

The shadow screens used are quite long, measuring about 12 feet by 4½ feet/3.6m by 1.35m and are lit by an oil lamp. While coloured, the skins of the puppets are opaque rather than translucent, and so the shapes rather than the colours of the puppets come through the screen.

#### **15. Hanuman, Shadow Puppet, Kerala, S.W. India**

Hanuman is general of the monkey army. He is the son of Vayu, god of the wind and has the gift of flight. He becomes a very loyal devotee to Rama.

#### **16. Sita, Shadow Puppet, Kerala, S.W. India**

Princess Sita is offered in marriage by her father King Janaka of Mithila, to anyone who can bend the Bow of Siva (pronounced SHE-VA). The bow is so big that it has to be carried in a wagon with 8 wheels drawn by 150 men. Only Rama can bend the bow and so 'wins' Sita's hand in marriage. Sita is considered to be the perfect wife and woman – tender, beautiful and compassionate.

#### **17. Ravana, Shadow Puppet, S.W. Kerala, India**

Ravana is a ten-headed demon. Disguised as a wandering monk, he gains Sita's confidence and snatches her away!

#### **18. Lakshmana, Shadow Puppet, S.W. Kerala, India**

Lakshmana is the younger brother and companion of Rama. Lakshmana means *fortunate*.

# HORNIMAN MUSEUM

## Object Information: Other Gallery Links to *Puppet Worlds*

The objects listed below are found in the main galleries and link to the *Puppet Worlds* exhibition. Objects are listed under the galleries in which they appear.

Some of the information below can be found in the *Puppet Pathways* trails.



### RAMAYANA AND MAHABARATA STORIES

(pronounced RAM-EYE-AR-NA and MA-HA-BA-RA-TA)  
These are Hindu epics whose stories started in India but have also inspired storytelling in puppet theatre in Indonesia and Malaysia.

Look for the **red stone figures** of **Hanuman** and **Ganesh** from Jaipur in Rajasthan, India opposite the **Pacific spears and masks** on the **left hand side** of the gallery.

**Hanuman**, a character from the **Ramayana**, features in the Keralan (S.W. India), Malay and Thai shadow sections of the *Puppet Worlds* exhibition.

**Ganesh**, the son of Parvati and Siva (pronounced SHE-VA), is an elephant headed god reputed to have written down the epic **Mahabharata**. In his eagerness to write the stories down, he torn off a tusk to use as a pen.

Ganesh is often used to open Indian shadow plays to bestow good luck and success on the performance, much like the shadow puppet of Rishi, the holy hermit, in Thailand.



Look above the stone figures of Hanuman and Ganesh, at the figure of **Kali dancing on Siva**

A Javanese shadow (wayang kulit) puppet of **Batara Guru**, features in the *Puppet Worlds* exhibition (and 20 Key Puppets list). Batara Guru shares similar qualities to Siva. Both examples are shown with a crescent moon over their heads.

### SRI LANKAN STRING

Look for the Sri Lankan 'Sanni' curing masks (rear of the first case as you come in the entrance). Look at those in the **second to last rows with large eyes, revealed teeth and fangs**.

The demon string puppet in the *Puppet Worlds* exhibition shares similar qualities to these curing masks. These masks are worn by dancers in healing ceremonies to expel evil spirits that, it is believed, may be causing disease or sickness. The masks represent either the demon causing the disease or the sickness itself. Offerings are made to the demons who promise to leave the patient.

These puppets are of Prince Charles, Princess Diana and a British policeman. The puppet maker copied their likeness from a press photograph of their wedding in 1981.

This puppet tradition is usually reserved for subjecting human weakness to public ridicule. During colonial times, British dignitaries were often satirised including District Officers and even King George and Queen Mary.

## EGUNGUN ROD, NIGERIA

Look for the 2 **Egungun rod puppets** from Nigeria, **below the Bunraku puppet and heads** on the **right hand side** of the gallery.

These puppets are used in Yoruban festivals honouring lineage ancestors, and enact the first stage of the human life cycle – copulation. Egungun means ‘masquerade’. The **African Worlds** gallery displays an Egungun mask from Nigeria (see notes below).

## ITALIAN MARIONETTE

Look for the **Italian marionette**, **beside the Bunraku puppet and heads** on the **right hand side** of the gallery.

This string puppet is a harlequin or tumbling clown from Naples, Italy. The harlequin was a character, played by a human actor, from the Commedia del’Arte theatre like the original Punch and Judy. A marionette is a type of string puppet.



The music gallery is organised in the following sections:

- **The Rhythm of Life** (first cases as enter)
- **The Ideal Sound** (behind **The Rhythm of Life** cases)
- **Listening to Order** (cases along wall furthest from entrance)

## RAMAYANA STORIES

Look for the **Ravana** mask and costume plus anklets and bow of Siva from Sahnai, West Bengal in north-east India in **The Rhythm of Life: Adulthood and Survival** (middle case) section.

The video shows the Chhau dance (a theme of good over evil) from the chaitra parva festival, detailing Ravana’s attempts to win Sita’s (pronounced SEE-TA) hand in marriage by bending the Bow of Siva. Rama (pronounced (RAR-MA) is the victor.

## UZBEKISTAN ROD

(Pronounced OOZE-BECK-E-STARN)

The following instruments, seen being used in a traditional Uzbekistan wedding procession (see video), are also used to announce public events such as the start of a puppet performance.



Look for the single **gong** from Borneo, Malaysia, instrument number **29** in the **Listening to Order** cases (look high).

Look for the **photograph** of a **Malaysian gamelan orchestra** above the information for instrument number **121** in the **Listening to Order** cases - a **geduk ibu** (barrel drum with 2 beaters) from Malaysia. To be added (date to be confirmed).

Look for the **gedumbak** (goblet drum), instrument number **134** in the **Listening to Order** cases, from Malaysia (at eye level).

Look for the toy **suling** (flute with external duct) from Java, Indonesia, instrument number **302** in the **Listening to Order** cases (at eye level). These are not found in gamelan orchestras, but are used in wayang performances.

## BUNRAKU PUPPETS, JAPAN

These puppet performances are accompanied by music and song. A small room above the stage, called a **geza**, is used for the musicians.

The most common instrument used is the **gidayu** (narrative) **shamisen**, a 3-stringed, banjo-shaped lute. It is played using a plectrum in the right hand to strike the strings.



These puppet performances are accompanied by music and song. A small room above the stage, called a **geza**, is used for the musicians.

Look for the **shamisen** and plectrum, instrument number **187** in the **Listening to Order** cases (at eye level). Another shamisen (without plectrum) with 'tutor' or music book and spare strings can be found in **The Rhythm of Life: Childhood and Learning** section (case nearest entrance), instrument number **74 and 75**

## PUNCH AND JUDY HAND OR GLOVE, ENGLAND

Traditionally, a musician playing a drum and blowing panpipes (hands free!) would work with **The Professor** (the Punch and Judy puppeteer) to encourage the crowds. An assistant would collect money from the crowd much like busking today. This assistant was known as a **Bottler** because he would use a bottle for the money. In this way, people could not reach in and steal the money while he was not looking!



Look for the Romanian nai or **panpipes**, instrument number **278** in the **Listening to Order** cases. **Panpipes** like these are similar to the ones traditionally used in **Punch and Judy** performances (look low).

## BURMESE STRING and THAI SHADOW

A **tiger** (kyar) puppet is sometimes used in Burmese string puppet shows.

In Thailand, shadow puppets of Phra Ram (Rama) and Lak (Lakshmana, his brother) are made from the skin of special buffalo. These buffalo must either have given birth, been struck by lightning or have been partly eaten by a **tiger**.

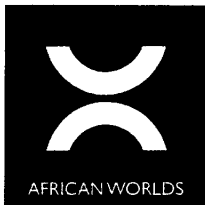
Look for the **tiger** skull in **case 68 (upper floor, right hand side)**

## UZBEKISTAN ROD and MALAY SHADOW

The **Uzbekistani rod** puppet character of **Iskander** (Alexander the Great) has horns. Horns are permanent structures on the side or median line of animals' heads.

In **Malay shadow** theatre, **Mahraja Wana** (Ravana), the evil abductor of Siti Dewi, disguises himself as a deer. Deers have antlers, paired branched structures, which are shed and renewed annually.

Look for the **Wapiti deer** from N. America, **Black buck** from India and the **Musk Ox** from Arctic America in **case 36/37** of the **Defences of Animals – Horns and Antlers** section (**lower floor, left hand side**).



## EGUNGUN MASK, NIGERIA

Look for the **Egungun mask** from Nigeria, object number **10** in the **first case opposite the Brazilian Candomble altar for Ogun**.

The word Egungun means 'masquerade' in Yoruban (a language of Nigeria and parts of West Africa). A pair of Egungun puppets are also displayed in the Centenary Gallery.

The mask is like a wooden cap with a human head form worn with an elaborate costume. The mask is worn in special ceremonies to honour family ancestors who continue to influence living relatives' lives.

### Exploring Musical Instruments

(The 'tools' for this study can be adapted for investigating and learning from other objects.)

**FIRST QUESTION**  
**What is it?**  
**- Let's find out!**

#### SOCIAL FUNCTION

What is it used for?

- **entertainment,**
- **ritual**
- **accompanying dance**
- **theatre**
- **signalling**

#### PROVENANCE: GEOGRAPHY AND HISTORY

Where did it originally come from?  
How did it get to be here? (eg. travel bought, gift)

#### DESIGN TECHNOLOGY materials

**What is it made from?**

- How do we recognise different materials? (eg. wood, metal)
- Where did the materials come from? Source: wood, metal, recycled...
- What **tools** were used to make it?
- Was it made industrially (in factory) or individually (in small workshop)?
- Why was it made in this way?
- Is it decorated?
- Compare with similar objects: 'similar / different'
- How does it work?
- Is there a dedicated energy source? eg. electricity, battery, spring
- **Can we make something similar?**

#### SCIENCE

**Vibration, resonance, pitch, amplification, timbre** (description of sound quality: eg. soft, harsh, jingly, powerful)

**How is sound produced?**

- **resonant material** eg. wood (xylophone), metal (gong)
- **stretched material**, drums beaten with hand or stick
- **vibrating air**: wind instruments: flutes, trumpets (vibrating lips), reeds (eg. clarinet, accordion)
- **string**: eg. plucked (guitar), bowed (violin), struck (piano)  
Look at how a stretched string vibrates
- **electronic** eg. synthesiser
  
- **How do we feel vibration?**
- Through solid material
- Through air
  
- **Resonators and amplifiers**
- Try speaking into a cup or bucket
  
- **Mbira**
- Experiment plucking wooden ruler using table as resonator
- **Panpipes**
- How does length of pipe affect pitch (high or low notes)?
- **Trumpets**
- Make conical **megaphone** (paper, card) to amplify voice
- **Xylophone/Metalophone**
- How size of keys affect pitch

#### MATHS

- describe **shape** (eg. square, cylinder, cone)
- **number** (eg. 6 strings, 8 wooden keys)
- **size** (eg. bigger, smaller)
- **weight** (heavy, light)
- bells/gongs/chimes:  
**time** the sustained ring  
drum: **count** beats

#### IMAGINATION

- play an instrument, listen to music
- pretend: pictures in your head
- make sounds to imitate wind, rain, a river, stars...

#### RECOGNISING SOUNDS

- compare (eg. with eyes closed recognise metal, wood, string &c).
- make shakers containing different things eg. sand, beads, flour, pebbles

## Teachers' Guide to the Music Gallery: Musical Instruments from around the World

*One of the stated aims of the National Curriculum is to develop an understanding and appreciation of different beliefs and cultures. Moreover it specifically requires children to "Think about the lives of people living in other places and times, and people with different values and customs." The multicultural nature of the Horniman Museum collections provides a rich source from which teachers can develop work to fulfil such ideals.*

### **Introduction to the exhibitions**

The Horniman Museum has one of the world's widest ranging collections of over 7,500 musical instruments. There are around 1,500 instruments on display in the new Music Gallery .

Visitors will be able to find out about musical instruments from all parts of the world and throughout history – from 3,500 year old Egyptian clappers to electric guitars.

*Mu 5d (KS1) "...a range of music from different times and cultures."  
Mu 5e (KS2) " "  
Mu 4c,4d,5e (KS3) "...resources and processes used in selected musical genres and traditions." "...contextual influences.."*

*En2 2a (KS1) "...use captions to find information..."*

*En2 3a (KS2) "...scan text to find information..."*

*En2 3c (KS) "...obtain specific information..."*

*Ge (KS1&2) "Geographical enquiry and skills" "Knowledge and understanding of places"*

*A&D (KS1&2) "collect visual information" "compare ideas in others' work" "the roles and purposes of craftspeople and designers working in different times and cultures" "investigating craft and design in the locality in a variety of genres, styles and traditions"*

*A&D 4c, 5d (KS3) "continuity and change in the purposes of craftspeople and designers from Western Europe and the wider world" "investigating craft and design in a variety of genres, styles and traditions, and from a range of historical and cultural contexts"*

*PSHE&Cit (KS1) 4c "to identify and respect the differences and similarities between people"*

*PSHE&Cit (KS2) 2e "...to understand other people's experiences."*

*4b "...to think about the lives of other people living in other places and times..."*

*4f " differences and similarities between people arise from factors including cultural, ethnic and religious diversity..."*

*Cit (KS3&4) "use imagination to consider other people's experiences"*

*PSHE (KS3&4) "...respecting the differences between people...how to empathise with people different from themselves...the diversity of different ethnic groups"*

### **Access**

There is full ramp and lift access to all areas of the gallery.



## Music Gallery Content

### **The Rhythm of Life**

The display shows how music can be essential in celebrations throughout people's lives. The instruments and videos were collected and recorded during recent research projects ranging from Cameroon to Croydon.

#### Childhood and Learning

- **Infancy** – protective charms and noisemakers
- **Yoruba naming ceremonies** - drums feature in a video
- **Children's musical instruments** – noisy toys and games.
- **Japanese doll festival** – a set of dolls playing miniature musical instruments
- **Music education** – a small drum played by a child from a family of West African drummers
  - a child's violin used by a Bromley child who grew to be a professional musician
- **Leaving school** – a video performance by final year students at the BRIT School, Croydon

#### Adulthood and Survival

- **Status** – trumpets for royal ceremonies, Benin, West Africa
  - a drum used in the annual 'beating the bounds' ceremony of an English parish
  - musical instruments used to express passion
- **Wedding Music** – a video of ceremony and dance from Uzbekistan
- **Moving to Music** – instruments and sound makers associated with marching, working and dance
  - bagpipes, jingles and tap dancing shoes
- **The Seasonal Round** – video of extract from a chhau dance performance of the Ramayana story, from West Bengal, India, that features in the Chaitra parva festival celebrations in mid-April each year
- **Survival** – instruments used in herding and hunting animals
- **Festival** – instruments owned and played by Arnold Dolmetsch in the Haslemere Festival of Early Music, which takes place in July each year
- **Spirituality** – didgeridu, aboriginal Australia
  - bells from Tibetan Tantric Buddhist ritual
- **Death and Remembrance** – instruments used in the "sak vue" celebration to "disperse death", the final and most important of the funeral ceremonies held in the Bamileke area of West Cameroon, Africa

### **Listening to Order**

This huge display of over 900 musical instruments shows some ways in which they can be classified and compared.

The classification system that is widely used in museums and research today is called the 'Hornbostel-Sachs' system'. Instruments can be placed in one of five classes according to their principal sound source.

1. **Idiophones** – *sound made from sonorous material that does not require tensioning*. These are mostly percussion instruments - for example: wood – xylophone, metal – gong, rattles and scrapers of various materials. There are also plucked idiophones like musical boxes and African mbiras, and oddities like the 'Glass Armonica' and the musical saw.
2. **Membranophones** – *sound made from a stretched membrane* – Drums like the Sioux Indian 'powwow' drum and the Moroccan bendir frame drum.
3. **Chordophones** – *stretched strings* – zithers, lutes, fiddles and harps
4. **Aerophones** – *sounds from vibrating air* – a multitude of flutes, panpipes, ocarinas, reed instruments like clarinets and bagpipes, and trumpets from giant conch shells to a 4.5 metre coiled hunting horn.
5. **Electrophones** – *instruments using a loudspeaker* – electric guitars and synthesizers

There are also illustrations of:

- the 4000 year old Chinese 'bayin' classification system in which the eight groups are associated with seasons, points of the compass and various forces of nature

The remainder of this extensive display is the Adam Carse collection of woodwind and brass instruments. The 300 instruments illustrate the technological evolution of these instruments from the 18<sup>th</sup> Century to the present day

### **The Listening Stations**

Linked to the above display is a series of 'listening stations' where individuals and groups can hear a selection of musical examples illustrating 90 featured instruments.

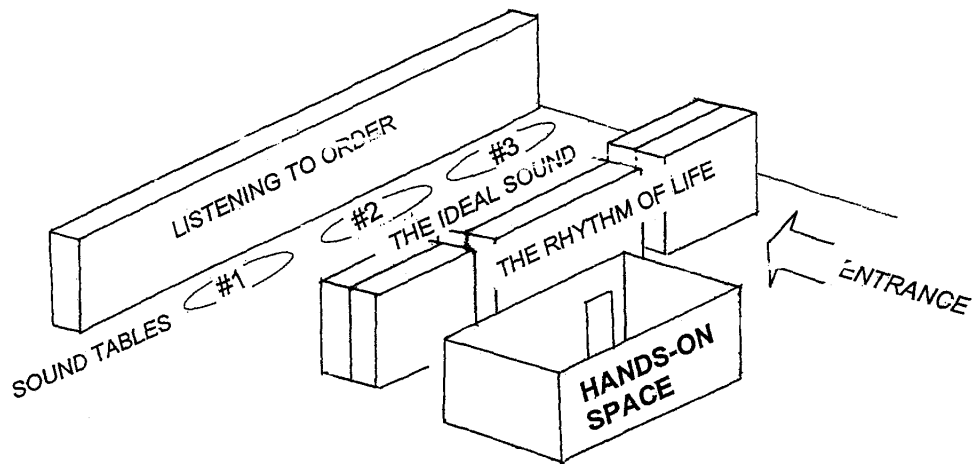
# HORNIMAN MUSEUM

## A gallery trail for school parties, family groups and individual visitors to the Music Gallery

This trail starts in the Hands-on Space where you can try playing a variety of musical instruments.

Use this guide to find out:

- how each instrument fits into local music traditions around the world
- how similar types of instruments are used in different cultures



## SINGING BOWLS

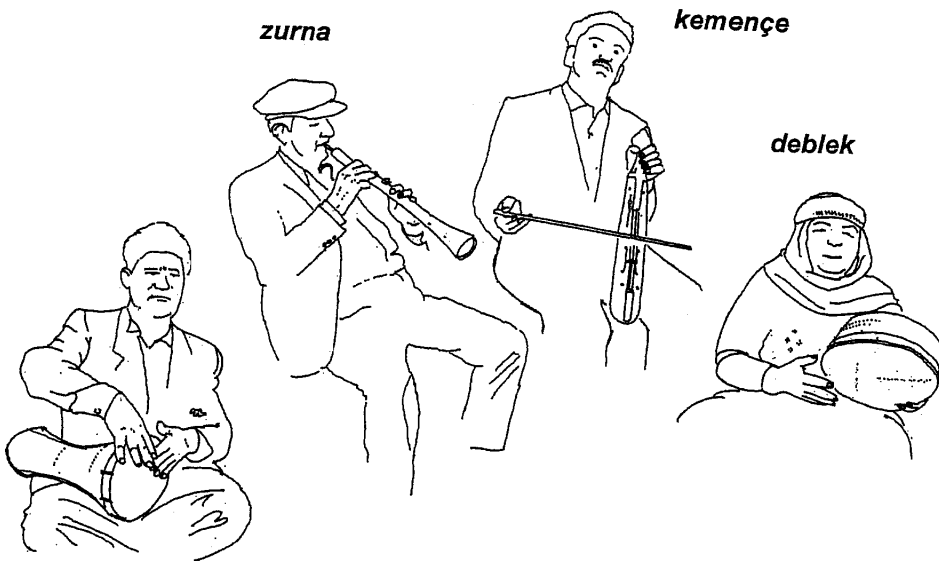
- Gently tap one of the bowls and time the number of seconds that the bowl vibrates.
- These bowls are an example of an *idiophone*, the sound is made from the vibration of sonorous material – metal. These bowls work as *bells*. Find some other bells in the collection
- This type of singing bowl originally comes from Tibet. Look at our collection of instruments used in Tibetan Buddhist ceremonies in the main gallery.

Sound table 1 #35  
Sound table 2 #413

## DUMBEK

The dümbek and similar drums are played over a wide area of the Eastern Mediterranean and the Middle East. They play the dance rhythm while other instruments play the melody.

- Here are some instruments that can be played with the dümbek. See if you can find them.



- Find two similar 'goblet' drums: a tarabuka from Macedonia and a darabukka from Morocco.
- The dümbek in the Hands-on Space has a metal body and a plastic drum head. What are the tarabuka and the darabukka made from?

Sound table: #132

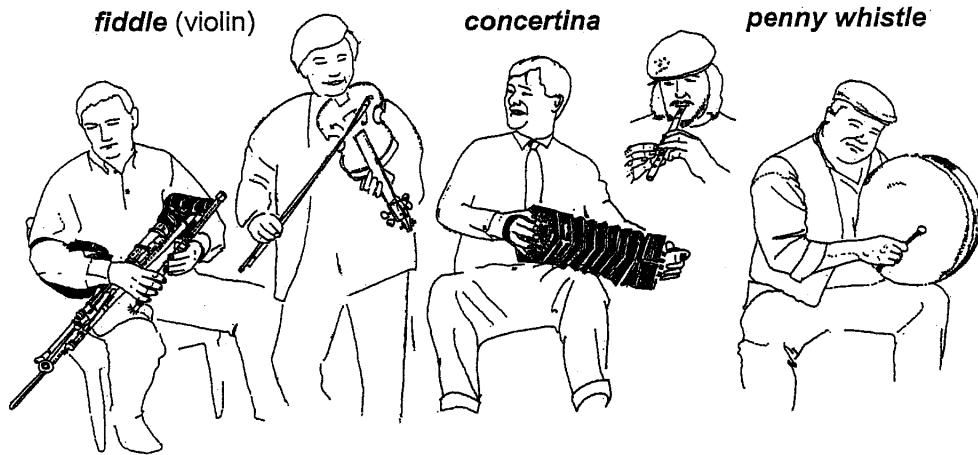
## **BODHRAN**

(pronounced 'bough-rawn')

The *bodhrán* can beat the rhythm in a band playing Irish dance music.

- Find some other instruments that could be in the band:

Sound table 1 #139



### ***uilleann pipes***

(pronounced 'illiun') These bagpipes are not mouth-blown. The air is pumped in the bag with bellows under the player's right elbow.

Sound table 2 #391

- The bodhran is a kind of **frame drum**. The wooden frame is not very deep.  
Frame drums are found in many parts of the world. Find three more frame drums – where are they from?

## Glossary of terms

<b>Amplify</b>	<b>Sonorous</b>	<b>Resonator</b>
<b>Stridulator</b>	<b>Rasp</b>	

**What do these words mean?**

**Let's find out!**

To '**amplify**' can mean to make sounds **louder**.

Here is a way to **amplify** your voice:

- Make a cone shape with a sheet of paper or card.  
Make sure the narrow end has a hole that will fit over your mouth.  
Now speak into the cone.  
This cone shape amplifies your voice. It is called a megaphone:  
'mega' is from a Greek word meaning 'very large' and 'phone' is from a  
Greek word meaning 'voice'.  
(Think about 'xylophone' and 'telephone').  
So a megaphone makes a very large voice!

A '**sonorous**' material is one that can make a good musical sound.  
It's from a Latin word which means 'to sound'.

A '**resonator**' could be a hollow container that changes sound.

Try this:

- Get a cup or mug and speak into it, close to your mouth.  
Can you work out how this resonator changes your voice?  
(The vibrations of your voice are changed as they bounce around  
inside the resonator.)

A '**stridulator**' can be an instrument with a rough or bumpy surface.

It works by being scraped with a stick.

A grasshopper is also a stridulator as it makes a chirping sound by rubbing its  
back legs together!

A '**rasp**' can be something with a rough surface - it's just like a stridulator.

Try this:

- Stroke the side of a pencil over the knuckles of your other hand.  
You can feel the rhythm, but why can't you hear much sound?  
(The sound isn't very good because your fist isn't a very good  
resonator!)

# HORNIMAN MUSEUM

## Hands On Base Discovery Boxes

The **Hands On Base** is home to the museum's handling collection – over 4000 objects from around the world!

The **Discovery Boxes** are found under the main displays and contain objects grouped in the following themes.

The boxes marked with an \* have an information/activity booklet inside.

### Super Mix (a mixture of the museum's collections)

- ✓  **Teeth\***
  - Trade\*
  - Adornment\*
  - Toys and Games
  - Footwear
  - Headwear
  - Musical Instruments
  - Red \*

### The Natural World

- ✓  **The Life of a Gourd\***
- ✓  **Shells\***
  - Useful Plants
  - Structures of the Natural World

### Puppets

- Punch and Judy glove puppets\*
- Pig and Wolf glove and finger puppets\*
- Indian string puppets (Kathputli)\*
- Indian glove and rod puppets (Sanchar)\*
- Indonesian rod puppets (from Java)\*
- Child-sized Bunraku (Japanese) puppet\*
- Indian shadow puppets\* (not in box but on display)

### Masks

- Indonesian masks (from Java and Bali)\*
- Mexican masks\*
- Chinese masks\*
- Indian animal masks

### Clothing and Costume

- Chinese costumes (2 boxes)
- Indian sari

Ed on Ntserver/Discovery Boxes/List of boxes

~~Framework discussion~~ a  
(+)

from Linda  
11/10/08

Discussion about framework of each activity box.  
Discovery

(previously on the end of the notes of Puppets Box meeting but separated out here for clarity)

Notes and suggestions towards a template for each Discovery box:

However different in content some share common threads where appropriate and from a users perspective all will require:

1. A standard start and finish and explanation of the method of navigating through the box, re-packing e.t.c.
2. A common style.
3. Written to a reading age of eight, they should also be invitational, upbeat, and positive as in our treatment of the banners and panel text ( i.e you can...e.t.c)

The following was discussed as a possible template/outline for consideration alongside all other suggestions so far:

1. Each Discovery Box could have:

- A front window section in which one of the featured objects is mounted to front, clearly visible, as if on display.
- 
- A central storage section subdivided to receive each object or containing layers of plastozote with actual object shaped and sized holes for each object which cradle each object
- 
- A rear(or otherwise located) section to receive A4 'Read Me'/'Open Me' file(s)/booklets containing the laminated activity sheets and guidance notes for using the box and any other associated books or reading materials.
- 
- A fold out tablecloth format of suitable dimensions to fit six participants and their feature objects and and the discovery box files/booklets.
- 
- A compartment for wetwipes.
- 
- A label on outside of box inviting people to remove from shelf and take to table or safe floor space.
- 
- A digital photograph or diagram of the contents of the box in situ, placed on the inside lid. To aid re-packing and simple shape sorting activity.

2. Each Discovery box activity file/Booklet could have:

On outside:

Invitation sentence or title on spine and cover to engage user

On inside:



- What's in this box section containing:

A simple 'chunked' explanation of what you can do with the box indexed(possibly via use of symbols) to page numbers or tab numbers (or coloured tabs and coloured pages in sections).

i.e This is a box for learning about Punch and Judy puppets  
You can:

- Find out how old Mr punch is -- History symbol
- Learn how he moves = handling activity symbol
- Meet him close up and perform a little play with Mr Punch, Judy and the Crocodile = drama symbol or story symbol ?
- Drawing activity ? with drawing symbol
- Go on a trail to find things in other galleries that help tell the story of Punch and Judy
- Take away some things to do at home = at home symbol
- Learn how to re-pack the Discovery box to keep the objects safe for your next visit

Each of the above page or section titles relates to a coloured section in the body of the file and so has the same colour as background or key next to it( to aid legibility)

2. A pictorial diagram of the contents which will also aid the re-packing process - 'These are the objects you can touch/use..... repeat of sheet inside lid.

3. A removable adults/facilitators guidance notes sheet that can be consulted independently, with more detailed explanations but still colour/symbol coded to sections in main part of file/booklet.

4. Possibly on index page before a series of symbols describing what you can do in different sections of the file. i.e You do not **have to** go through every page, if time is short or if you prefer you can go straight to a specific type of activity. Look at the types of activity and available and find that symbol on the tab.

i.e book symbol for story activity, open mouth for singing activity, pencil and text for writing activity, pencil and motif for drawing activity, acting/drama activity = ?, handling activity symbol = ?, History/context symbol = ?

五、 自然史博物館學校參觀教學相關資料.....	72
1. 參觀規劃簡介	
2. 參觀規劃教師手冊	
3. 展場教師指引（以兩個主題為範例，所有學生用學習單在該館網站中均可下載 列印，故不收錄於本附錄中。）	
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making the most of a visit

Services for schools at  
The Natural History Museum

## Making the most of a visit

So much to see, so little time...

The Natural History Museum's exhibitions are a remarkable resource for teaching and learning. Unique collections and multi-media interpretations stimulate interest and bring students closer to the natural world. A visit to the Museum is a truly memorable experience.

But with so much to see, how can you get the most from your visit? Much of the success of teaching and learning in the Museum will depend on the same principles applied in your classroom. To really get the most from your time, consider the following issues...



### Don't try to do too much

- There is a vast amount of information presented in the exhibitions. Limit your targets to a few key objectives. Plan focused work for 30–40 minutes in any exhibition, and in 2 or 3 exhibitions in the day at most.
- Encourage student-led and open-ended tasks as well as closely directed activities. Allow time for supervised groups to visit the areas that they find most interesting.
- Remember that children will also need time to get their bearings in the Museum and find out how to make sense of labelling in the galleries.

### Know your goals

- Set clear goals for the day – both for activities to be completed and for learning outcomes. Brief the children and the other adults helping on your visit so that they are fully aware of the goals.
- Think about how the visit fits in with your teaching plans – is it an introduction, enhancement or revision of the topic? How will you connect the visit experiences to your classroom activities?
- The Museum's natural objects, models and interpretative exhibits provide a wealth of enjoyable, practical experiences that connect with ideas you can explore further elsewhere. Why not focus on these learning aids rather than just text?

### Encourage active learning

- Some exhibits illustrate the methods used by scientists to make sense of the world around us. Drawing attention to these processes and principles in the study of the natural world may be more useful than collecting specific factual information.
- Use a variety of methods for recording information. Drawings, photographs and audio or video recordings may prove to be far more rewarding than formal note-taking.
- Encourage students to really think about what they see – to ask questions and to discuss their ideas.

### And finally... plan ahead

The Museum is an ever-changing, dynamic space. Exhibits are removed on occasion for scientific study or restoration. We try to keep our published information up-to-date, but we cannot guarantee that all the exhibits mentioned will be available. If a particular exhibit is essential to your plans, contact us in advance to check what's currently on display.



## What's on offer?

Booking a visit entitles you to...

- free access for children, students and accompanying adults, Monday-Friday during term-time, to all the Museum's exhibitions
- access to our activity programme for schools
- reserve time in the hands-on exhibitions that are appropriate to the age of your children
- use of cloakroom and lunchroom facilities in The Clore Education Centre
- activity guides at a discounted rate



### Activity guides

Activity guides are printed materials that provide a useful focus for a Museum visit. Each guide directs children to look more closely at selected exhibits and asks questions to encourage observation and critical consideration of each exhibit. The range includes ideas for all ages from 3 to adult.

### Investigate

An exciting hands-on centre for children aged 7 to 14, and adults, too. *Investigate* allows you to take a closer look at hundreds of natural history specimens and explore them further using microscopes, magnifiers and other tools. Find out more about the specimens from our database. School groups at KS2 and KS3, or groups with special needs can book exclusive use of *Investigate*.

### Activity programme

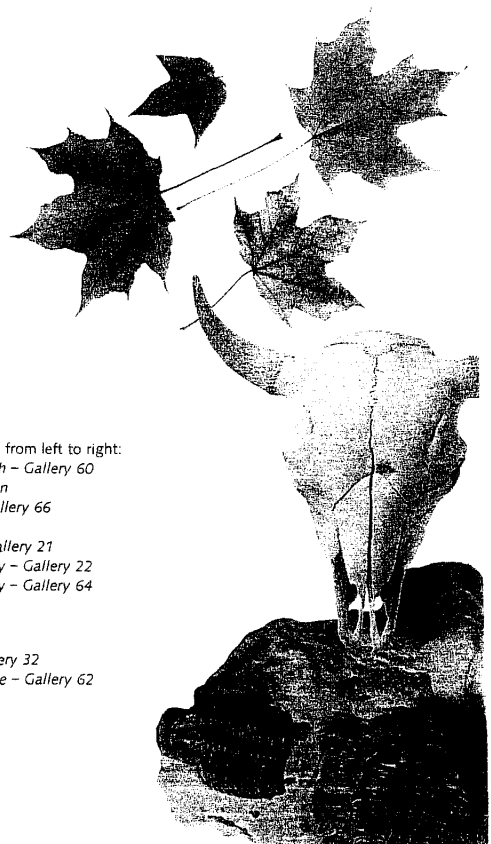
We run a changing programme of additional educational activities for schools. Each suits a stated audience and enhances the experience of the exhibitions.

These include...

- workshops
- encounters with characters such as Charles Darwin
- *Action stations* – a new approach to the galleries

Photo captions from left to right:  
*Visions of Earth* – Gallery 60  
*Wildlife Garden*  
*Earth Lab* – Gallery 66  
*Investigate*  
*Dinosaurs* – Gallery 21  
*Human Biology* – Gallery 22  
*Earth's Treasury* – Gallery 64  
*Investigate*

Back cover:  
*Ecology* – Gallery 32  
*Restless Surface* – Gallery 62



## How can we help

### Ask for what you need

Our experienced educators are on hand to help you plan your day. Call the Education desk on (020) 7942 5045 or email on [education@nhm.ac.uk](mailto:education@nhm.ac.uk) and tell us what you are hoping to achieve from your visit. Then we can advise how best to meet your goals. We understand the difficulties of managing groups and we know the galleries in detail, so we can suggest strategies that will ensure a successful day. We can also provide relevant teachers' guides to the exhibitions, and free samples of activity guides.

### Teachers' guides

We produce teachers' guides to the main exhibitions. Each includes a map and a description of the key exhibits with helpful suggestions on how to approach them with children of different ages.

### Briefing groups and adult helpers

Brief the adults working with you to ensure a successful visit. Make sure they understand how to focus on the unique experiences the Museum has to offer. Explain the scientific principles and processes that are important in the ideas presented. Encourage them to work with the children and to discuss ideas – appreciating and sharing the experience. Help them to select what is important to you and give them the confidence to question what they see during their visit.

### Free admission for teachers

As a teacher, you can make planning visits free of charge. Simply show proof of teacher status at the Museum reception desk, for example, a teachers' union card or a letter from your headteacher. Please ask for tickets if you wish to visit one of our temporary exhibitions.

### Professional development

Each year we offer courses of professional development that...

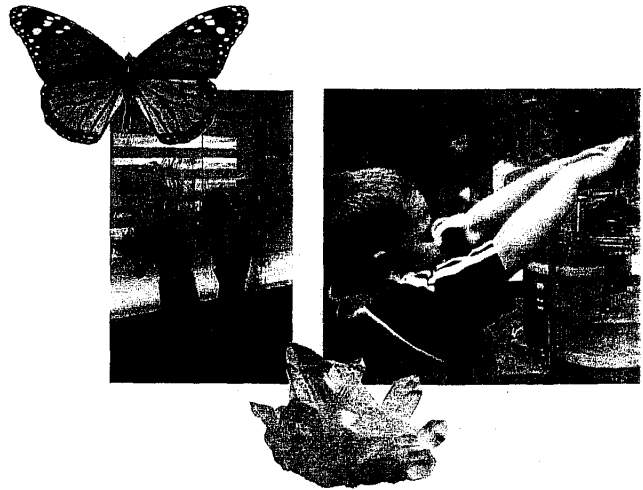
- explore an aspect of the Museum in detail
- propose imaginative activities for a Museum visit
- link the Museum activities to your classroom plans

We can run these sessions on demand for your training day and tailor them to your particular requirements. Contact us for details via the Education desk on [education@nhm.ac.uk](mailto:education@nhm.ac.uk) or (020) 7942 5045.

### Education Unit

The Natural History Museum  
Cromwell Road  
London SW7 5BD  
(020) 7942 5000

[www.nhm.ac.uk/education](http://www.nhm.ac.uk/education)





## Contents of this pack

**'Yellow page'** – how to contact us

**How to book**

**Booking form** (blue)

**On the day** – including maps of the site

**Discovery guide listing**

**Detailed information**

- opening times
- admission rates
- supervision
- adult:pupil ratios
- teaching packs
- activity guides
- useful resources on our website
- term dates

**Teacher's guide to *Investigate***

**Teachers' guides and activity guides** (as requested)



## How to book

**To book, contact ...** Bookings VOS (Administration)  
The Natural History Museum  
Cromwell Road  
London SW7 5BD  
Telephone: (020) 7942 5555

UK school and college groups can book on weekdays in term-time. A booking gives you access to all of our exhibitions which cover earth and life sciences.

You must book at least two weeks in advance by telephone, or three weeks in advance by post or fax. Please book as early as possible.

### By telephone

Call Bookings VOS (Administration) on (020) 7942 5555, between 10.00–16.30 (during term-time) and 10.00–13.00 during holidays.

### You will need to tell us...

- the name of a contact at the school
- your school's name, telephone number and address (including the postcode)
- your LEA (if applicable)
- the name of the teacher in charge on the day (if different from above)
- the date you wish to visit
- the number of pupils and accompanying adults (see required ratios under *Supervision*)
- the age of the pupils
- which exhibitions you intend to visit
- whether you want to book for a hands-on gallery or other activity

Then complete the blue **Confirmation of telephone booking**.  
Copy both sides for your records and send the original to...

- confirm the above details
- order activity guides, which you can collect from Schools reception on the day
- inform us of children's special needs, if appropriate

Please attach a cheque to pay for any activity guides ordered.  
Make cheques payable to *The Natural History Museum*.

A telephone booking is a firm booking with us. Please contact us again as soon as possible if you wish to cancel your booking – especially if you have booked for a workshop or event.

*Continued overleaf*





Official use only	
Booked in	
Receipt	
Res. id.	
Rec. No.	

## Confirmation of telephone booking

Complete both sides of this form. Copy both sides for your records and send the original to Bookings VOS (Administration).

A postal booking is not confirmed until you have received written/telephone confirmation from us, or until you have telephoned us to confirm.

Please read *Essential information* and *On the day*. Then sign below to acknowledge that you agree with our requirements for supervision and have read about our emergency procedures.

Please telephone 020 7942 5555 immediately if you wish to cancel your booking.

Signed (person in charge on the day)

### Contact details

Name of school/educational establishment

Your record no. (if available)

Telephone code and no. (office hours)

School/college address

Town/city

County

Postcode

LEA

GMS

Inde

### Visitor details

Date of visit

Mon

Tues

Wed

Thu

Fri






Name of person in charge on the day

Estimated arrival time

Number of children/students

Estimated departure time

Number of accompanying adults

Age of children/students

Year group (National Curriculum)

/FE

/HE



### Exhibitions

Please tick up to three exhibitions where you intend to focus your visit. If you plan to visit more than three exhibitions, record this as a general visit. This will help us to plan our future provision for schools.

#### Life Galleries

- General visit
- Birds
- Fossils from Britain
- Creepy crawlies
- Dinosaurs
- Ecology
- Fishes, amphibians and reptiles
- Human biology
- Lasting impressions
- Mammals
- Marine invertebrates
- Meteorites
- Minerals
- Origin of species
- Our place in evolution
- Plant power
- Primates
- Rowland Ward Pavilion
- Wonders

#### Earth Galleries

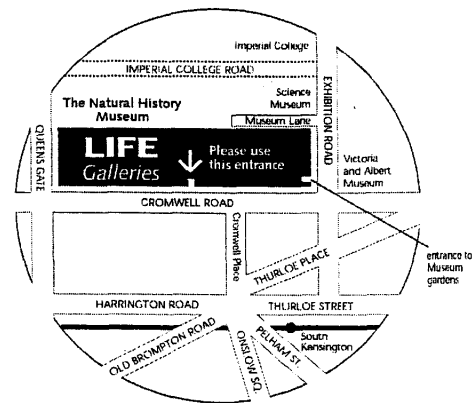
- General visit
- Earth today and tomorrow
- Earth's treasury
- From the beginning
- The power within
- Restless surface
- Visions of Earth

## On the day

For groups under 16 years old

Please use the Life Galleries entrance in Cromwell Road (see map opposite). There are limited coach stopping spaces on the Cromwell Road red route, so stopping in Exhibition Road may be easier. Usually after 10.00 you may walk through the Museum gardens.

Once inside the Museum turn right immediately and follow signs directly to **Schools reception** in The Clore Education Centre in the basement. There is no need to register at the main reception desk on the ground floor.



### At Schools reception

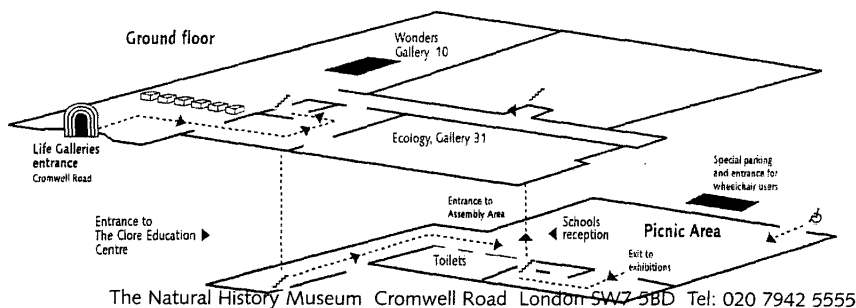
- check in
- book a time to eat packed lunches
- collect any activity guides you have ordered
- confirm workshop or event bookings

### In The Clore Education Centre

- toilet facilities are provided
- you may leave coats and bags on racks

Please note that property is left at the owner's risk so do not leave valuable items.

Follow signs to the exhibitions. Please use the stairs rather than the lifts, if possible.



Continued overleaf



## Discovery guide listing

May 2002

These are printed materials available to guide your visit. Activity guides normally retail at 40–80p but schools qualify for discounted rate of 30p if sheets are booked and paid for in advance.

### EARTH Galleries

#### I spy rocks *KS1*

Take a closer look at rocks and explore vocabulary to describe them.

#### Rock explorer *KS2*

Look at different rocks, learn how to describe them and find out how they get their names.

#### Natural hazards *KS3*

Find out about natural hazards such as volcanic eruptions, earthquakes, landslides and floods and how they affect people. Discover how scientists work out what causes these hazards and how to predict them.

#### Solid as a rock? *KS3/4*

Make close observations of volcanic and eroded rocks. Track the clues that identify igneous, sedimentary and metamorphic rocks and explain how each is formed.

### Earth's treasury

#### What's the use? *KS2/3*

Explore the uses and properties of natural materials. Discover some of what we know about the structures in rocks and minerals that explain their properties.

### Earth today and tomorrow

#### Resources unlimited? *KS3/4*

Evaluate the evidence earth scientists use to predict where to find resources in the rocks. Consider the usefulness of their suggestions for disposal of waste products and discovery of sources of energy.

### The power within

#### Red hot rock *KS4*

(replaces *Dynamic Earth*)

Explore some of the evidence scientists have gathered about the dynamic processes at work inside the Earth. Decide for yourself how this evidence supports the theory of plate tectonics.

### LIFE Galleries

#### An animal of my own *KS1*

Make close observations of an animal – by drawing, thinking about scale, and developing descriptive language.

#### I spy shapes and patterns *KS1*

Look closely at natural objects to discover the wide range of shapes and patterns that are evident in the natural world.

#### Animals on the move *KS1/KS2*

Find out how animal features suit them for moving in different ways.

#### Colours and patterns *KS2*

Examine several animals with distinctive colours and patterns. Explore the functions of colour and pattern in nature.

#### As dead as a dodo *KS2/KS3*

Take a closer look at extinct and threatened species and consider the impact you have on endangered species..

#### Fossil explorer *KS2/ KS3*

Explore a variety of fossils around the Museum and discover what they have in common and how they were formed.

#### Museum explorer *KS2/KS3*

Explore the work of the Museum and discover what makes this museum special.

#### Science detective *KS2/KS3*

Explore and debate ideas about the work of scientists and the nature of science using exhibits throughout the Life Galleries.

### Creepy crawlies

#### Sorting creepy-crawlies *KS2/KS3*

A closer look at arthropods reveals similarities and differences between groups. Develop questions to build a branching key to identify arthropods.

*Continued overleaf*

## Detailed information

### Opening times

The Museum is open Monday to Saturday 10.00–17.50 and Sunday 11.00–17.50. It is normally closed 24–26 December.

### Admission rates

Admission to the Museum is free to all visitors from 1 December 2001. Only booked educational groups qualify for additional services. Unbooked groups will need to pay full price for discovery guides, and will have no access to our cloakroom and lunchroom facilities or our workshop and events programme.

### Supervision

We will make every effort to ensure that you and your group have an enjoyable day. We also have a responsibility to other visitors to ensure that the actions of school groups contribute to their enjoyment of the exhibitions.

In the interests of health, safety, security and the convenience of all our visitors, please make sure students are supervised at all times.

- Groups at Year 6 and below must have adults with them at all times
- Groups at Year 7 or above must have an adult in the same exhibition as them.
- This also applies to the shops and the Picnic Area.

### Adult: pupil ratios

Age	Minimum ratio	Recommended ratio
nursery/ reception	1 to 6	1 to 4
infants (Y1 and Y2)	1 to 8	1 to 5
juniors (Y3–Y6)	1 to 10	1 to 8
secondary (Y7–Y11)	1 to 15	1 to 10
post-16	1 adult per booking	1 to 30

### Discovery guides

Discovery guides are printed materials that provide a useful focus for a Museum visit. Each guide directs children to look more closely at selected exhibits and asks questions that encourage close observation and critical thinking. The range includes ideas for all ages from 3 to adult. A complete listing is included in this pack. Schools ordering, and paying for, discovery guides in advance qualify for a discounted rate – currently 30p. Order them on the blue **Booking form**.

*...continued overleaf*



THE  
NATURAL  
HISTORY  
MUSEUM

A teachers' guide

# Investigate<sup>Q</sup>

The Clore Education Centre

## Exhibition content

*Investigate* is a hands-on science centre for children aged 7 to 14 and adults, too. Here, visitors can take a closer look at hundreds of natural history specimens.

Questions on the walls and Qcards prompt open-minded and open-ended exploration of the specimens. Measuring tools and magnifying equipment are provided to encourage visitors to make observations, look for relationships and draw their own conclusions. ICT provision includes

a database and other structured activities that broaden and deepen study of the objects.

Seasonal activities in the live display area, courtyard garden and activity of the month ensure there is always something new to see and do.



## Finding the exhibition

*Investigate* is located in The Clore Education Centre in the basement of the Life Galleries. The entrance to *Investigate* is via the stairs and lifts in Gallery 31, off Waterhouse Way, Gallery 30.

gallery

B2

### Investigate wall

**Description:** An array of large specimens and trays of smaller specimens provide the raw material for investigations.

- A few of the more spectacular specimens require a controlled environment and are enclosed behind glass.
- Other large objects are fixed in place, but can be touched and examined closely.
- Trays of objects can be taken to a workstation, where the objects can be removed from the tray for more detailed examination. All the tray specimens can be handled, although some are encased to protect them.

Specimens include plant, fossil, animal and mineral material. To promote curiosity and stimulate conjecture, the specimens are not labelled.

**Questions:** on the wall – each displayed inside a 'Q' – can be answered from *Investigate's* objects. They are intended as a general stimulus for the kinds of enquiry that can be undertaken. They might provide a useful starting point for pre-visit discussion.

Do centipedes have 100 legs?  
Black as a crow?  
What is a feather's weight?  
Solid as a rock?  
What is at the heart of oak?  
Slippery as a snake?  
How narrow is a hair's breadth?  
Eyes like a hawk?  
Blind as a bat?  
Clear as crystal?

### Activity of the month

Changing activities on a variety of natural history themes provide opportunities for small groups to work together.  
Example activities: *Animal dentist* and a *Feely box* game.

### Education staff

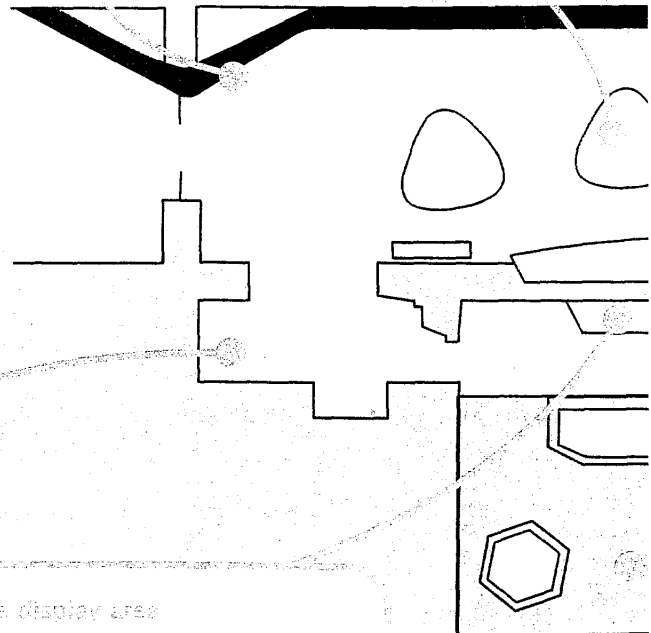
*Investigate* staff – Explainers – will prompt questions and exploration and support activities. They will guide students if they need help orientating themselves in the space, locating specimens or using the ICT activities.

### Workstations

**Description:** At the workstations students work more closely. The four workstations all have a magnifier, a binocular microscope and a viewing workspace, each accommodating two students. Each workstation has a computer system, sets of Qcards and a viewing workspace for observation and measurement. These include mechanical and electronic, rulers, callipers

**Qcards:** Qcards match specific trays of objects and offer suggestions for investigation rather than direct questions. They offer an unconventional approach to worksheets.

The ICT at the workstations contains access to additional information about many objects, suggestions for investigations and links to other resources elsewhere in the Museum. The terminals have an alphanumeric keypad and a tracker-ball (a



### Live display area

Seasonally changing displays of British flora and fauna inspire students to take a closer look at the world around them.  
Example activities: *What do worms do to soil?* and *Take a closer look at carnivorous plants.*

### Courtyard games

The courtyard games, enquiry and investigation activities give students a chance to see how they interact with the environment.

study their selected specimens using magnifying aids – a free standing microscope. Each workstation has six sets. Each pair of workspaces shares a set of simple tools to enhance observations and lenses, balances (both digital and micrometers).

They provide cues, clues or instructions. Like the Qs on the wall, they allow students' activity without

pecially designed software that gives information about the objects, including their names, descriptions of objects, both within *Investigate* and other resources. Each workstation has a touch-sensitive interface (instead of keyboard and mouse).

#### Information centre

The news display reflects current and topical items of Museum work and broader natural history issues.

#### Communications centre

Weblinks to webcams and discussion groups will allow students to find out what other people have investigated and to post their own discoveries on the web. A *Make your own web page* of observations made of specimens in *Investigate* will be an initial activity in this area.

#### National Curriculum links at KS2 and KS3

##### The importance of science

*Investigate* provides opportunities to stimulate and excite pupils' curiosity about natural phenomena.

##### Sc1 Scientific enquiry

In *Investigate* students can...

- think creatively to try to explain how living things and non-living things work and to link causes and effects
- ask questions that can be investigated scientifically and decide how to find out answers
- use observations and measurements to make comparisons, identify patterns and interpret evidence
- consider whether evidence is sufficient to support any conclusions or interpretations made
- consider anomalies in observations or measurements and try to explain them
- use their scientific knowledge and understanding to interpret observations and data

##### Sc2 and Sc3

The specimens and activities in *Investigate* support a number of aspects of Sc2 and Sc3, particularly the study of...

- variation and classification of animals, plants, fossils, rocks and minerals
- adaptation in animals and plants

#### Sticky wall

A series of 'jigsaw' activities where students can build complex pictures from simple components – investigating natural history all the time. Example activities:  
*Pull yourself together* – putting together jigsaws of animals' skeletons.

and pond extend the *Investigate* resource. Qcards prompt observation of the plants and animals in this area. Supervised activities give students a chance to investigate the features of living things and

**Investigate**



### Services for schools

School visits to the Museum are free of charge. Booking allows you access to all public galleries and an opportunity to reserve places on our workshops and other educational programmes. Ask for details of our current programme when booking.

We allow a generous ratio of accompanying adults to ensure appropriate supervision. For reasons of health and safety, teachers **must** remain with their students at all times.

Teachers can make a free planning visit to the Museum at any time – just present your teaching union card at the information desk. For more advice on planning your visit, call the Teachers' Centre on (020) 7942 5045 or email us at: [teachers@nhm.ac.uk](mailto:teachers@nhm.ac.uk). The Teachers' Centre is open between 12.00 and 13.00 Monday to Friday (except public holidays) and between 13.00 and 16.30 on the first Saturday and third Sunday of each month (except public holidays).

Teacher's guides are available for most of our exhibitions. We also provide a range of activity guides to support pupils' learning in the galleries.

To book a school visit or to order samples of our printed materials, please call Education Unit (Administration) on (020) 7942 5555.

*Exhibits may be removed at short notice for refurbishment, repair or scientific study. We reserve the right to close the exhibitions and to make changes to the content or structure at any time.*

### Using *Investigate*

You can reserve *Investigate* for a group of up to 70 children, Y3–9, for a 50-minute session starting at 10.30, 11.30 or 12.30, Tuesday–Friday during school term. *Investigate*, its content and activities, is quite different from other science centres. This Teachers' guide is designed to support your visit. For advice on the kinds of activity that are suitable for a session in *Investigate* and how a session could be managed, you are encouraged to contact an Education Officer by email at [teachers@nhm.ac.uk](mailto:teachers@nhm.ac.uk) or by calling the Teachers' Centre on (020) 7942 5045.

As you can see there are many activities in the exhibition, so be selective about your priorities for the visit. Explainers will be on hand to guide your students if they need help orienting themselves in the space, locating specimens or using the ICT activities. Explainers will prompt questions for exploration and support activities. Teachers have responsibility for managing the sessions here as elsewhere in the Museum.

### Follow up work

Encourage students to report on their investigations – to communicate their ideas and explain their understanding of the nature of living things, materials, natural phenomena and scientific processes.

### Thematic links to other exhibitions

The collections in *Investigate* are representative of the collections displayed throughout the Museum. In other exhibitions you will find more information about many of the natural history specimens you have seen in *Investigate*.

### Visitor access

Activities and specimens within *Investigate* are at a low level and accessible to visitors in wheelchairs. The courtyard garden has a raised pond and planting beds designed to allow easier access for wheelchair users. There is maximum use of natural light in the gallery and light levels for all activities are generally good.

*Investigate* contains many specimens which can be touched and explored in detail. For additional information, and for details of how we can support groups with special needs, telephone the Teachers' Centre on (020) 7942 5045.

[www.nhm.ac.uk/education](http://www.nhm.ac.uk/education)

The Clore Education Centre supported by The Vivien Duffield Foundation



# Investigate

At the National Museum of Natural History

## Teachers' questions answered



### Why *Investigate*?

What kinds of investigation can you do there?

*Investigate's* key resource is hundreds of natural specimens. They are particularly good for those types of investigation that involve classifying and identifying, pattern-seeking, exploring or investigating models. Qcards (sets of questions related to specific trays of specimens) and questions on the specimen wall promote these types of investigation. They provide cues, clues or suggestions for investigation rather than direct instructions and students can use them as prompts for the sorts of investigations they might follow. There are few opportunities in *Investigate* to set up experiments with controlled variables or to design and test systems, although some ideas raised in the exhibition could be followed up in this way back at school.



*Investigate* is described as a hands-on science centre. What is meant by 'hands-on'?

*Investigate* contains many touchable objects. It has been carefully designed to enable visitors to make intimate observations and to find answers to their own questions. Visitors can make their own decisions about which specimens to look at and what equipment – physical or virtual – to use to aid exploration of those objects. In this sense *Investigate* is both hands-on and interactive. 'Interactive' is often associated with exhibits that require the operation of push-buttons, levers or switches. *Investigate* does not contain such exhibits.



How does *Investigate* relate to the National Curriculum?

It is possible to make use of the objects in *Investigate* for work in English, mathematics or art – and to use the whole exhibition as a stimulus for work in design and technology. However, the key links are with science. *Investigate* provides unique resources for access to ideas encompassed by Sc1. It is also possible to focus on aspects of the life and earth sciences represented in Sc2 and Sc3.



How should I prepare for the visit?

Students with some idea of what to expect will be able to make best use of the opportunities *Investigate* offers. Much of the activity in *Investigate* requires students to ask questions about

specimens and find ways of answering them, make observations, record natural phenomena and group specimens. A pre-visit exercise in class that takes this type of investigative approach with available resources (such as rocks or house plants) is recommended. Students will benefit from general awareness of the Museum and the different activities in *Investigate*. The best way to use the resources during your visit is to set up open-ended tasks with a range of possible outcomes – such as those inspired by the questions on the specimen wall (see *Investigate* teachers' guide). Narrow and closely directed tasks (such as 'Find object x and draw it') will not take maximum advantage of *Investigate*.



What kinds of learning outcomes are appropriate?

To make the most of your visit to *Investigate*, clear learning objectives related to your work in school are desirable. Learning outcomes that could arise from the types of activity that can be done in *Investigate* include...

- awareness of diversity in the natural world
- the nature of scientific enquiry
- the use and limitations of tools and techniques
- what scientists actually do

Other specific objectives with reference to Sc1 may be suitable, but it is important to remember that learning during short visits to museums is primarily affective. Students have only a brief encounter with *Investigate*, and may need time to adjust to its highly stimulating environment. For advice on the kinds of activity that are suitable for a session in *Investigate* you are encouraged to contact an Education Officer by email at [teachers@nhm.ac.uk](mailto:teachers@nhm.ac.uk) or by calling the Teachers' Centre on (020) 7942 5045.



How do I book a visit?

Bookings for *Investigate* (at 10.30, 11.30 or 12.30 Tuesday–Friday) should be made by telephone on (020) 7942 5555. You are encouraged to follow up your booking with a call to the Teachers' Centre on (020) 7942 5045 to discuss with an Education Officer how best to organize your session.



How many students can I bring?

*Investigate* will comfortably accommodate up to 70 students (two classes) – the workstations have a capacity of 48, the *Activity of the month* will accommodate a small group (4-6 students) as

will each of the *Live area*, the *Courtyard garden*, the *Sticky wall* and the *Communications centre*.

Booked school sessions last for 50 minutes and it is recommended that you divide students into three groups of equal sizes. Each group can then spend two-thirds of their time at the workstations and one third engaging with the other activities.

Suggested plan...

	Group working at workstations	Group working at workstations	Group working on other activities
1st 15 mins	A	B	C
2nd 15 mins	A	C	B
3rd 15 mins	B	C	A

### What advice can I give to other accompanying adults?

Make sure colleagues and other accompanying adults know what you want to achieve from the visit to *Investigate*. Reassure them that they don't need to know what all the objects are and they don't need to know the 'right' answers to every question your students might ask. The most useful thing to do is to encourage the students to talk – to develop vocabulary to describe what they are seeing and to express what they want to investigate as clear, well-phrased questions.

### What links *Investigate* and the rest of the Museum?

Most of the objects in *Investigate* are closely related to others on display elsewhere in the Museum, and there are numerous cross-references within the ICT system. Many exhibitions contain specimens and interpretative materials that can contribute to ideas explored in *Investigate*, while several exhibitions have easily accessible objects that can be subjected to similar investigative approaches.

### How can I follow up the visit?

Students will return to school with information and ideas. Some of these may lead to further investigations in class. Others will provide a basis for thinking about science concepts or processes, or discussion about the nature of science and what scientists do. We plan to develop a series of case studies; keep an eye on the web site.

### What is the role of the *Investigate* staff?

*Investigate* is staffed by Explainers whenever it is open. These staff can assist with use of the tools and with any of the activities. They are keen to help students with their investigations and help them to formulate suitable questions to explore. You should make Explainers, as with other accompanying adults, aware of your intended learning outcomes, so that they can support your visit effectively. Teachers accompanying school groups continue to be responsible for their students in *Investigate* as elsewhere in the Museum.

### What is the function of ICT in *Investigate*?

*Investigate* has been designed in such a way that computers do not dominate the exhibition, but become a useful tool to support learning from objects, as they are for research scientists. Specially designed software gives access to additional information about many of the objects, suggestions for investigations and links to other objects, both within *Investigate* and elsewhere in the Museum. Every specimen is included in the *Investigate* database, which can be accessed both in the exhibition and on-line. The database is continually added to and updated. Unlike many computers in museum exhibitions, ICT in *Investigate* is not a substitute for objects.

### Can schools use *Investigate* for CPD?

The Education Unit is happy to arrange sessions in *Investigate* as part of a CPD programme. This might focus on investigation, hands-on interactive learning or developing teachers' own knowledge and understanding of life and earth sciences. Please contact the Teachers' Centre by email at [teachers@nhm.ac.uk](mailto:teachers@nhm.ac.uk) or phone (020) 7942 5045.

### Is there an underlying philosophy to *Investigate*?

*Investigate* is intended to be constructivist in that it takes a dynamic, empiricist view of scientific knowledge and an active approach to learning.

### How does *Investigate* relate to the scientific research at the Museum?

The Museum employs hundreds of scientists. Many of these are engaged in fundamental scientific research across the life and earth sciences, including meteorites, human origins, pollution monitoring, disease control, DNA analysis and biodiversity. This work is supported by a collection of almost 70 million natural history objects and has led to the Museum's world-renowned reputation for taxonomy and systematics.

The activities in *Investigate* promote an investigative, enquiry approach to learning from natural objects similar to the scientific processes used by scientists working in the field or on the Museum's collections.

### How does *Investigate* differ from other exhibitions or science centres?

*Investigate* aims to engage visitors in the challenge and excitement of the process of scientific exploration. It has been very carefully designed to encourage and facilitate curiosity, with emphasis on developing questions and on seeking answers.

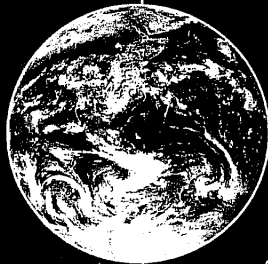
This contrasts with museum exhibitions that frequently present science simply as expert knowledge, and with the activities in many science centres, which often lead along pre-determined routes to the discovery of particular concepts or principles.

## A teachers' guide

# Dinosaurs

### Exhibition content

For over 160 million years dinosaurs were the dominant land vertebrates on planet Earth. This exciting multi-media exhibition showcases some of the national collection of dinosaur skeletons and explores the lives of these fascinating animals. The exhibition concentrates on the process through which scientists interpret fossil evidence. Curiosity is stimulated by robotic models, fossil skeletons, casts, videos and activities.



The exhibition is divided into three key themes – what were dinosaurs, were dinosaurs like animals living today and what do people think about dinosaurs?

A one-way system structures a visit into a series of experiences that build a comprehensive picture of the dinosaurs. This starts with an overview of dinosaur diversity from a suspended walkway. The main body of the exhibition zig-zags below.

### Finding the exhibition

*Dinosaurs* is located on the ground floor of the Life Galleries in Gallery 21. Follow Waterhouse Way, Gallery 30, into *Wonders*, Gallery 10. Follow Waterhouse Way, now Gallery 20. *Dinosaurs* is the first gallery on the left.

gallery

21

Find out that living things can be grouped according to observable similarities and differences

KS1 Sc2

### What were dinosaurs?

A large text panel outlines the defining features of dinosaurs. A quiz with touch-sensitive panels tests our ability to recognize a dinosaur.

Consider factors that affect the size of populations, such as predation and competition for resources

KS3 Sc2

### The dinosaur world

In a 3/4 scale reproduction three *Deinonychus* devour a *Tenontosaurus*. These robotic animals, complete with sound effects, show how large herbivores could fall prey to a group of small carnivorous hunters.

### The world around them

Videos and fossil specimens depict the changing face of planet Earth in terms of the climate, the shape of the continents and some of the different plants and animals adapted to live here. This time sequence is divided into the Triassic, Jurassic and Cretaceous periods.

Discover that animals and plants in different habitats are suited to their environment by observing where they are found

KS2-3 Sc2

Look at examples and understand that animals, including humans, eat and grow

KS1-2 Sc2

### Animal or vegetable?

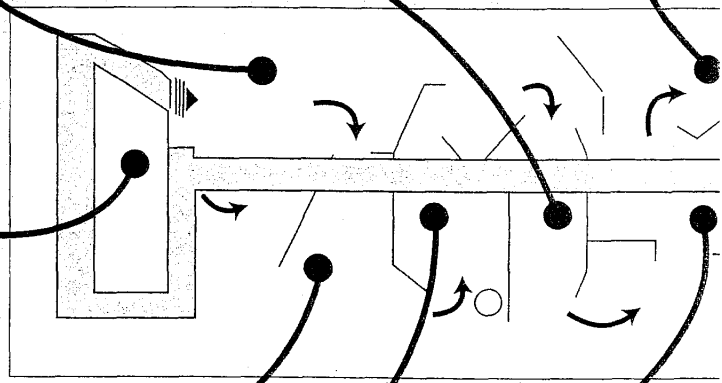
Fossil displays from different dinosaurs show hands, skulls, teeth and stomach stones which suggest that many species of dinosaur were herbivores.

Assess the evidence that variation in adaptations within an environment reflects feeding relationships and competition

KS3 Sc2

### Attack and defence

Casts to touch and displays of fossilized dinosaur teeth, skulls, clubs, claws and horns, together with illustrations show the range of weaponry available to dinosaurs.



### Families, groups and loners

Fossil egg remains, model reconstructions of the nests of *Maiasaura* and *Orodromeus*, and videos, compare the behaviour of dinosaurs and animals living today. The nests of dinosaurs and the nests of birds provide evidence for dinosaur parenting behaviour.

Look at examples and understand that animals, including humans, move, grow and reproduce

KS1-2 Sc2

### Moving and eating

Hand-operated levers demonstrate the effort involved in walking for animals with different anatomical structures. A set of fossilized footprints and an animated video interpretation present hard evidence and one inference of likely dinosaur social behaviour. Actual size models of the legs of four different dinosaurs show bones, muscles and skin. Videos link these models with the variety of ways in which dinosaurs may have walked or run.

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Look for evidence of variation between species

KS3 Sc2

Examine some of the fossil record that provides evidence for evolution

KS4 Sc2

The importance of evidence and thought in the development of theories and how scientific knowledge standing needs to be supported by evidence

KS3-4 Sc0

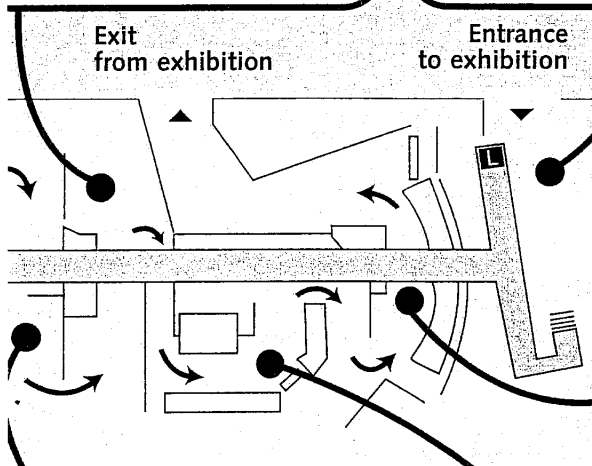
### And they go?

panels, a large meteorite, a video of continental drift and humorous put forward some competing theories of the dinosaurs. The fossilized *Edmontosaurus* lies still half-buried showing how fossils are found.

### First encounters

The entrance area contains complete standing life-sized skeletons of *Camarasaurus*, *Triceratops*, and *Hypsilophodon*. Here too are the remains of *Coelophysis* with its last meal still evident inside. A huge fossilized *Euoplocephalus* is shown still embedded in rock and showing evidence of dinosaur skin texture.

From the walkway other complete standing skeletons can be seen including *Iguanodon*, *Massospondylus*, *Allosaurus*, *Albertosaurus*, *Tuojiangosaurus*, *Gallimimus*, *Dromaeosaurus*. Also on display are the massive arms of *Deinocoelurus*, a full-sized cross-section of *Baryonyx* and the skulls of *Triceratops* and *Tyrannosaurus*. This area introduces the immense biodiversity of dinosaurs – from large to small, herbivores and carnivores, two-legged and four-legged.



### Piecing together

Video sequences, tools, laboratory equipment, notes and life-sized cast reproductions, together with illustrated panels bring alive the case study of *Baryonyx*, by showing how the scientific process builds up our understanding piece by piece. A collection of small scale-model dinosaurs show past attempts at modelling dinosaurs, illustrating how ideas change over time. The fossilized remains of *Iguanodon* studied by the Mantells in 1822, together with illustrated panels present a concise history of the palaeontologists who pioneered our understanding of dinosaurs. By the exit a robotic model of a young *Psittacosaurus* twitches, gently sleeping.

### Dinosaurs as living animals

3-D model dinosaur cutaways and fossils, some of which can be touched, compare the dinosaurs with modern animals. These comparisons cover anatomy, physiology, dinosaur senses and life expectancy.

Consider that animals, including humans, share common life processes that depend upon organ systems which enable these processes, such as moving, breathing, sensing, growing and ageing

KS1-4 Sc2

Evaluate how presenting scientific information in a number of ways, through drawings, diagrams, tables and charts can record and present information in an appropriate and systematic manner

KS1-3 Sc0

### Dinosaurs and people

Videos, toys, books and cartoons represent a range of human perceptions and responses to dinosaurs.

In order to develop visual literacy, pupils should be taught about the different ways in which ideas, feelings and meanings are communicated in visual form

KS1-3 ART

## Services for schools

School visits to the Museum are free of charge. Booking allows you access to all public galleries and an opportunity to reserve places on our workshops and other educational programmes. Ask for details of our current workshop programme when booking.

We allow a generous ratio of accompanying adults to ensure appropriate supervision. For reasons of health and safety, teachers must remain in the exhibition with their students at all times.

Teachers can make a free planning visit to the Museum at any time – just present your teaching union card at the information desk. For more advice on planning your visit, contact the Teachers' Centre on (020) 7942 5045 or email us at: [teachers@nhm.ac.uk](mailto:teachers@nhm.ac.uk)

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*Exhibits may be removed at short notice for refurbishment, repair or scientific study. We reserve the right to close the exhibitions and to make changes to the content or structure at any time.*

## Thematic links to other exhibitions

To make observations of other ancient reptiles visit...

- *Wonders*, Gallery 10
- *Fossil marine reptiles*, Gallery 30

To compare dinosaurs with reptiles living today visit...

- *Fishes, amphibians and reptiles*, Gallery 12

To find out more about the living animals that are compared to dinosaurs visit...

- *Mammals*, Gallery 23/24
- *Birds*, Gallery 40

To consider the reasons for dinosaur extinction visit...

- *From the beginning*, Gallery 63

## Visitor access

*Dinosaurs* is accessible to wheelchair users and all the exhibits can be viewed from a low height. Based on two levels, the overhead walkway can be reached via a lift which is located to the right, just inside *Dinosaurs*. The lower level is reached by a ramp at the other end of the walkway.

There are several exhibits which visitors are encouraged to touch. These include casts of fossilized dinosaur weaponry in *Attack and defence*, a large *Apatosaurus* thigh bone in *Dinosaurs as living animals* and a large meteorite in *Where did they go?*

<http://www.nhm.ac.uk/education>



THE  
NATURAL  
HISTORY  
MUSEUM

## A teachers' guide Creepy crawlies

### Exhibition content

Of the 68 million specimens in The Natural History Museum's collections, almost half are arthropods (mostly insects).

Creeping and scuttling, biting and stinging, fluttering and flying, arthropods are astonishingly diverse and widely distributed life forms. *Creepy crawlies* allows you to explore some of the diversity found in this group.

The exhibition contains a general section *How arthropods live*, which addresses six key themes, relevant to all arthropods.

There are also four areas dedicated to specific examples from each of the main groups of arthropods...

- spiders and related species
- centipedes and millipedes
- crabs and related species
- insects

This exhibition uses a wide variety of media to investigate arthropods including real specimens, giant 3-D models, interactive displays, video, text, sound, simulations and living animals.

### Finding the exhibition

*Creepy crawlies* is located on the ground floor of the Life Galleries, in Gallery 33. It is reached from Waterhouse Way, Gallery 30. It is the first gallery on the left as you approach from *Wonders*, Gallery 10.



g a l l e r y

33

- Group animals according to observable similarities and differences

KS1,2,3 Sc

### F Insects

*Antworld* is home to our colony of American leafcutter ants and is one of the few places in the Museum where you can observe live creatures. Graphic and text panels revisit the themes of feeding, life stages and perception. *Feeders and breeders* shows how young insects are adapted to feeding while adults are adapted to breeding. This section, and the exhibition, ends with an examination of the impact that insects have upon humans and the environment.

### E Centipedes and millipedes

How can you tell the difference between centipedes and millipedes? Startle them, drop them in water or look at what they eat! Examine the graphic panels and specimens. Other text panels can be used to further your observations.

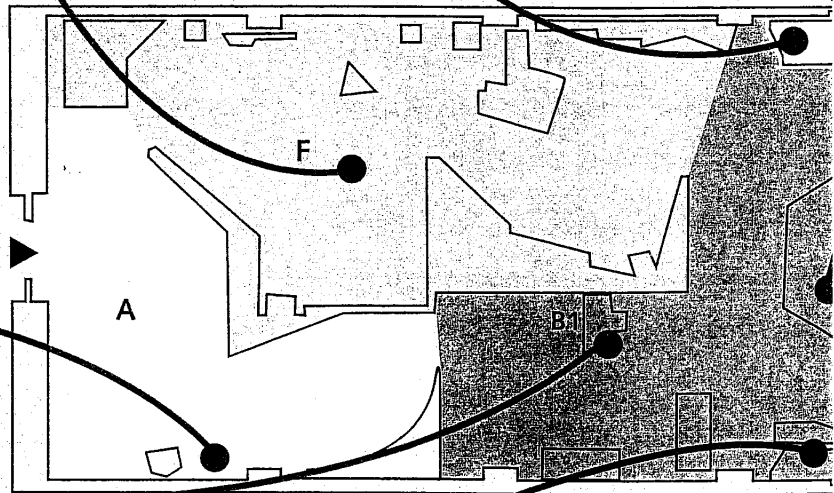
### B6 How arthropods

A model termite mound area. Together with an a it explains how the air pa mound work to regulate Additional text and graph constructions by weaver and nursery web spiders.

### A Introduction

A two-minute video and four large banners introduce the arthropods. Students will be able to make observations of the jointed legs and hard exoskeletons that are characteristic features of these animals.

Entrance to exhibition



### How arthropods live – Feeding

od vending machine shows the huge e of foods consumed by arthropods. ct a foodstuff and a one-minute video vs what eats it. Included are baby es, scorpions and socks, which are n by ghost crabs, black widow spiders moth larvae respectively. A selection veyday objects explains how different ropods' mouthparts and feeding limbs k.

### B2 How arthropods live – Colour

What is the importance and function of colour to arthropods? Real specimens and models explore this question and include examples of colour in mating, camouflage and warning.

### B3 How arthropods live

The giant robotic scorpion im poison as arthropod attack an Other specimens, such as rhi tropical centipedes, further e; and, together with a three-m depth to the study.

Explore the life process of nutrition, at animals (including humans) have common

KS1,2,3 Sc

- Explore the life process of reproduction that animals (including humans) have in common

KS1,2,3 Sc

- Observe the differences between things that are living and things that have been alive



- Explore the life process of growth that animals (including humans) have in common

KS1,2,3 Sc

- Study the different habitats that support different organisms

KS2,3 Sc

### B5 How arthropods live – Metamorphosis

How and why do arthropods change during their life cycle? Look up at giant models of three stages in the life of a swallowtail butterfly. Mosquitoes, swallowtail butterflies and ladybirds exemplify different rates and degrees of change in a three-minute video *Changes*.

#### – Building

rates this commentary, is in the erature. nels examine potter wasps

### D Crabs and related species

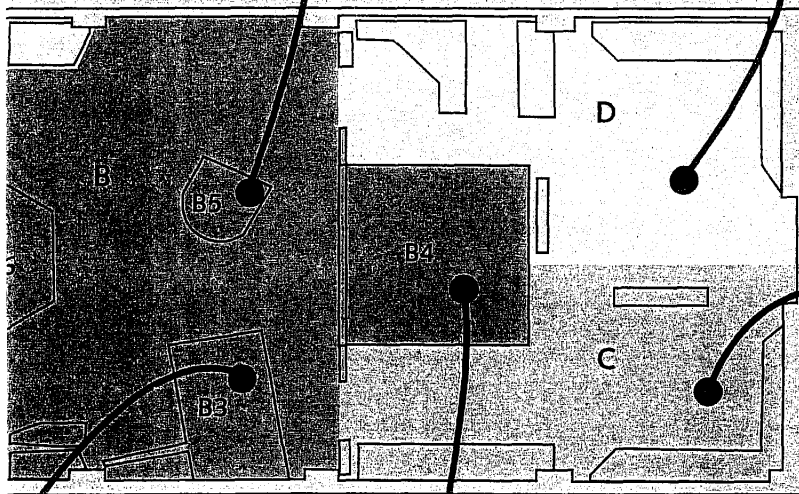
A good place to look at the variety of habitats in which crustacea live, and how they interact with other animals. The *Cabinet of crustacean curiosities* contains unusual species such as hermit and fiddler crabs and pistol shrimps. The mating theme is revisited – this time examining the problems caused by an inflexible carapace.

### C Spiders and related species

This section begins by establishing the key characteristics of an arachnid (eight legs, two body-parts, no wings or antennae) with an exhibit that invites you to *Build your own arachnid*. A series of selectable video clips explore perception, hunting techniques and the hazards of the mating game.

- Observe variations within and between species

KS3 Sc



#### Attling for survival

esses armour, pincers and fence mechanisms. s beetles, earwigs and these mechanisms video, allow more

#### Literacy hour links

There is huge scope for literacy hour work based upon a visit to *Creepy crawlies*. Some examples include...

##### Year 2

produce simple flow charts – for example on the process and stages of metamorphosis.

##### Year 3

collect simple words and phrases, in order to write poems and short descriptions – for example collect a group of words that describe 'how spiders move'.

##### Year 6

develop a journalistic style through consideration of public interest and the interest of the reader.

### B4 How arthropods live – Crawley House

A reconstruction of a house invites you to find out what happens where humans and arthropods meet. There are over 20 different arthropods to find, including wasps, houseflies, cockroaches, mites and fleas.

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c

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## Thematic links to other exhibitions

Thematic links to other exhibitions

To explore the similarities and differences in the life processes of other animals visit...

- *Mammals*, Galleries 23 and 24
- *Primates*, Gallery 107
- *Human biology*, Gallery 22
- *Dinosaurs*, Gallery 21

To investigate relationships between human beings and the environment visit...

- *Ecology*, Gallery 32

## Visitor access

*Creepy crawlies* is accessible to wheelchair users. The majority of exhibits are at an appropriate height for all visitors to the Museum. However, the exhibition is a very popular one and at times can be crowded and quite noisy. It might therefore be advisable for visitors with any degree of hearing impairment to visit at quieter times. The light level in the exhibition is generally good and many of the exhibits are backlit and make use of good colour contrast.

<http://www.nhm.ac.uk/education>

## Where to get specimens for *Investigate*

For bones, skulls, skeletons, casts some cross – sections and some preparations...

John Dunlop  
Osteological Supplies  
12, Tideway  
Littlehampton  
01903 724 983

For rocks, minerals, fossils...

Gregory, Bottley and Lloyd  
13 Seagrave Road  
London  
020 7381 5522

For prepared taxidermied whole animals...

K. Wilmot  
10 High Street  
Greatham Village  
Cleveland  
01429 872376

for skins, insects, echinoids, mollusc shells, hides, furs, arthropods

<http://www.arthropod.net/specimens/ls000.htm>

or

[www.web-shops.net](http://www.web-shops.net)

for arthropods, arachnids etc...

[www.bugsdirectuk.com](http://www.bugsdirectuk.com)

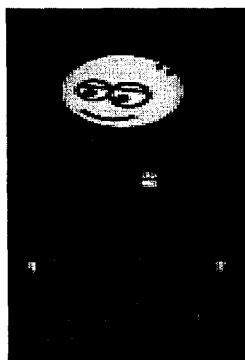
or they can be obtained pre embedded in transparent resin from

[www.science4schools.co.uk](http://www.science4schools.co.uk)

These are the commercial sources that we are currently using.

dan

**INVESTIGATE REVISITED**  
Working as an Explainer in *Investigate*



### Contents

Chapter Heading	Page	Heading	Page
What are we trying to achieve?	2	Right answers and appropriate milestones.	11
Objectives.	3.	Answering the "what is it?" question.	12
How can we achieve these objectives? Explainer roles and responsibilities. Some suggested strategies.	4-7	Some questions to consider and discuss.	13
Introductions.	8	Suggestions for specific activity areas	14-16
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Learning FROM objects not ABOUT objects. Interactions. Questioning.	10		

This document results from the '*Investigate* revisited' training and consultation that took place with explainers in 2001. One reason for these sessions was to work towards producing a handbook for explainers working in *Investigate*.

The intention is for this to be a working document that we revise, and extend. This is not the end but the beginning of the process.

A series of meetings will be arranged as early as is possible in January 2002 to discuss and agree the outlines and strategies contained herein.

Dan Wormald 2001

Hoy Hawkey

### What are we trying to achieve in *Investigate*?

*Investigate* is founded upon Constructivist theories of knowledge and learning.

George Hein explains these ideas as follows...

"Constructivism argues that both knowledge and the way it is obtained are dependent on the mind of the learner. This view, based on idealist epistemology as well as developmental psychology, and in recent years supported by research in cognitive psychology, comes as a shock to those who wish to preserve the idea of knowledge independent of individual learners or communities of learners. It has been called radical Constructivism. Proponents of Constructivism argue that learners construct knowledge as they learn; they don't simply add new facts to what is known, but constantly reorganise and create both understanding and the ability to learn as they interact with the world. Further, the knowledge that is constructed through this process is individual or social, but has no ontological status outside the mind of the knower."

(Taken from GEM news article – see [www.GEM.org.uk/news](http://www.GEM.org.uk/news) for full text.)

"So, that's all nice and clear then!! Thanks George!!"

What a lot of scary long words.

What does all this mean?

How can we implement these ideas in *Investigate*?

In practical terms *Investigate* seeks to...

- Allow close examination of real objects (related to the natural world)
- Facilitate open-ended investigations that are appropriate for, and owned by, the learner
- Provide memorable experiences that can act as reference points for later learning

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→ 有 知 識 有 信 心 信 守 自 己 的 理 論

研 究 學 習 → 研 究 學 習 的 學 習 活 動 心 時 表 現

## Objectives

These are the objectives for *Investigate* that were stated, discussed and refined in the *Investigate* revisited training sessions...

1. To create a welcoming, accessible and exciting environment in which visitors feel secure and motivated. It should be clear that the environment is safe and in which they have permission/are encouraged to do stuff – they are trusted and can trust us.
2. To allow/enable visitors to experience the physicality of the specimens for themselves – thus enhancing their motivation and stimulating their curiosity for exploring the natural world.
3. That visitors should develop skills of observation, description, vocabulary and questioning
4. That visitors should engage with a process of enquiry.
5. That the visitors should feel a sense of ownership for their enquiry.
6. To allow/enable visitors to get close to unfamiliar objects
7. That visitors should enjoy the specimens.
8. To help visitors to look at familiar objects in a new way
9. To experience and develop skills using scientific equipment
10. To enhance awareness of the work of the Museum and its scientists
11. To make links with gallery exhibits and displays

Please note that these objectives are not arranged in order of importance and also that attempting to address all of them in a single interaction is almost certainly doomed to failure. Personally I believe that Number 7 is both the key to and the foundation of a worthwhile experience in the gallery. Many of the others are ways of facilitating this.

**In 2002 we revisited the objectives of *Investigate* and rewrote them as follows**

The purpose of *Investigate* is to explain key aspects of the scientific work of the Museum by providing...

- a special environment – safe, with a laboratory 'feel', where the experience is guided (to make it more effective) and welcoming
- and resources – genuine access to genuine specimens, scientific tools including ICT, and facilitators to support the experience

...where a visitor (aged 7-14 or an adult) can be a scientist by...

- using specimens
- using scientific tools
- following their own lines of enquiry  
(This may include developing scientific skills of observation, description and questioning and developing scientific vocabulary.)

⇒ explain specimens and aspects of scientific work of the museum  
scientists by providing a special environment

## How can we achieve these objectives?

In the *Investigate* revisited training we set out to establish what jobs (left column) explainers need to do in order to support the objectives we had set for ourselves. We then tried to match these with suggestions for practical strategies (right column) for how to do them. I have reproduced all the strategies below in the hopes that explainers could try them out, modify them and suggest new approaches to add to this document. and use

explainer roles and responsibilities	Some suggested strategies/questions
Maintain and curate the specimen collection. <u>Create an exciting and inviting environment.</u>	This is what might be described as on going housekeeping. Replacing specimens and Q cards, setting up the space and closing it down, reporting breakages and other maintenance issues. Etc.
Encourage touching and exploration (In particular to reassure parents that it's ok to touch)	Do it yourself e.g. stroke the fox Warm tone of voice, positive body language Get stuff out of trays (but hold on to tray as a complete item) Hand things to people (that they have chosen) Do a small investigation yourself Encourage exploration of the whole room <b>Listen out for parents saying 'don't touch'</b>

Please note that the strategies in the right hand column are suggestions of things to try. Some of them may work for you while others will not. Some will work with some visitors and not with others. Try them out, keep the ones that work and make them part of your standard practice. Please send any suggestions for additions to Dan.

This is not an attempt to specify or standardise exactly what explainers should do. In all of this you must remain sensitive to the needs of the individual you are dealing with. (I would argue that everyone has 'special needs', but you should be aware that we get a slice right across the age and ability ranges as an audience in *Investigate*.)

In interacting with visitors you need to be flexible in your approach and responsive to their individual needs and interests.



Explainer roles and responsibilities	Some suggested strategies/questions
<p>Reassure that right answers are not required in this space Reassure that individual's opinions/ observations are as valid as anyone else's – but <b>evidence</b> for them is important</p>	<p>Going away with questions is OK  It's OK to make a guess (and then look for supporting <b>evidence</b>)  Say you can find out answers by looking and touching.  Be open and supportive of questions and answers without either agreeing or disagreeing with answers  Focus on 'good' scientific responses  There might be more than one answer – the important thing is having <b>evidence</b> to back it up  Why do you think that?  What gives you that idea?  Where is your <b>evidence</b>?  How do you know?  Reward <b>evidence</b>, not answer  Pursue the <b>evidence</b> line – at some point assume understanding and move on.  This might include children who want you to set the agenda and tell them what to write down – offer options and alternatives, reassure that their choice is fine</p>

Please note that the strategies in the right hand column are suggestions of things to try. Some of them may work for you while others will not. Some will work with some visitors and not with others. Try them out, keep the ones that work and make them part of your standard practice. Please send any suggestions for additions to Dan.

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Explainer roles and responsibilities	Some suggested strategies/questions
<p>Talk to people about what they are doing</p> <p>Ensure that visitors reach milestones that are satisfactory – without focussing on right answers.</p> <p>Discuss what kinds of answers are satisfactory – for them and for us</p>	<p>What have you found (out)?</p> <p>Why did you choose...?</p> <p>Which one do you like best?</p> <p>Start a dialogue</p> <p>What have you been doing?</p> <p>How are you getting on?</p> <p>✓ What does (this object) feel like?</p> <p>Do you need any help? (Make the help obvious by waving a ruler or some such – guide them to the help rather than hand it to them?)</p> <p>Find point of common interest</p> <p>Demonstrate how you might do something</p> <p>What are you doing that for?</p> <p>What are you trying to find out?)</p> <p>Get another tray and demo tools as needed</p> <p>Use specimen or tool as cue</p> <p>Be interested in what they are doing</p> <p>'That's interesting!'</p> <p>'It might help if...'</p> <p>Watch for a short while before piling in.</p> <p>There isn't always a way in, it's not compulsory</p> <p>DO NOT ASK, "Do you want any help?"</p>
<p>Help visitors to <u>think of ways to test their ideas</u></p>	<p>How do you think you could test that idea?</p> <p>Draw attention to the tools – might they help?</p> <p>'Is there any equipment here that might help?'</p> <p>Don't underestimate the need to take your time.</p> <p>Listen to them. Piaget talks about "giving students time to talk themselves into understanding"</p> <p>Talk out the hypothesis 'what would show you that that was true?'</p> <p>Science is more about trying to disprove things than to prove them.</p> <p>Make a guess and prove it wrong - narrow down the possibilities</p> <p>Connect to the further information</p> <p>Make comparisons and connect with other examples</p>

Explainer roles and responsibilities	Some suggested strategies/questions
Show what resources are available – including Explainers	See 'introductions' below...
Establish where people are and where they want to get to	<p>You will meet the full spectrum of abilities working in investigate, including visitors with severe special needs. You will need to be sensitive to this and adjust your interactions appropriately. Sometimes less is more. Look for similarities and differences with other experiences</p> <p>What do you already know/think you know about these things?</p> <p>Turn observations into questions -- . . . ?</p> <p>Show the tools –</p> <p>“How could this help you to find out about these things?”</p> <p>What would you like to find out?</p> <p>Home in on and define central idea that they have</p> <p>Explore their use of language – what do they mean?</p> <p>Why did you choose that tray?</p>
Be present and ready to interact	<p>Everyone coming into the space should be treated as an investigator. We should be engaging parents/carers and adults as much as children. Warm tone of voice, positive body language. Where you are in the room will make a difference. Do not sit chatting in a group with other Explainers.</p>
<p>Help visitors to formulate ideas for investigation</p> <p>Initiate a process of investigation</p> <p>Get people started Encourage visitors to work together, and share ideas and findings</p>	<p>Initiate a conversation</p> <p>Get people to describe to you what they are looking at</p> <p>Share a personal experience or observation</p> <p>Give permission to touch the specimens</p> <p>Do you know where to start?</p> <p>Have you been here before?</p> <p>Is this your first visit?</p> <p>What are you most interested in?</p>

Please note that this is not an exhaustive list of all of the jobs done by explainers in *Investigate*. To this we would need to add monitoring and evaluating activities in *Investigate*, development work, customer care and visitor management roles (e.g. the ticketing system) and much more. However these are the tasks and strategies that were discussed in *Investigate* revisited.

## Introductions

Ideally all visitors and groups should be introduced to the space as soon as possible after their arrival. The evaluations we have so far underline the importance of an early interaction with visitors to focus their visit and experience in *Investigate*. Visitors who do not have such an interaction tend to browse for a while and then leave before they get involved in any focussed activity. The intro should be as brief as we can make it. Visitors will learn more from engaging in an investigation than they will from being told about it.

### Key points for intro

- This is a space where visitors can be scientists exploring the natural world. There is a large range of specimens to explore with tools and equipment at the workstations.
- Please take a whole tray from the wall and return specimens after use.
- There are other activities to explore in the corridor and garden.
- Explainers are there to support and help visitors *Investigate*. They will help you to make best use of the space, asking you questions, and what you have noticed.

活動 - 目標, 時間, 地點

學生能理解科學的意義

能參與科學探究

能與同學合作

能表達意見。

## Schools intro

Keep it to a minimum.

Think carefully about what you want the group to hear (make short, clear statements) and what you engage them in a dialogue about. Don't ask questions where they may not be able to answer in the way you need. Personally, I would advise you not to engage in question and answer with groups at all. There is no guarantee that you can carry all of the students with the dialogue, as you do not know enough about the group to be able to judge how to pitch it. However we will do an exercise with a video camera and take it from there. So watch this space.

1. Welcome to The Natural History Museum and to *Investigate*. (If you need to get their attention then thanking them in advance for listening is usually a more effective strategy than telling them to be quiet, or shouting at them)
2. Introduce the space – **real** objects, resources (Q cards, notepads), **scientific** tools (including computers) and other activities, helps (Explainers, one another, adults with you)

(Take out a/some **whole** tray/s and show it/them to the group so they have a visual and solid cue to link to what you are asking them. Put **whole** tray back at end.)

3. This is a space where **you** can act as a scientist and carry out **investigations** of **your own** – in the way that scientists do [here]. This is part of what goes on here behind the scenes. Scientists ask questions, This is one thing you will need to do in *Investigate*.

Scientist find things "from" the object

Knowledge  
ideas

4. Advise to wash hands at end of session.
5. Give teachers a chance to say what they want to say to the group. (This is something that we don't often do and we really **MUST**.)

### Hints:

You could deal with some of the less important stuff (where it doesn't matter if some of the group miss some of the ideas) as the group are settling down and deal with the key ideas only once you have their attention.

## Learning FROM objects, not ABOUT objects.

### ★ Interactions

The main job of an Explainer is to facilitate interactions between visitors and objects. (and between visitors)

Remember that the interaction you want to encourage is not with yourself. You should prompt and perhaps suggest, you are not there to instruct. As an Explainer you should start (**EVERY TIME**) by encouraging visitors to explore the real specimens. Do not be ensnared by the computers. They are there to support an investigation. They are not an investigation in themselves and most visitors will not find them a useful tool for focussing on the objects. As a manager appraising staff working in *Investigate* I want to see Explainers encouraging visitors to look for their own answers, not telling them to see what it says on the computer.

### Questioning

Asking questions is one valuable tool in encouraging visitors to interact with specimens. The right question at the right time can spark off an investigation for a visitor.

Much has been written about questioning strategies, about the importance of asking open questions rather than closed ones. In the real world, both have their place.

Explainers should be aware from their training that there are different kinds of questions, open, closed, those requiring prior knowledge and those that can be answered from observation. You should try a variety of different approaches. Less confident learners may feel more secure by starting with closed questions and then moving on from there.

One useful way of structuring a learning experience for a visitor is to think in terms of there being three cognitive levels through which learners pass...

1. Descriptive.. at this lowest level learners stick firmly to the material, describing what they can sense/observe.
2. Reflective.. at this second cognitive level, learners will reflect upon what they have observed and try to work out what it means. This might be reflecting on how they feel about what they have observed.
3. Speculative.. at the highest level, learners will be able to integrate what they have learnt and apply it to other contexts.

A key point here is that the three levels build upon each other. A learner who is asked to speculate as soon as they step into *Investigate* will have a hard time. They will not have the grounding in the first two levels to enable them to succeed.

The message for Explainers is to think about what your question asks of a visitor before you ask it. When in doubt start with the Descriptive.

## Right answers and appropriate milestones.

If a visitor has been through a process of investigation, reached an answer with which they are satisfied, **and can justify that answer in terms of the evidence**, then that looks like a highly successful experience in the gallery.

Even the most thorough examination of *Investigate's* objectives will fail to reveal any mention of visitors to the space finding out "right" answers. This stems from the constructivist ethos on which *Investigate* is founded. This ethos would reject the notion of an absolute truth (a "right" answer). Rather, the individual through their interactions with the world constructs knowledge and understanding for themselves. In practical terms, it is the difference between saying to a visitor...

"This is a rhinoceros" and

"Most scientists have agreed to call this animal a rhinoceros"

Let me qualify this bald statement by saying that there is no need for each individual to start from zero and make all the discoveries of human existence for themselves before anything is meaningful for them. Inevitably humans build knowledge on what others have already described. What is essential is the realisation that it was humans that were doing the describing.

Scientists have described and interpreted their own observations. Sometimes these descriptions and interpretations are generally accepted by the rest of the scientific community and sometimes not. In either case the "answer" that has been reached cannot be said to be "right". At most, we can say that it has yet to be disproved.

To translate this into practice in *Investigate* requires us to present Science as a dynamic process of discovery that is carried out by Human beings.

No statement made in *Investigate* will be either right or wrong. Some will agree with the majority of scientific opinion and some won't. As an Explainer you can never have access to all the latest interpretations or observations, so it is usually safer to avoid such statements.

The strand to pursue as an Explainer is...

- "Does this statement fit with the observable evidence?" or
- "Does this statement not fit the evidence?"

If a visitor in *Investigate* reaches a milestone through an investigation that you consider to be at variance with current scientific thought you are welcome to make the statement.

"It's interesting that you think that/I can see where you are coming from. It's not how I understood it when it was explained to me..."

But the answer they have reached **is not wrong.**

I would want to see Explainers challenging **all** answers through the evidence regardless of your own opinion about it. For example...

"Why do you think that?"

"What is your evidence?"

"What is it about these specimens that leads you to that conclusion?"

## Answering the 'what is it?' question

This is a question that you need to be prepared for. It is one that children and adults in the gallery will ask you a lot.

There are any number of possible answers to this question...

- it is part of an animal
- It is an animal that lives in the sea
- it is a member of a group scientists call echinoderms
- it is the shell of a dead animal
- in Britain it is commonly called a sea urchin
- it is an exoskeleton
- it is mainly made of calcium

**Be sure that you are answering the question they are asking!**

**Always** check that you have understood a question, do not assume. Some useful questions might be...

"What do you think it is?"

"What is it that you want to know"?

"Before I answer, can I find out more about what you're thinking, so I can be sure my answer is right for you"....

[Be explicit about your intentions and your reasons for checking before answering]

[If visitor not holding object, hand it over.]

"Here it is, take a closer look and see what you think."

"It's fascinating isn't it, I love this bit. What do you think?"

"Have you tried looking at this through a microscope?"

'Name' it (with a 'suitable' name) and draw attention to a key feature that interests you. Ask if that interests them and move on having got 'naming' out of the way.

As always, the key to a good interaction is to engage the visitor with the specimen. This does not mean that you should divert such requests into another area and if the visitor wants a name then if you know it you should give it, though I always think it is reasonable to ask them why they want a name.

What I am keen to eradicate is an exchange like...

Visitor... "What is this?"

Explainer... "have a look on the computer!"

Obviously the computers are there to be used, but they should not be your first port of call. Otherwise we could just replace explainers with signs saying...

"Look on the computer!".



### Some suggestions for specific activity areas...

Much of the other material in this handbook relates to the investigation of real specimens in Investigate. Several of the explainers have asked me to compile a list of suggested strategies and best practice for the changing activity areas. The following are the results of my observations in the gallery and some strategies that I have used myself.

#### 1. Activity of the month.

- **Fossil dig.** Begin with the stratigraphy. There are 3 rock layers represented. Which is the oldest? Which will contain the most recent fossils? The fossils are embedded in the rock. How do rocks form? In what kinds of rock might you find fossils? How do fossils form? What kinds of thing are most likely to become fossils? Types of fossils? Don't forget traces/footprints/burrows/dung. Focus on the fossil they have found. Is it a whole or a part? Is it a plant or an animal? How can they tell? Is it like anything they have seen before?
  - **Skulduggery.** Split the lower mandibles up from the skulls and ask visitors to match them up again (they will have to make close observations to do this). Ask visitors which skulls they think belong to modern animals. Then demand their evidence once they've made their selection. Measurements are a good starting point for an investigation of the question "Which is most like you?" You could also explore features that the visitor considers Human. There are printed focus sheets for this activity that visitors can be encouraged to use. There is also a pack of written notes on each skull available for explainers.
  - **What a drag.** What would be a good shape for a fish? Look closely at the shapes in the tray and make guesses about which will travel fastest/slowest. Then use the tubes to race the shapes against each other. Observe the way the shapes move down the tubes as well as how quickly. Eg shapes with tails suffer less turbulence from "rifling" than shapes without.
  - **Feely box.** This is arranged as a game for two players, the idea being for them to work out if they are handling the same object or two very different objects. It is an excellent opportunity for language development with younger children.
2. **Skeleton Wall Jigsaws.** The activity, putting the puzzles together is obvious enough. What may not be so obvious to visitors is that all the skeletons are from mammals which share many common skeletal features. The 3D human skeleton should be used as a reference point for visitors to observe.
- #### 3. Living things area
- **Carnivorous plants.** Identify the parts of a plant, leaves, stem, flower etc. make comparison between the carnivorous plants and some from the crrtyd garden. How are they different. Challenge preconceptions about carnivorous plants. Do they need water, soil, sunlight to feed?
  - **Pond dip.** We take two dippings each day (one from top of pond, one from bottom) and put them out side by side. How do the

animals in each differ? There is an i.d key to use. Try a simple biodiversity survey. How many different species can you find?

- Fast plants. I'd start by asking what a plant needs to grow. Where would be the best places for plants to grow? How do plants get the things they need to live? These plants respond very quickly to light and gravity, how might that give them an advantage over plants that don't?
- Wild oats. Start by looking at one seed. Is it alive or is it dead? Describe the seed, look closely at the tail structure. It's fun to put a seed on a visitor's hand, add a drop or two of water. Ask them what the seed does. How does it do this? Look at the structure of the seed. Ask students (very careful with the language) how the seeds might benefit from this adaptation.
- Woodlice choice chambers. woodlice prefer some environments over others (damp and wet). This preference expresses itself in their movement. In an unsuitable environment they will not turn around very often, resulting in them walking out of that space. In a suitable place they will turn around over and over again, thus keeping them in one place. Ask visitors to what extent they think animals make decisions. Then show them the chambers (all the lice will be in the same place). Alternatively, place one louse in the middle of the chambers, leave for a minute and then look to see where it has ended up.
- Wormeries. Can you see any worms? What evidence of worm activity is there? Can you tell where the worms have been? How? What is the effect on the soil? Worms recycle. What other kinds of animal perform a similar role?

#### 4. New Media activities

- Build a bird
- Coccolithophores
- Symmetry
- Look Closer
- Food webs

## ★ Some questions to consider and discuss

Below is a list of questions that I feel need to be clarified and agreed by staff that work or develop materials for *Investigate*. Some of them may provide fruitful starting points for the discussions that are to take place in January around this document.

Have a think about them before the meetings take place and add any questions of your own underneath and bring them along together with your comments on the rest of this document.

- ★ • What kinds of educational experiences are we trying to facilitate in Investigate? 著重 过程 讨论 提高 兴趣 有 趣 又 新 奇 的 自 由 地
- ★ • What kinds of end-points should we be helping visitors to reach? 帮助 他们 引 出 自己 的 结论 有 趣 的 问 题 答 案
- What kinds of questions should we be asking? 问 题 的 提 出
- How should we be answering questions?
- What kind of information should explainers be 'giving' to visitors?
- When is it ok to agree with visitors?
- Is it acceptable for visitors to go away with an answer we know to be wrong?
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## *Investigate* standard procedures

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## 1. Set up

The explainer duty manager needs to check to see what booked groups we have and allocate staff to Investigate as appropriate. Please check the folder for pre-visit forms that will detail any special requirements or special needs of which we need to be aware.

Investigate must be set up by the explainers every day before we open to the public or to schools. The set up includes...

Switching on. The power switch should have been turned by the cleaning staff so all the lights and machines should be up and running when you arrive. Please check that all the computers have booted up correctly and report any problems to Investigate manager (currently Dan). In the first instance you can try ctrl/alt/del to see if they will boot up manually.

Putting out the specimen trays. Remove tray lids. (A check needs to be made to ensure that all the trays have their full complement of specimens.) Please check that the right set of Q cards is in each tray.

Putting out the bench specimens (these are all in the tall cupboard to the left of the door to ed rm. 1)

Putting out the tools (there should be some of each in each workstation tray, please check for breakages and report to relevant responsible explainer – currently Hannah). Don't forget the record pads.

One explainer needs to go around and check that the Investigate signage is correct (who this is should be specified by the explainer duty manager)

Pond dip. There are 2 trays for this they are usually left on the pond edge. Take one dipping from the bottom of the pond and one from the top. Put a branching key out next to them.

Put courtyard garden Q cards out in carousels.

Check that changeable activities are all there and intact. Carry out such maintenance as is necessary.

## 2. Close down

Investigate closes at 1700, but last entry is at 1630, so from then on explainers can be packing away specimens and tools. If we still have visitors, leave the workstation nearest the door for them to use. The computers are on a timer and will switch themselves off progressively toward that end of the space, finally closing down at 1700.

To close down Investigate...

Collect all specimen trays, replace Q cards, replace lids, replace in rack in tall cupboard.

Pour pond dips back into pond

Replace tools and pads in short cupboards

Replace bench specimens in tall cupboard

Check that all the computers have turned themselves off (if not use the emergency key to open the cupboard underneath and switch them off by hand – report this as a fault to Investigate manager)

Check front door is locked and doors to garden.

Turn the exhibit key to extinguish the light and make sure that the back door locks behind you.

### **3. Breakages...specimens**

If a specimen gets broken or lost it either needs to be mended or replaced.

1. remove whole tray and place in left hand rack in the tall cupboard
2. leave a note in the tray saying what has happened, naming the specimen and that the specimen has been given to me (Investigate manager)
3. give specimen to me (Investigate manager), actually just leave it on my desk with a note

If the specimen has been completely destroyed or stolen exactly the same procedure should be followed, except of course you will not be able to leave the specimen on my desk.

Input needed here from Simon

#### **4. Breakages equipment**

Broken tools need to be removed from use and left on the Investigate manager's desk. Please also inform the responsible explainer.

The gallery should be checked on a daily basis by EGMT before it opens. They note down...

- \* Any monitors that appear out of order which get reported to special effects.
  - \* Any specimens on display that are damaged or, as recently, attacked by moths.
  - \* We know flooring is ongoing problem Jacqui is handling but if more comes up, note and make safe with sticky tape.
  - \* Any other damage.
    - \* Items put on check list and responsibility given to team member
- Input needed here from Simon



**5. Computers crash or not working**

In the first instance try rebooting them manually (i.e. Get the emergency key, get out the keyboard and try Ctrl-Alt-Del). Inform the Investigate manager. If this does not work put an exhibit out of order sign on the monitor and inform the Investigate manager

Input needed here from Simon

## 6. Timed ticketing

During school holidays and on certain busy weekend days visitors will be required to collect a coloured sticker for the half hour they wish to go to *Investigate* from the desk at the entrance to *Investigate*.

They may choose which half hour they want to visit.

Each member of the group wishing to go to *Investigate* should be given a sticker. (There is no need to keep a record of the names of people.)

There will be 40 coloured stickers available for each half hour.

A member of DVS staff will be at the door to *Investigate* to make sure the right coloured stickers come in at any time and to give out stickers to visitors who want entry.

Ideally DVS staff should prepare 10 envelopes each containing the correct number of stickers for the half hour period.

Visitors do not have to be at the door to *Investigate* ready for when their slot begins (we want to prevent a queue of waiting people forming in the downstairs corridor). They will be admitted to *Investigate* at any time within their slot.

Please encourage them, however, to come within the first 15 minutes – because if the exhibition is still busy at the end of the slot we may have to ask them to leave.

Times and sticker colours:

10.30-11.30 no sticker required  
11.30-12.00 orange sticker  
12.00-12.30 blue sticker  
12.30-13.00 red sticker  
13.00-13.30 yellow sticker  
13.30-14.00 brown sticker  
14.00-14.30 orange sticker  
14.30-15.00 blue sticker  
15.00-15.30 red sticker  
15.30-16.00 yellow sticker  
16.00-16.30 brown sticker  
16.30-17.00 close down. No sticker required  
Input needed here from Maria

## **7. Staffing levels**

Please note that these are general guidelines and that the explainer duty manager has responsibility for setting staffing levels. These decisions need to be informed by securing all reasonable safety for staff and visitors, while at the same time, not wasting Museum money by overstaffing Investigate when the volume of visitors does not warrant it.

For school groups...

The rule is the more the merrier. If we can have 4 explainers in Investigate that's great. If we only have 2 explainers then the duty manager should seek education officer support except in cases of small groups.

During afternoons in term time...

It is often quiet at these times. Having one explainer in the space is often fine so long as others are on call if needed

Busy times at weekends and in school holidays...

Very often this works out as 'as many as possible'. If we are operating the ticket system and have 40 visitors per half hour, three explainers is just enough to keep the space functioning, but almost all their time will be used up in putting specimens back in trays. There will be little time for meaningful interactions.

At quiet times...

At weekends and in school holidays the first and last hour of the day are frequently very quiet in Investigate. At these times we should only have one explainer in the space, with others on call if needed. It may be that other explainer staff are sent out to the galleries to drum up some more audience for Investigate at these times, otherwise they are likely to be involved in project work of some description.

## 8. Controlling visitor numbers

As with many spaces in the Museum, *Investigate* can only deliver its intended learning outcomes, and staff and visitors can only be safe there if the space is not overcrowded. The Museum reserves the right to refuse admission to any area at any time.

As with all spaces in the Museum, it is preferable for it to be well used (but not over-used) for as much of each day as is possible. It is important for the profile of the Education Unit (with visitors and within the Museum) that it is seen to be busy and used rather than not whenever possible.

*How many people can the room accommodate?*

With managed school groups on structured visits and family groups focussed on task larger numbers are comfortable. With younger children (8-10 year olds) more people can be comfortably accommodated than with older children (13-14 year olds). With school groups on less structured visits and family groups without a clear focus, or where the carers do not accept responsibility for the children's behaviour, smaller numbers are comfortable.

It is also easier to accommodate larger numbers when there are four Explainers present and harder when there are only two.

**It is, therefore, impossible to state a definite number of people that the space can accommodate.**

*What should happen if the room feels overcrowded?*

Explainers present in the room at any time, have the authority of the Education Unit to take whatever steps they feel necessary to ensure that any visitor to *Investigate* is having a safe visit and to maximize the realization of *Investigate*'s educational targets.

This could mean...

- calling for more support in the room
- reporting the situation to the Duty Manager for them to call for support
- taking charge to focus and structure the visit for any group (a small family group, or a larger school group) that is not adequately directed
- refusing admission to groups/ individuals trying to enter
- asking individuals/ groups to leave *Investigate* and return when it is less busy
- calling for support from Visitor Services (including the Security team) to remove difficult visitors
- ***If you have any other suggestions, please feedback as indicated below***

If any of these actions are taken, the Duty Manager should inform Dan Wormald, *Investigate* manager, at the earliest opportunity.

**Situation A**

### **Managing visitor numbers at busy public times – weekends and holidays**

We will normally put in place a 'timed ticket system' for predictably busy times. We have experimented with different numbers and different timeslots. Currently the pattern to be applied is 40 tickets for each 30-minute slot. The exact numbers are constantly under review – any feedback on this is always welcome.

#### **Situation B**

##### **School groups after 14.30**

We do not offer structured, 'door-closed' sessions to any school after 13.30 on a weekday in term-time. The majority of schools visiting the Museum on any day will leave the building between 14.30 and 15.30 (and in fact, many have gone by 14.30). Therefore the time from 14.30 has been advertised as 'public' time. However, we also know that on most weekdays in term-time there are very few members of the public in the building and it is important that *Investigate* is well used (see above). Therefore, it is not appropriate to refuse school groups admission on weekdays after 14.30. But it is appropriate to manage carefully how many are admitted at any one time, as it is at all times (see also above). So, if a school group asks if they can visit *Investigate* after 14.30, it is probably best to say, "*Investigate* has a limited capacity. If the school group is divided into smaller groups (perhaps of 10 children), arriving at staggered intervals, it is more likely that you will be able to get in". And the Explainers working in the space are authorized as above to admit, or not admit any group of 10, 20, 30, 40 or 50 on that basis.

#### **Situation C**

##### **School groups booked in during term time**

Normally school groups are booked for sessions starting at 30 minutes past the hour, 3 such sessions each day. The Bookings team will never book more than 60 people into a school slot, usually book no more than 60 primary school children and usually no more than 45 secondary school children. The exact numbers are constantly under review – any feedback on this is always welcome.

#### **Situation D**

##### **Groups for whom we have made special provision**

We are occasionally asked to ensure access for particular groups. This provision will be granted at the discretion of the *Investigate* manager or EMG. In these cases we would normally inform the Explainer team via the day duty diary. In such situations, the special provision group might take priority over other visitors for a period of time.

##### **Request for feedback**

Any comments, or suggestions for other situations to be considered, or other factors to be taken into account. Please feed these in the first instance to Dan Wormald, *Investigate* manager.

Input needed here from Maria

## **9. School sessions**

Each school group should receive a short briefing from one permanent explainer. Details of what this should involve are given in the Investigate revisited handbook.  
Please remember to ask the group leader if there is anything they want to say.

**10. Announcements**

**SCHOOL HOLLIDAYS** please make announcement at

**11.30am & 2.30pm**

TERM TIME please make announcement at

2.30pm

Good Afternoon, Ladies and Gentlemen,

Visit Investigate, The Museum's hands-on Science Centre

For children aged 7-14 and adults too

Touch and explore hundreds of specimens from the Natural World

Investigate is in the basement next to the Picnic area

Input needed here from Maria/Simon/Sarah

## 11. Gathering more audience

- **School groups**

If we have empty school slots in Investigate then the explainers should try to fill these on the day by approaching teachers and group leaders in the picnic area and offering them a session in Investigate.

Explainers will need to explain...

1. what Investigate is
2. what we have got
3. what students can do
4. that it's free of charge

It may not be possible to do this on every day that there are empty slots, but the duty manager should consider using this strategy rather than have large numbers of staff doing nothing.

- **Public visitors**

During the known quiet public times in Investigate (most specifically term time afternoons and 1030 – 1130 and 1500 – 1600 at weekends and in the school holidays, explainers should be encouraging visitors to go down to the gallery by taking a specimen or tray of specimens up to the top of the stairs, stopping visitors and showing them the specimen/s and telling them that in Investigate there are hundreds of real things with tools to explore them, so they can be scientists.

This strategy has been cleared with DVOS and is at the discretion of the explainer staff in Investigate. Clearly it is not appropriate to undertake when the gallery is already full. Staff acting as attractors for Investigate should return to the exhibition after 15 – 20 mins to check that they are not now needed to help manage the visitors.

Input needed here from Simon/Maria/Sarah



**12. Cleaning**

Investigate should be cleaned by the Museum cleaners every morning before 10.00 because the light and computers are all on the same circuit. The cleaners will already have turned the exhibit key before we arrive to set up.

The Museum cleaners will not go outside, so explainers need to keep an eye on the courtyard garden and give it a sweep if it needs it.

Input needed here from Simon

### **13. Data-gathering**

We need to be keeping an accurate count of the numbers of visitors that we get in to Investigate. During the school holidays and at predictably busy weekends this task is taken by DVOS staff, via the ticketing system. At other times, when we do not have front of house support we need to be keeping these records ourselves. The daily duty manager needs to ensure that a count is made of the number of visitors who come into Investigate in each half hour period that the gallery is open.

Please note this is a door count (the number coming through the door) not a head count (the number of visitors in the space).

The count needs to be left on the Investigate Manager's desk at the end of each day.

#### **14. Reporting**

There will be a Report Book for Investigate, it will be ring bound, with many loose leaf, pro – forma pages, prepared in advance by an explainer in consultation with the Investigate day to day group.

The explainer duty manager will be responsible for completing the pro forma each and every day. The pro forma will enumerate diverse issues connected with Investigate, problems, successes, breakages, repairs needed etc. The Book will be in the prep room and the duty manager must fill in all sections of the pro - forma report, even if the response is "None". The DM must initial the page after it has been completed.

### 15 Standard procedure for adding a specimen tray to Investigate.

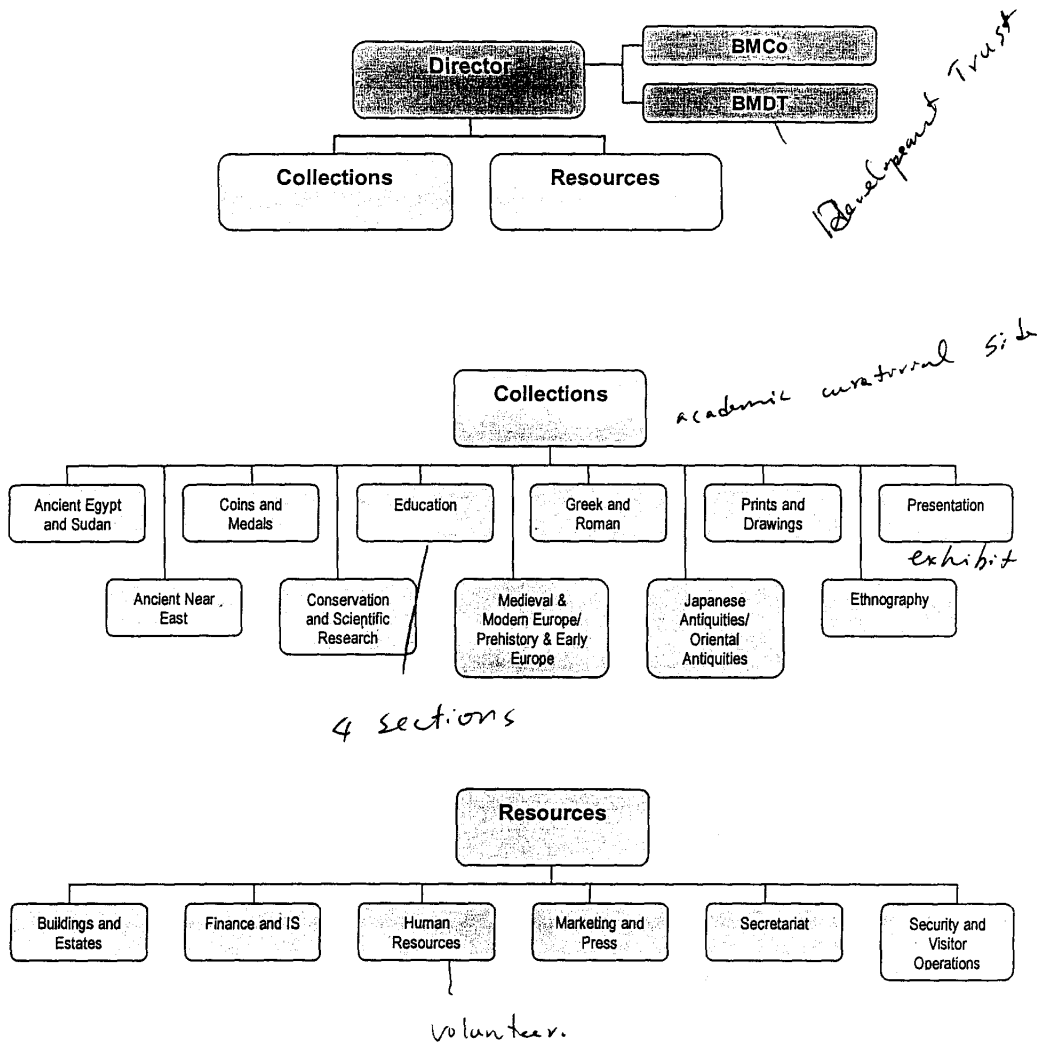
1. Decide on the theme of the tray. Will it be a group of related organisms? Will it be a more general theme? Does it fill a gap in the existing offer?
2. Get Investigate manager to agree that it is worthwhile.
3. Source and price the specimens. Investigate manager needs to authorise the expenditure.
4. Buy/acquire the specimens.
5. Research the specimens. Write relevant text sections Include...
  - Section of text for Further Information. Please see existing for standard format.
  - Details for the database. Including any notes for explainers
  - Source a related article for "in the news"
  - Write draft Q card questions to support specimens
  - Suggest tray label image, provide reference
6. Submit all of the above to Investigate manager for check.
7. Allocate/print numbers and stick on to specimens
8. Send specimens to photography with numbers. Number of photo to be the same as specimen number.
9. Make changes to database
10. Contact new media dept (currently JNB) to confirm inclusion. Give photo disc to new media to link images to data base record.
11. Put specimens in tray
12. Check the computers in the gallery
13. Put the tray out for visitors

## **16 Adding new specimens to existing trays**

1. Identify what we have lost or broken. Amend the data base accordingly
2. Suggest a new specimen to Investigate manager as a replacement
3. Source and buy the specimen
4. Ascribe new specimen number and fix on specimen
5. Send specimens to photography with numbers. Number of photo to be the same as specimen number.
6. Create a new database record for the specimen including key data and explainer notes if appropriate.
7. Give photo on a disc to new media. Ask them to link up the image and update the database in the gallery.
8. Check that the new specimen is on the database.
9. Put it out in the tray for the visitors.

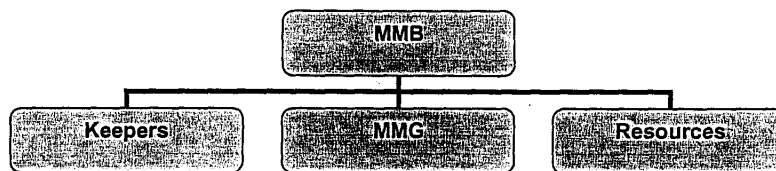
七、 大英博物館學校參觀教學相關資料.....	131
1. 博物館人事組織結構表	
2. 2003-2004 學校與教師活動通訊 ( <b>Information and Events for Schools and Teachers</b> , 整本資料共 16 頁, 在該館網站均可下載列印, 故僅收錄前 4 頁供參。)	
3. 活動預約確認表	
4. 參觀活動說明與建議	
5. 與博物館教學相關的出版與網站資源	
八、 大英博物館教師研習相關資料.....	150
1. 針對「 <b>Celebrating Athena's Birthday</b> 」主題舉辦之教師研習講義	
2. 為「 <b>Christ Church</b> 」小學全校教師舉辦研習之講義	
九、 大英博物館「古埃及挖掘」教學活動相關資料.....	176
1. 挖掘日誌	
2. 埃及古物地層與年代紀錄表	
3. 教師自行設計的古埃及展示廳學習活動	

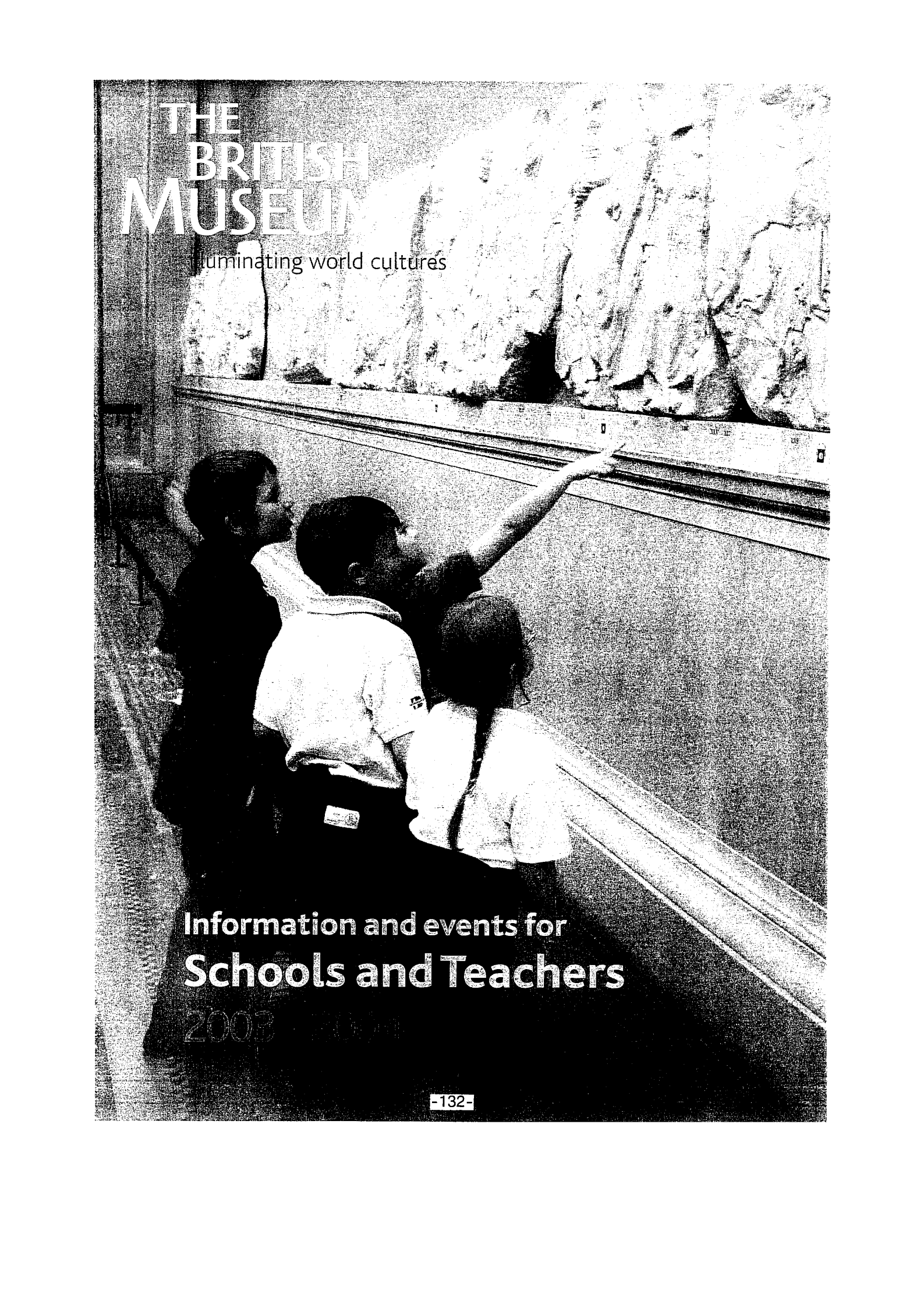
Management Structure



5. Management Board and Management Group

5.1 The two standing management groups that are required by the Director are the Management Board (MMB) and the Management Group (MMG). This structure is explained diagrammatically as follows:





**THE  
BRITISH  
MUSEUM**

illuminating world cultures

Information and events for  
**Schools and Teachers**

2003



### Opening hours

#### Museum

Saturday - Wednesday 10.00 - 17.30

Thursday - Friday 10.00 - 20.30

#### Great Court

Sunday - Wednesday 9.00 - 18.00

Thursday - Saturday 9.00 - 23.00

Visits to the Museum are free, but you must book for any group of 10 or more. You should try to book at least one term before you hope to visit. Since some galleries, especially the Greeks and Egyptians, are very popular, we advise you not to make any travel arrangements until you have a firm booking with us.

Most of the galleries needed by schools are open either all day or until 13.45, but please check gallery availability when you book. Sometimes galleries have to be shut at short notice. We are usually able to inform you of such closures, but we advise you always to make alternative plans in case a gallery has to be closed without notice due to unforeseen circumstances.

We strongly recommend that you make a preparatory visit before you bring your group. This will give you time to work out practical details such as where to find all the facilities on offer and the galleries you wish to visit. The Education Department has a range of resource packs available to help you with your visit. Please order these well in advance - see page 14

### The Ford Centre for Young Visitors

The Ford Centre for Young Visitors is part of the Clore Education Centre and provides lunch facilities, lavatories and coat cupboards for use by up to 1000 pupils per day. When you book a visit you will be assigned cloakroom facilities for your group and a confirmed 30 minute time slot for lunch. When you arrive at the Museum, please check in at the Ford Centre. The facilities in the Centre are in high demand and we advise you to book as early as possible to avoid disappointment. Groups without bookings are very unlikely to be able to use the Centre.

*Ford Motor Company*

The Ford Centre for Young Visitors is made possible by Ford Motor Company

### Booking

#### Booking a visit

Please telephone to arrange your visit, ensuring that you have the following information:

- your school name, telephone number and address, including postcode
- the preferred date of your visit, time of arrival and possible alternatives
- the number of pupils and of accompanying adults - we recommend ratios of 5:1 (KS1); 8:1 (KS2); 15:1 (secondary)
- which galleries you want to visit
- particular access requirements for any of your group

#### Booking an event

For single date events such as study days and events for teachers you can use facsimile, post, email or telephone. Such events carry a four-letter event code after their title.

**For all other events, it is best to book by telephone.**

The Education Box Office is open Monday to Friday, 10.00 - 16.45 including half-terms and school holidays. You are also welcome to book in person. Cheques should be made payable to 'The British Museum Great Court Ltd'. **Payment for events must be received at least two weeks before the date of the event. If payment is not received by that time, your booking may be cancelled and your places offered to another school.**

When you have booked, you will be sent a confirmation form and further advice about organising your visit and about facilities such as the Children's Shop. If you do not receive a confirmation form within two weeks of booking, please contact us immediately. You must bring your confirmation forms with you when you arrive for your visit or event.

#### Cancellations

If you cancel a booking less than 14 days before an event, your fee will not be refunded unless it is an event for which a waiting list is held and the place/s can be filled from the list. If an event has to be cancelled, we will do our best to inform you at least 14 days before the date of the course. In the event of such a cancellation, we will refund the full fee, but cannot take responsibility for travel or other costs you may incur.

### Special Educational Needs and Access provision

The majority of galleries in the Museum are accessible. All the facilities in the Clore Education Centre are also accessible. If any of your pupils has a particular access requirement, please let us know when you book your visit. We will be able to advise you of any temporary changes. Many of the events listed in this brochure involve handling objects and are suitable for pupils with special educational needs, but please check when booking.

Sessions for visually impaired pupils and pupils with special educational needs are available on request. The sessions must be booked at least 6 weeks in advance.

#### Subject to availability we can offer:

##### Special Educational Needs:

- Ancient Egypt handling session
- Ancient Greece handling session
- Roman Britain handling session

##### Visually Impaired:

- Guided touch tour of Egyptian Sculpture
- Guided touch tour of the Parthenon Sculptures
- Ancient Egypt handling session
- Ancient Greece handling session
- Roman Britain handling session
- Anglo-Saxons handling session
- Africa handling session

Sessions can be booked on a Monday, Thursday or Friday, during term-time. Sessions are free and last approximately 45 minutes.

Wheelchairs, magnifying glasses and portable induction loops may be borrowed by prior arrangement. Parking spaces may also be booked for minibuses for pupils with mobility impairments. You will need to provide details of the registration number, make and model of the vehicle together with the date of your visit. Please telephone 020 7323 8299 or text 020 7323 8920.

### Education Box Office

The British Museum  
London WC1B 3DG  
Telephone 020 7323 8511/8854  
Facsimile 020 7323 8855  
Text 020 7323 8920  
Email  
education@thebritishmuseum.ac.uk  
www.thebritishmuseum.ac.uk/  
education

# Turn your class into museum explorers

## A new approach to visiting The British Museum

Tired of trails? Weary of worksheets?

Do you want to do something different with your pupils?

Try using a Museum Explorer Pack with your class. Explorer Packs provide you with everything you need for a lively and challenging teaching session in the Museum including objects, samples of materials, photographs and a range of activity cards.

### Five steps to transforming your visits

- 1 - Book an Explorer Pack session either for your own class or to observe a session with a class from a different school.
- 2 - Observe our experienced Education staff using the Pack with the class.
- 3 - Take away with you a plan for the session, notes and a copy of the printed materials used in the session.
- 4 - Attend a one hour training session after school along with other teachers taking part. You will now be registered to use the Explorer Pack.
- 5 - Bring your own classes and teach them using the Explorer Pack. One of our staff can be on hand for your first self-directed session if you like.

### Explorer Pack Programmes

**Teacher and class -**  
maximum group: 35  
duration: 1 hour  
cost: £30

**Teacher observing -**  
3 places per session  
duration: 1 hour  
cost: £20

### Eating and drinking in Roman Britain (KS2)

3, 6, 7 November 2003 at 10.30 & 12.00  
Training: 17 November 2003,  
16.30-17.30

15, 18, 19 March 2004 at 10.30 & 12.00  
Training: 30 March 2004, 16.30-17.30

When the Romans arrived in Britain in AD 43 they introduced many new types of food together with new ways to cook and serve it. Take this opportunity to find out what the objects on display in the Roman Britain gallery can tell us about the food and drink consumed in Britain 2000 years ago. The Romans left us a variety of sources of information about their diet and this session is also an opportunity to think about how archaeologists use a range of sources to build up a picture of life in the past.

### Celebrating Athena's birthday (KS2)

13, 16, 17 October 2003  
at 10.30 & 12.00

Training: 4 November 2003,  
16.30-17.30

17, 20, 21 May 2004 at 10.30 & 12.00

Training: 8 June 2004, 16.30-17.30

Every year in midsummer the ancient Athenians celebrated the birthday of their patron goddess. The Parthenon frieze shows the procession carrying her birthday present to her temple on the Acropolis. This session brings to life the sounds and sights of the procession, helps pupils to understand the different sorts of sculpture on the Parthenon and shows how important the gods were in the lives of the ancient Greeks.

### Materials of ancient Egypt (KS2)

9, 12, 13 February 2004  
at 10.30 & 12.00

Training: 2 March 2004, 16.30-17.30

Wonderful things have survived from ancient Egypt, but why and how? This session offers an opportunity to handle examples of materials that would have been used in ancient Egypt. Next, pupils explore the galleries in order to discover how these materials were used by the ancient Egyptians and which ones have survived over the millennia.

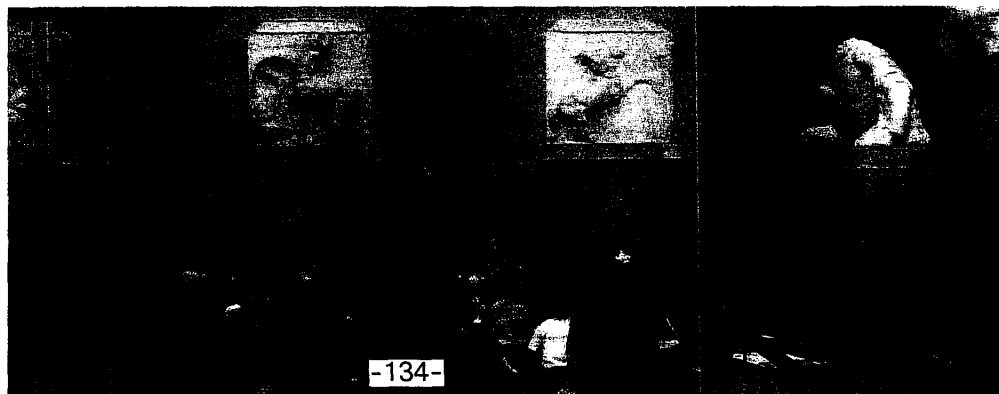
### New this year

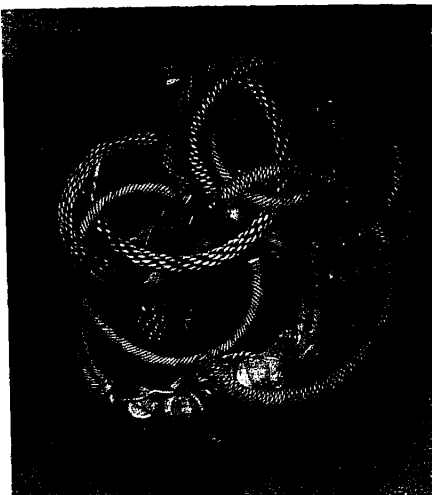
#### Anglo-Saxons (KS2)

26, 29, 30 April 2004 at 10.30 & 12.00;  
Training: 11 May, 16.30-17.30

The Anglo-Saxon period has left us a wealth of evidence about everyday life, burial practices and religious beliefs.

This session will set out to explore these themes using evidence from Sutton Hoo and many other objects excavated from burial and settlement sites. Pupils will consider what materials have survived the 1000 years since the end of the Anglo-Saxon period and the different sources of information available to help us find out about life in Anglo-Saxon times.





This special exhibition celebrates how discoveries of treasure and other ancient objects made by members of the general public help to change our views of Britain's past. It contains many important gold and silver treasures found in England and Wales over the last few decades, along with less obvious 'treasures' such as pewter Medieval toys and Viking jewellery. Objects cover almost the entire range of British history including stone age axes up to half a million years old, the recently discovered Ringlemere gold cup, the famous Roman hoards from Mildenhall and Hoxne, and several large coin hoards from the Iron Age to the English Civil War. The exhibition also concentrates on citizenship issues about who owns the past and includes interactive displays for younger visitors and opportunities to handle objects.

Admission for booked school groups is free. School groups can book for one hour slots between 10.30 and 13.30 on weekdays: please telephone 020 7323 8511/8854.

Support Packs for Primary Schools and for Secondary/A Level groups will be available from the Education Department in October.

Sponsored by



**treasure through time (KS2 and KS3)**

2, 3, 4 December 2003;  
 20, 21, 22 January;  
 3, 4, 5 February 2004  
 at 10.30 and 12.30

This workshop will enable pupils to understand how objects dating from prehistoric through to early modern times have been recovered from the archaeological record and how they have come to be classed as treasure. Moving from this 21st century interpretation of the objects, pupils will then explore how these objects were viewed by the societies which used them and how issues of wealth and status are bound up with them. They will also look at how the notion of treasure has been perceived over time and how this has affected the materials and object forms employed during different periods.

Maximum group: 35  
 Duration: 90 minutes  
 Cost: £60

**treasure teachers Evening**

27 November 2003

Join the schools staff of the Education Department for a special evening view of the Treasure Exhibition and of the newly opened Wellcome Trust Gallery - a magnificent display of objects from around the world through which we can explore the diverse understandings of human well-being. There will be performances, gallery talks, a display of resources and refreshments.  
 16.30-18.00: in-depth training session for teachers bringing groups to the Treasure through time workshops and for any other interested teachers (25 places)  
 18.00-20.00: views of the Treasure exhibition and Wellcome Trust Gallery and programme of activities

For free tickets, please contact the Education box office 020 7323 8511/8854



**treasure Study day for A-level archaeology**

See page 12 for details

Office Use Only	
Receipt	
Information	
Rec. ID	

# Booking Confirmation Form

Please ensure that the information below is correct

You must return this sheet to the Address below to confirm your visit  
Please turn over

Education Department  
Telephone +44 (0)20 7323 8511/8854  
Facsimile +44 (0)20 7323 8855  
education@thebritishmuseum.ac.uk

Great Russell Street  
London WC1B 3DG  
Switchboard +44 (0)20 7323 8000  
www.thebritishmuseum.ac.uk

## Additional requirements

### Access requirements

Does your group, or any member of your group have any particular access requirements?

Yes     No    If yes, how many in the group?

Please indicate the nature of the disability or additional needs required, so we are able to ensure that you are given suitable information for your visit.

## Resources

Please list below any teachers packs, videos or other resources that you require to assist you with your visit. You will find these listed in the Resources section of the Group Visits information booklet. Please make all cheques payable to 'The British Museum'.

Name of Resources	Quantity	Cost £
Total		£

You may photocopy any of the teachers packs or trails, unless it is specifically stated otherwise.

## Mailing Lists

<p>This information will be stored on the Museum's database. Please tick the appropriate box if you do not wish to receive any further information</p>	<p><input type="checkbox"/> Please do not send me further information  <input type="checkbox"/> Please put my name on the mailing list for the following topics.  <hr style="border: 0; border-top: 1px solid black; margin-top: 5px;"/></p>
--	--

Please remember to return this to the Education Department

Every effort is made to ensure that galleries, events and facilities are accessible

Education Department  
 Telephone +44 (0)20 7323 8511/8854  
 Facsimile +44 (0)20 7323 8855  
 education@thebritishmuseum.ac.uk

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# Booking Confirmation Copy

Please ensure that the information below is correct

Please remember to bring this sheet with you  
Important information overleaf

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education@thebritishmuseum.ac.uk

Great Russell Street  
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## Information for Group Leaders

### Arrival

When you arrive at the Museum, make your way into the Great Court.

If you have entered from the main entrance, the east stairs are to your right; if you have entered from the north, they are to your left. Please see enclosed plan. Go down one flight to the Ford Centre for Young Visitors. The Ford Centre for Young Visitors is on level 1 of the Great Court and is clearly signed.

Check in at the reception desk. If the Centre is busy, you may be asked to move your group to an empty area of the Centre and then return to reception to check in fully. Please remember to bring your yellow confirmation sheet with you.

At check-in we will allocate you a coat storage cupboard for the full length of your visit and tables for your pre-booked lunch time.

Deposit coats, bags and lunch boxes and make your way into the main Museum. Please remember to take valuables with you.

### Lunch arrangements

Return promptly to the Ford Centre for Young Visitors for your scheduled lunch time. Please note that lunch times will be strictly adhered to.

Collect your lunches and take them to your allocated tables.

When you have finished lunch, **please clear recycling and rubbish into the bins and leave tables and the area around them clean and tidy.** Please wipe up any spills or report them to a member of Education staff. Please try to finish your lunch **five minutes before** the end of your time.

### Departure

Return to the Ford Centre for Young Visitors and collect your belongings. Please make sure you have not left anything behind.

If you come back to the Ford Centre after 2.00 and there is room, you are welcome to linger and discuss your visit with your pupils or simply get organised for the return to school.

### Secondary Schools

Depending on the size of your group, you may be allocated lockers rather than coat cupboards. Lockers operate on a returnable £1 basis.

Please note that the Ford Centre for Young Visitors closes at 4.00 and you will need to collect all belongings before that time.

If you have any further questions about your booking or the facilities on offer in the Ford Centre for Young Visitors, please do not hesitate to contact us on 020 7323 8511/8854.

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education@thebritishmuseum.ac.uk

Great Russell Street  
London WC1B 3DG  
Switchboard +44 (0)20 7323 8000  
www.thebritishmuseum.ac.uk

## **A few helpful tips before your visit:**

- Do not leave children unaccompanied at any time. One way to do this is to organise your party into small groups, each with a briefed, responsible adult in charge.
- Check that everyone knows where the toilets and lunchroom are and where you will be meeting before leaving.

## **Please remind all children and students:**

- not to run and shout
- to discard chewing gum in the waste bins before entering the Museum
- not to eat and drink in the galleries
- not to touch objects or lean on the display cases
- to be courteous to other visitors - they want to enjoy the Museum too!

## **Why we say “Please don’t touch”**

It’s a good idea to discuss this topic with your pupils before they come. They will be learning about two important aspects of the Museum: conservation and public display.

Touching objects destroys them, even stone ones. The acid from sweat eats into the toughest materials. We want to preserve the objects so that our descendants can see and enjoy them too!

Smearry glass is unpleasant and makes it harder to see the objects.

Touch tours for visually impaired visitors are available for specially chosen objects, please contact us for further details.

## **Enjoy your visit!**

Education Department  
Telephone +44 (0)20 7323 8511/8854  
Facsimile +44 (0)20 7323 8855  
education@thebritishmuseum.ac.uk

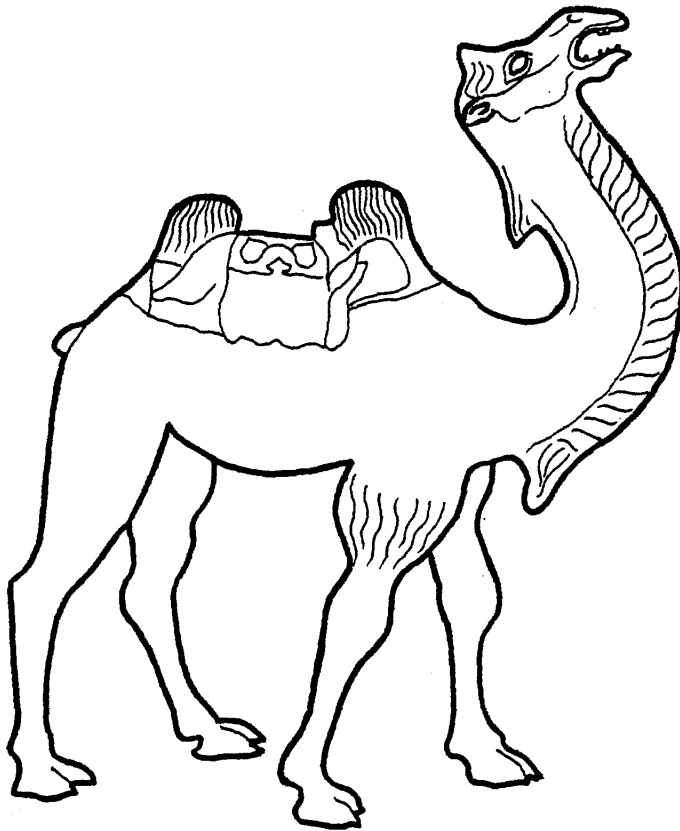
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www.thebritishmuseum.ac.uk



# THE BRITISH MUSEUM

## Group Visits to The British Museum

*This booklet contains important information  
for your visit. Please read carefully*



Tomb camel, Tang Dynasty, China (room 33)

Updated August 2002

Education Department  
Telephone +44 (0)20 7323 8511/8854  
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[education@thebritishmuseum.ac.uk](mailto:education@thebritishmuseum.ac.uk)

Great Russell Street  
London WC1B 3DG  
Switchboard +44 (0)20 7323 8000  
[www.thebritishmuseum.ac.uk](http://www.thebritishmuseum.ac.uk)

## Enjoying Your Visit to The British Museum

To make sure that your visit is a success, please read the following information.

### Before you set off:

Bring your own clipboards (preferably with plastic clips), paper for note making and drawing, multiple copies of activity sheets.

Check that you have brought your confirmation sheet with you. Check that the coach driver is not taking you to the Natural History Museum in Kensington by mistake!

**Coaches:** coaches should use the drop-off point on Montague Place at the back of the Museum. You can either enter through the Montague Place Entrance or walk around the side of the museum to the Great Russell Street Entrance.

**Parking:** Coach parking is available in Gloucester Slips, Regents Park, NW1. Car parks are available in Bloomsbury Square, Great Russell Street, and Brunswick Square. Limited parking for disabled visitors with cars or minibuses is available at the Museum but must be reserved in advance with the Information Desk on 020 7323 8599/8299.

In order to reduce noise and exhaust emissions from coaches visiting the museum, please ask coach drivers parking in Montague Place to switch their engines off when stationary.

**Tubes:** Tottenham Court Road, Russell Square and Holborn are all within a 10 minute walk.

### Facilities

**Toilets:** There are toilets specifically for school groups in the Ford Centre for Young Visitors. Toilets are also available at the Montague Place Entrance; next to room 27; next to room 12; off room 5 (temporary exhibition gallery). Wheelchair accessible toilets are available in the Ford Centre for Young Visitors, next to room 12 and room 5.

**Shops:** The children's shop is on the East side of the Great Court concourse. Please do not allow

groups of children into the gift shop or bookshop.

**Lifts:** There are various lifts from the Great Court concourse to the Upper Floors and to the Basement. The North lift inside the Montague Place entrance and the lifts at the South end of the Great Court provide access to the Upper Floors.

### When You Arrive:

**Entrance** to the Museum can be via either the Great Russell Street Entrance or the Montague Place Entrance.

Make your way to the Ford Centre for Young Visitors in the Clore Education Centre. This is on level 1 of the Great Court and will be clearly signed.

Check your group in at the desk here. Remember to bring your yellow confirmation sheet with you.

You will be allocated cloakroom facilities for the duration of your visit and tables for your pre-booked lunch time when you check in.

### During Your Visit:

Do not leave children unaccompanied at any time. One way to do this is to organise your party into small groups, each with an adult in charge.

Check that everyone knows where the toilets and lunchroom are and where you will be meeting before leaving.

### Please remind all children and students:

not to run or shout

to discard chewing gum in the waste bins before entering the museum

not to eat or drink in the galleries

not to touch objects or lean on the display cases

to be courteous to other visitors - they want to enjoy the Museum too!

## Further Information:

**Photography/Video:** Visitors may use hand-held cameras with flash, or video cameras in most areas of the Museum. Tripods are not allowed without prior permission from Visitor Services.

**Drawing** using dry media (ie pencils, crayons, reservoir pen) is permitted in most galleries. For other media and for further information please refer to the leaflet 'Rules on Sketching' which is available from the Education Department.

If you intend sketching we recommend you do not use the Greek or Egyptian galleries; these become very congested, as they are major KS2 topics.

---

### *Why we say "Please don't touch"*

It's a good idea to discuss this topic with your pupils before they come. They will be learning about two important aspects of the Museum: conservation and public display.

Touching objects destroys them, even stone ones. The acid from sweat eats into the toughest materials. We want to preserve the objects so that our descendants can see and enjoy them too!

Smeary glass is unpleasant and makes it harder to see the objects.

Touch Tours for visually impaired visitors are available, please contact us for further details.

---

## Further Assistance

The Education Department is happy to provide further information on any of the areas included in this booklet, and is always grateful for feedback on our programmes and resources and how you enjoyed your visit.

The British Museum Education Department  
London WC1B 3DG  
Tel 020 7323 8511/8854  
Fax 020 7323 8855  
E-mail: [education@thebritishmuseum.ac.uk](mailto:education@thebritishmuseum.ac.uk)  
Webpage: [www.thebritishmuseum.ac.uk](http://www.thebritishmuseum.ac.uk)

## Gallery Closures

All galleries are subject to closure at short notice due to temporary staff shortages or essential work. We will inform you of any closures notified to us in advance, but please be aware of the closures listed below. We advise, therefore, that you plan some flexible work.

Times	Open all day	Open 10.00-13.45	Open 14.00-17.30	Open 10.00-11.00 15.00-17.30
Room numbers	4 - 9	13	10	77
	11 - 12	14	16	78
	17 - 20	15	67	83
	22 - 25	21	43	84
	33 - 37	22	44	85
	40 - 42	26	45	88
	47 - 59	27	46	89
	61 - 66			20a
	68 - 73			33a
	90 - 94			

Further information can be found at the Great Court Information Desk

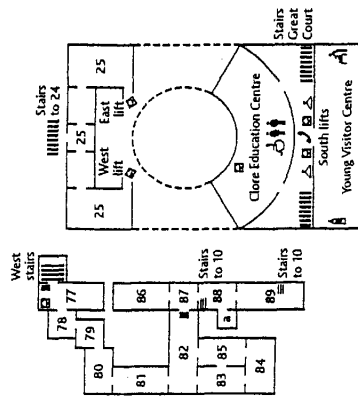
## Resources

Here is a selection of the teachers packs produced by the Education Department. Please see the 'Resources' booklet for a full list.

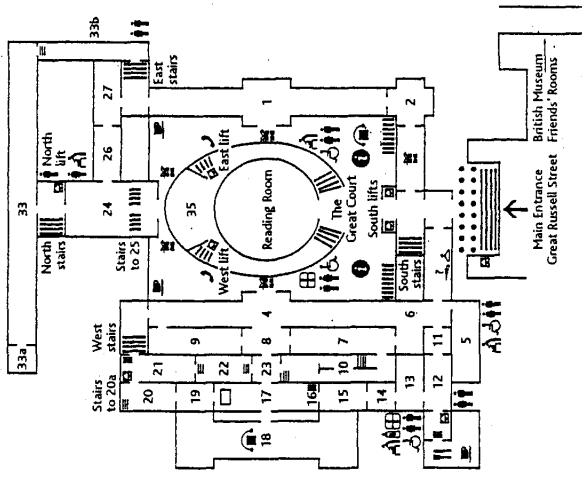
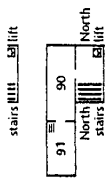
Ancient Egypt, KS2, £5.00  
Ancient Greece, KS2, £5.00  
Anglo-Saxons, KS2, £2.00  
Aztecs, KS2, £3.00  
Roman Britain, KS2, £5.00  
Africa in The British Museum, £3.00  
Benin, £3.00  
Islamic Civilisations, KS3, £3.00

To purchase packs please send us a cheque (made payable to 'The British Museum Great Court Ltd'), or telephone us with your credit or debit card details.

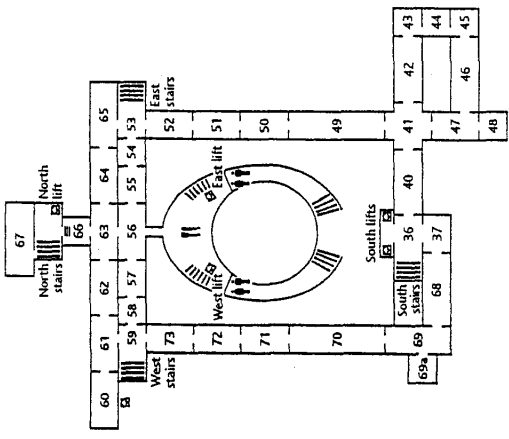
25, 77 - 89



1 - 35



Upper floor  
36-73, 90



Africa: 25

Ancient Near East: 88 - 89 Assyrian art

Greece & Rome: 77 - 85 Ephesus, inscriptions and Townley sculptures

**Key**

- Information Desk
- Lavatory
- Accessible lavatory
- Babycare
- First Aid
- Cloakroom
- Lost property
- Restaurant
- Café
- Shop
- Sound guide
- Telephone
- Lift

Ancient Near East: 51 - 59 Royal Tombs of Ur, the Flood Tablet, the Oxus Treasure

Asia: 67, 91-94 Korea, temporary exhibitions and Japan  
Egypt: 60-66 Early Egypt and Africa, Mummies and funerary archaeology

Europe: 41 - 48 Medieval to Modern: Sutton Hoo Treasure, Vikings, Lewis Chessmen, clocks & watches, Waddesdon Bequest

Greece & Rome: 69 - 73 Portland Vase, the Warren Cup, the Etruscans, Cyprus

Money & Medals: 68, 69a coins and medals

Prehistory: 37, 50 Bronze Age & Celtic art, the Mold Gold Cape, Lindow Man

Prints & Drawings: 90 Temporary exhibitions

Roman Britain: 49 Vindolanda Tablets, Mildenhall Treasure, Hinton St Mary Mosaic

Temporary exhibitions: 36

Americas: 26 - 27 Mexico & North America, Aztec Turquoise mosaics

Ancient Near East: 6 - 10 Khorsabad, Nimrud and Nineveh Palace reliefs, Assyrian Winged Bulls

Asia: 33 - 34 China, South & Southeast Asia: Amaravati Sculpture, Islamic art

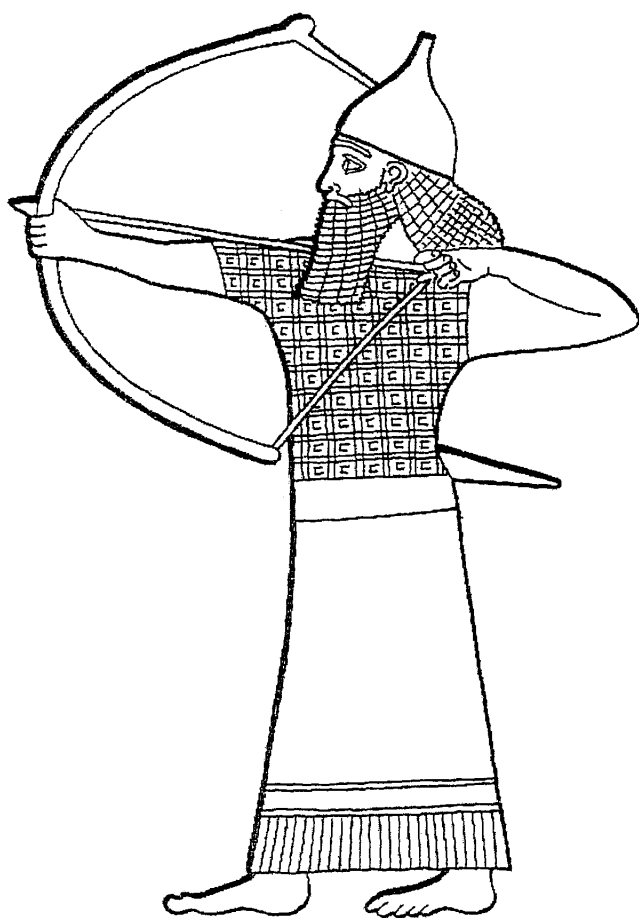
Egypt: 4 Sculpture: Rosetta Stone, fragment of the Beard of the Sphinx, colossal bust on Ramsesses II

Greece: 11 - 23 From the Bronze Age to the Hellenistic period. Includes Cycladic art, Nereid Monument, Parthenon Sculptures, Mausoleum of Halikarnassos

Sculpture: Great Court Concourse Gallery, Hoa Hakananai'a, Easter Island statue

Temporary Exhibitions: 1-2, 5, 24, 35

# Resources



Education Department  
Telephone +44 (0)20 7323 8511/8854  
Facsimile +44 (0)20 7323 8855  
[education@thebritishmuseum.ac.uk](mailto:education@thebritishmuseum.ac.uk)

Great Russell Street  
London WC1B 3DG  
Switchboard +44 (0)20 7323 8000  
[www.thebritishmuseum.ac.uk](http://www.thebritishmuseum.ac.uk)

## Resource Packs

### Adult trails

covering Money, Women in Asia, Food and Drink in China, Christianity in Roman Britain, Islamic Art and Human Remains. FREE

### Africa in The British Museum

Overview of Africa's influence on and relations with other world cultures in different historical periods. KS2 / 3, £3.00

**Ancient Egypt** Activities for use in the galleries. KS2, £5.00

**Ancient Greece** General information and KS2 activities for use in the galleries. KS2, £5.00

**Anglo-Saxons** Background information and KS2 gallery activities. KS2, £2.00

### Archaeology Guides

Study guides on Iron Age Britain and Celtic Europe, and Roman Britain.  
A Level, £3.50 complete pack or £2.00 each

### The Arts of Japan

Introduces teachers of Art and Design to the arts of Japan. Different media are explored within their historical and cultural context. This guide may be used in conjunction with a visit to the Japanese Galleries or in the classroom. Kazari guide included.  
KS3 – A level, £3.00

### Aztecs

Illustrated information pack for teachers planning a KS2 scheme of work. KS2, £3.00

### Benin

Includes information on the bronze plaques from the Royal Palace, gallery activities and a scheme of work. KS2, £3.00

**Celts** Background information on Celtic culture and civilisation. KS2, £1.50

**Chinese Art** Information for teachers and gallery guide. KS3 £1.00

### Classical Civilisation guides

Guides on Greek Theatre and Roman Empire, and checklist for Greek pots and sculpture.  
A Level, £3.50 complete pack or £2.00 Roman Empire, £2.00 Greek Guides

### Family trails

Including Bog Bodies, Skeletons and Mummies, Maths in the Greek Galleries, Science and Mummies, Patterns and Animals in the Islamic Galleries, 50p each

### Islamic Civilisations

Contains gallery based activities and teacher notes  
Religion KS2, £3.00 History KS3, £3.00

**Mexico** A pack including information about major Mexican civilisations. KS2 / 3, £3.00

### Mughals: Jewelled Arts

Pack from the British Museum exhibition on Jewelled Arts from Mughal India. Includes full colour images of objects in the exhibition.  
KS3 History, KS4 Art & Design, £3.00

### Native North America

Art Guide KS2 - KS4, £3.00 History Guide KS3/4, £3.00, Science KS2 Free (see postal charges below)

### **Nebamun Goes Hunting**

Egyptian resource containing full colour poster and literacy activities. KS2, £2.00

### **Photo Packs**

Versatile classroom resource containing 30 A4 laminated colour photos with teacher notes. The Human Face, KS3 – A Level. Native North America, KS3/4  
£7.50 each or £10.00 for both

### **Prehistory: Objects of Power Guide**

Containing study themes and detailed guide to the displays. Suitable for A level students, undergraduates and adult learners. £3.00

**Roman Britain** Gallery activities and information. KS2 / 3, £5.00

### **The Year of The Dragon**

Exploring dragons in The British Museum collections. For use in the classroom in conjunction with the online Compass tour, or to accompany a museum visit. Suitable for China as a topic, literacy, history, ICT and art. KS2 £3.00

### **What is African Art?**

A resource for teaching art at all Key Stages, looks at the historical and cultural context of art in Africa, and what it means to the West. KS2 - 4, £3.00

### **Resources available free with a 10" x 15" stamped sae (please see each pack for postage rates)**

**Africa: mask and masquerade;** Literacy activities for use before, during, and after your visit to the Sainsbury African Galleries. KS1, **54p postage**

**Assyrians;** Includes background information and KS2 worksheets. **54p postage**

**Gilded Dragons;** Resource pack from the British Museum Exhibition on treasures from Ancient China. **£1.05 postage**

**Kazari;** For teachers of Art and Design, to accompany the special exhibition. Historical and cultural themes of the exhibition are outlined and suggested activities included.

KS3 – A level. **19p postage**

**Medieval Realms;** Made up of 5 booklets and gallery guide. **76p postage**

**Native North America Science Guide;** KS2, **44p postage**

**Ottomans;** From the British Museum exhibition. Contains background information.

KS3, **54p postage**

**Unknown Amazon;** From the British Museum exhibition. Contains trail, exhibition guide and poster, 'We the World' pack from Survival International. **£1.83 postage**

## **Website Resources**

Created specifically for KS2 pupils, 'Ancient Egypt' consists of 10 object-based curriculum units with advice for teachers and full supporting materials for classroom use.

The site is available at [www.ancientegypt.co.uk](http://www.ancientegypt.co.uk)

'Ancient Mesopotamia' supports the National Curriculum and is aimed at Upper Key Stage 2 children and their teachers. The site contains a substantial Staff Room area where teachers can find a range of background information, discussion topics, and printable worksheets and follow up classroom activities.

The site can be found at [www.mesopotamia.co.uk](http://www.mesopotamia.co.uk)

Children's Compass is our exciting new website which helps you explore hundreds of objects in the Museum, from ancient Egypt and Medieval Europe to modern Africa.

The site is available at [www.thebritishmuseum.ac.uk/childrenscompass](http://www.thebritishmuseum.ac.uk/childrenscompass)

## Videos

### **The Anglo-Saxons**

10 sections focussing on evidence. 20 mins  
KS2, £6.00

### **Rembrandt Drawings**

KS4 and above, 30 mins, £6.00

### **Time Machine**

A record of the exhibition of contemporary art in 1994, including a major work by Andy Goldsworthy. 25 mins. £6.00

### **The Sutton-Hoo Ship Burial**

Introduction to the finds on display. 20 mins  
KS2 / 3, £6.00

### **The Enduring Image**

Representations of the human figure in The British Museum. 20 mins  
£6.00

### **Paper Magic**

Mexican papier-maché artists Felipe and Leonardo Linares, filmed working at the Museum of Mankind in 1992. 15 mins  
£6.00

### **Runnymede: Excavating the Bronze Age**

Recent excavation of a Bronze Age settlement. An introduction to digging and laboratory work in archaeology. 30 mins.  
£6.00

### **Flag Fen; the best of both worlds**

Archaeology of a pre-Roman settlement at Flag Fen, near Peterborough. 20 mins  
£6.00

### **Archaeology in Britain**

Produced for the 1987 exhibition, but useful as a general introduction. 25 mins  
£6.00

## To order

Please fill out the enclosed order form, stating the resources you require, and return, along with your preferred method of payment to:

The British Museum Education Department  
Great Russell Street  
London  
WC1B 3DG

Alternatively, you can telephone us with your credit or debit card details on 020 7323 8511/8854.



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Please list below any teacher packs, videos or other resources that you require to assist you with your visit. To purchase packs please send a cheque (made payable to "The British Museum Great Court Ltd"), or telephone us with your credit card or debit card details on 020 7323 8511/8854. Alternatively you may fill out the payment details below.

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Amount £

Signature

Name of Resources	Quantity	Cost £
	Total	£

**Return to** The British Museum Education Department  
Great Russell Street  
London  
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# Explorer Pack: Celebrating Athena's Birthday

## Session Structure for Teachers *(Basic structure)*

### Training

Please meet for your training session at the huge marble lion in the Great Court near the main Information Desk

Training dates are:

- 4 November 2003
- 8 June 2004

4.30 - 5.30 pm

### Session structure

Introductory session

3 types of sculpture: sculpture sorting with plenary

Handling the Parthenon

Focused enquiry

Watching the procession

The story of Athena and Poseidon

## 1. Introduction to the Parthenon

*What was the Parthenon ?* a temple of Athena

*Where was it built?* On the Acropolis - the hill rising in the centre of the city of Athens; Acropolis was originally the citadel of the city and probably site of the ancient palaces of the early kings of Athens, though no trace of these survives; it became the focus of worship of the city's patron goddess Athena - many shrines on the top; the most important was the temple which contained the ancient wooden statue of Athena to which the new peplos was presented each year on her birthday in mid-summer (August)

*When was it built ?* built 447-432 BC; the old temple holding the wooden statue was destroyed by the Persians when they sacked Athens in 480BC. When the Athenians returned to their city after the defeat of the Persians it was agreed that the old temples etc. would not be re-built as a reminder of the sacrilege of the Persians; the great general and politician Pericles seems to have won over the Athenian people to agree to the building of the Parthenon.

*What was in/ on the Parthenon building ?* A huge statue of Athena made of gold and ivory and standing 10 metres tall - this was not the focus of the procession and presentation of the peplos. The Parthenon had more sculpture than any other Greek temple:

- both pediments (west showing contest of Athena and Poseidon for patronship of Athens; east showing the birth of Athena - the east door of a temple is always the main one); these sculptures are carved in the round
- metopes all round the outside (pronounced met-o-pees); carved in high relief; the ones in the museum all show a battle between Greeks and centaurs (half-man, half-horse)
- frieze - encircling the outside of the inner structure; the display in the gallery is inside out; carved in low relief; probably shows the great procession during the Panathenaic Festival which brought the peplos to Athena's ancient statue

Remember that the sculptures were originally painted and that there was much painted decoration on the temple itself

*What happened to it later ?* Used as a Church, mosque and ammunition store.

*How did it get here ?* Artistic/historical importance. Role of Elgin and British Museum.

### *Visuals:*

good colour photo of Parthenon now  
diagram of placement of sculpture

- At the start, allow pupils to make initial responses to the sculptures encouraging responses to the scale and nature of the sculptures and their current context.
- Make sure they know what a sculpture is; use the term carving if necessary.
- By the end of the introduction children need to know:
  - the names of the different types of sculpture
  - what each type showed
  - what the form of carving was
- They will also be asked what the sculptures are made of, but you can probably leave this to them to work out.

## 2. Three types of sculpture: sculpture sorting

- Divide the children into groups of no more than four and distribute recording cards
- Send children out to find the piece of sculpture illustrated on their card and then to answer the questions
- Encourage them to try their knowledge out on a piece of sculpture they have chosen themselves

### *Materials*

A4 cards with images in middle and questions around (selection of metope, frieze and pedimental sculpture)

answer slips

all stored in plastic wallets

- When the children come back, collect in the cards they have been doing
- Use the synthesis chart to consolidate what they have learned

### *Materials*

synthesis chart set out as below:

What does it look like?	photo	photo	photo
What is it called?	frieze	metopes	pediment
What does it show?	great procession	battle	gods
What is it made from?	marble	marble	marble
What sort of sculpture is it?	low relief	high relief	in round

- Where was it? use mini-diagrams



4. Focused enquiry

---> ~~rose~~ <sup>rose</sup> → imagination → feelings, of civic pride, plenary session.

Choose one section of the frieze.

With the whole group, describe and interrogate this section of frieze:

- What single features can you see? Description
- How do these features combine? Interpretation

a religious festival  
a democratic city

Move the children from seeing to hearing.

5. Watching the Procession (4/12)

Divide the children into groups with a section of frieze each and get them to do the same exercise as in 4. using prompt cards.

The pretext for this activity is: Imagine you are a by-stander watching the procession go by in 5<sup>th</sup> century Athens. What do you see standing in front of a particular section of the frieze?


**Materials**

prompt cards for children and helpers

6. Plenary story of Athena and Poseidon

**Please note:** When we run the session, we do not do this section

Near the west pediment, do a short telling of the story of the contest between Athena and Poseidon referring to the sculptures.

Each Pediment tells <sup>different</sup> ~~the~~ stories.  
( in the  )

Parthenon Materials

A	B	C	D	D	E	E	Total
marble	marble	marble	marble	marble	marble	marble	8
wool cloth	wool cloth	wool cloth	wool cloth	wool cloth	wool cloth	wool cloth	8
horse hair		horse hair	horse hair	horse hair	horse hair	horse hair	7
hard leather	hard leather	hard leather	hard leather	hard leather	hard leather	hard leather	8
soft leather		soft leather	soft leather	soft leather	soft leather	soft leather	7
wood	wood	wood					4
bronze	bronze	bronze	bronze	bronze	bronze	bronze	7
Horn							2
	leaf		leaf	leaf	leaf	leaf	5
	pottery	pottery					2
		basketwork					1
Rope	rope						2

### Parthenon Materials

- Marble
- Wool cloth
- Horse hair
- Hard leather
- Soft leather
- Wood
- Bronze
- Horn
- Leaf
- Pottery
- Basketwork
- Rope



Select a part of exhibit panel to observe and discuss.

**Watching  
the procession**

I can see ...

I could hear ...

I would feel ...

**Watching  
the procession**

I can see ...

I could hear ...

I would feel ...

## Watching the procession

### I can see ...

- Begin with single things: “the eye of a horse”; “a woman’s arm”
- Then put the things together with other ideas: “a man talking to his friend”; “a horse’s hooves galloping”

### I could hear ...

- Encourage the children to mix these in with their ideas for “I can see ...”

### I would feel ...

- Finish with a few ideas for how the children would feel as they watched this part of the procession.

## Watching the procession

### I can see ...

- Begin with single things: “the eye of a horse”; “a woman’s arm”
- Then put the things together with other ideas: “a man talking to his friend”; “a horse’s hooves galloping”

### I could hear ...

- Encourage the children to mix these in with their ideas for “I can see ...”

### I would feel ...

- Finish with a few ideas for how the children would feel as they watched this part of the procession.

# Celebrating Athena's Birthday

## Explorer Pack

Training Session

4 November 2003

8 June 2004

The sheets attached have been printed out from the museum's on-line database called Compass.

You can find compass via the museum's main website (see below) or direct at:  
[www.thebritishmuseum.ac.uk/compass](http://www.thebritishmuseum.ac.uk/compass) — *adult*.

If you enter Parthenon into the Search, you will get 27 entries. All of these will provide information, some about the later history of the building, others about other objects in the Greek and Roman Department which are related to the Parthenon. There are nine of the sculptures illustrated there with detailed notes about what they show.

For the children, there is Children's Compass:  
[www.thebritishmuseum.ac.uk/childrenscompass](http://www.thebritishmuseum.ac.uk/childrenscompass)

This is organised by topics so the children will not be able to find the Parthenon itself, but they will be able to find out about some gods.

Click and start HERE paragraph about the event

*British Museum website.*

*↳ Greek and Roman department website you get more information*

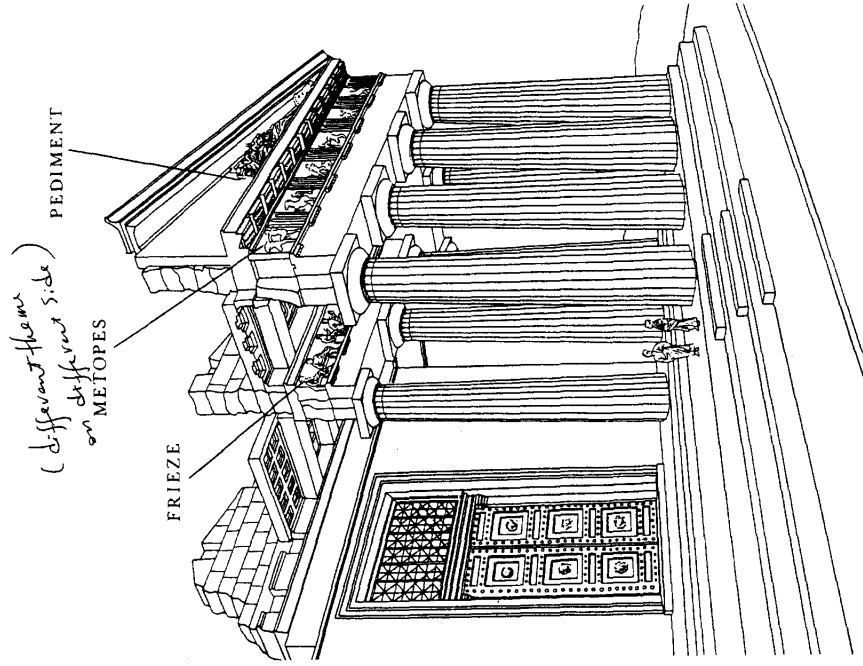
# 1 The Parthenon and Athens

## The Parthenon and its sculptures

Around 450 BC Athens' premier statesman, Pericles, initiated a programme of works designed to embellish his city in a manner befitting her supreme status among the other Greek states. The Parthenon, begun in 447 and completed around 432 BC, was built on the Acropolis, a great mass of rock rising sharply out of the plain around Athens, and was the crowning achievement of this building programme. The temple, including its roof tiles, was made out of fine white Pentelic marble quarried some ten miles from the city and hauled up to the Acropolis by ox-cart. It was unusual both in its great size and in the lavishness of its ornament, of which the frieze was a part.

The Parthenon frieze is one of three major elements forming the sculpted ornament of the temple, the other two being the *metopes* and the pediments. In Greek the word *metope* means 'between the eyes', and the name is thought to refer to the manner in which each panel alternated with an architectural element decorated by three vertical mouldings and hence called a *triglyph*. The metopes and triglyphs were placed at the same height as the frieze, but in a more conspicuous position above the outer architrave supported by the columns of the peristyle. The Parthenon frieze is, strictly speaking, therefore, one of two friezes. The temple was constructed in the Doric order of Greek architecture, and the metopes were part of the so-called 'Doric frieze' running around the outside. Although unusually rich in the number of metopes that were sculpted, this frieze took the standard form for temples designed in that order.

The metopes numbered ninety-two and represented various mythical battles: on the west side a contest between Greeks and Amazons; on the north, a battle between Greeks and Trojans, as well as other scenes from the legendary sack of Troy; on the south a battle between Greeks and the race of Centaurs, part man and part horse, and on the east a struggle between the Olympian gods and their enemies the giants. Such episodes from Greek mythology were the stock-in-trade of Greek temple sculpture,



1 Cut-away diagram of the east side of the Parthenon, showing the position of the architectural sculptures.

## The Parthenon and its sculptures

The temple known as the Parthenon was built on the Acropolis of Athens between 447 and 432 BC. It was part of a vast building programme masterminded by the Athenian statesman Perikles (died 429 BC). Inside the temple stood a colossal statue representing Athena, patron goddess of the city. The statue, which no longer exists, was made of gold and ivory by the celebrated sculptor Pheidias.

The building itself was decorated with marble sculptures representing scenes from Athenian cult and mythology. There are three categories of architectural sculpture:

The frieze (carved in low relief) ran around all four sides of the building inside the colonnade. The metopes (carved in high relief) were placed above the architrave surmounting the columns on the outside of the temple. The pediment sculptures (carved in the round) filled the triangular gables at each end.

Although the building was to undergo a number of changes, it remained largely intact until the seventeenth century. The early Christians turned the temple into a church, adding an apse at the east end. It was probably at this time that the sculptures representing the birth of Athena were removed from the centre of the east pediment and many of the metopes were defaced. The Parthenon served as a church until Athens was conquered by the Ottoman Turks in the fifteenth century, when it became a mosque. In 1687, during the Venetian siege of the Acropolis, the defending Turks were using the Parthenon as a store for gunpowder, and it was ignited by the Venetian bombardment. the explosion blew out the heart of the building, destroying the roof and parts of the walls and the colonnade.

The Venetians succeeded in capturing the Acropolis, and did further damage while attempting to remove sculptures from the west pediment, when the lifting tackle broke and the sculptures smashed. Many of the sculptures that survive only in fragments, and some destroyed altogether, are now known only from drawings made in 1674, by an artist probably to be identified as Jacques Carrey.

For more information on the Parthenon sculptures, Lord Elgin and The British Museum, see the other attached articles.

### Further Reading

I. Jenkins, *The Parthenon Frieze* (London, The British Museum Press, 1994)

B.F. Cook, *The Elgin Marbles*, 2nd edition (London, The British Museum Press, 1997)



## The Greek goddess Athena (Athene)

Athena (or Athene) was a virgin goddess of arts, crafts and war, and patroness of the city of Athens. When Zeus' first wife, the wise goddess Metis, was pregnant with Athena, Zeus heard that a second child would usurp him. He swallowed his wife to prevent her bearing another baby. Regretting his haste, Zeus asked either Prometheus or Hephaistos (traditions differ) to release the first child that Metis had been carrying. With a blow from an axe, Athena was released and emerged, fully armed, from her father's head - to the consternation of the other Olympians.

Athena favoured courage and ingenuity, and aided practical tasks. She helped Perseus kill the gorgon Medusa, and afterwards wore the gorgon's head on her *aegis*. She assisted Herakles, Bellerophon and Cadmus, and played a part in the building of the Argo and the Wooden Horse. She also presided over women's household crafts, particularly weaving.

The goddess had a shrine in Troy, but like Hera she was angry that Paris had not selected her in the beauty contest and so supported the Greeks in the war - particularly Odysseus, whose resourcefulness she encouraged. She was widely worshipped, but her most famous shrine was of course in Athens, where the Parthenon was her temple. She is shown in art as an imposing goddess, armed with helmet, spear, *aegis* and shield. The owl was her special bird, and the olive tree her gift to Attica.

### Further Reading

L. Burn, *The British Museum book of Greek and Roman art*, revised edition (London, The British Museum Press, 1999)



## What are the 'Elgin Marbles'?

The 'Elgin Marbles' is a popular term that refers to the collection acquired by Lord Elgin in Athens between 1801 and 1805, purchased by British Parliament from him in 1816 and presented by Parliament to The British Museum. The collection is of sculptures from the Parthenon, more than half of what now survives: 247 feet of the original 524 feet of frieze; 15 of 92 metopes; 17 figures from the pediments, and various other pieces of architecture. It also includes objects from other buildings on the Acropolis: the Erechtheion, reduced to ruin during the Greek War of Independence (1821-33); the Propylaia, and the Temple of Athena Nike.

In the nineteenth century the term 'Elgin Marbles' was used to describe the collection, which was housed in the Elgin Saloon, constructed at The British Museum in 1832, where it remained until the Duveen Gallery (Room 8) was built.

Material from the Parthenon was dispersed both before and after Elgin's activities. The remainder of the surviving sculptures that are not in museums or stores in Athens are in museums in various locations across Europe. The British Museum also has other fragments from the Parthenon acquired from collections that have no connection with Lord Elgin.

For more information about the ownership of the 'Elgin Marbles', see 'The 'Elgin Marbles': Ownership' and 'Lord Elgin and the Parthenon sculptures'.



## Lord Elgin and the Parthenon Sculptures

Lord Elgin (Thomas Bruce, 7th Earl of Elgin) took up the post of Ambassador to Constantinople, the capital of the Ottoman Empire, in 1799. Greece was then part of that Empire, and had been since 1453. Wishing to improve the arts of Great Britain, Elgin assembled a group of architects, painters, draughtsmen and moulders to make casts and drawings of Greek monuments. They began work in Athens in 1800. The following year, Elgin was granted a *firman* (letter of instruction) that required the authorities in Athens not to hinder his employees in this work, and in addition allow him to 'take away any pieces of stone with inscriptions or figures'. A further *firman* was secured by Sir Robert Adair in February 1810 which instructed the authorities in Athens to allow the embarkation of all the remaining antiquities collected by Elgin.

It is a popular misconception that Elgin purchased the antiquities; in fact the *firman* was granted to him as a diplomatic gesture following the British defeat of the French forces in Egypt, then an Ottoman possession.

It was the continuing destruction of classical sculpture in Athens that prompted Elgin to rescue for posterity what sculptures he could. The Parthenon had been reduced to a ruin over a hundred years previously, in 1687, during the Venetian siege of the Acropolis. The defending Turks were using the Parthenon as a gunpowder store, which was ignited by the Venetian bombardment. The explosion destroyed the roof and parts of the walls and the colonnade.

Previously, in AD 450 the Parthenon had been converted into a Christian church. The whole of the middle section of the east pediment was removed, and an apse constructed, entailing the destruction of twelve statues in all. Part of the east frieze was taken down, and almost all of the metopes on the east, north and west sides were deliberately defaced.

On his return to England, Elgin suffered severe financial problems. In 1810 he began formal negotiations with the British Government for the sale of his collection. In the end Elgin agreed to accept the value determined by a special Committee of the House of Commons. They held the collection to be worth £35,000 (and not the £73,600 which Elgin had requested). The Committee found that the collection had been legitimately acquired by Elgin as a private individual, and the sale went through. The collection was then vested in the Trustees of The British Museum in perpetuity, under the terms of the Local and Personal Acts 56 George III c.99 of 1816.

The Trustees now hold the Elgin Collection under the terms of The British Museum Act (1963). For more information about the ownership of the 'Elgin Marbles', see the attached article, 'The 'Elgin Marbles': Ownership'





## The 'Elgin Marbles': Ownership

The British Museum holds in trust for the nation and the world a collection of art and antiquities. The Parthenon sculptures have been an integral part of this collection for the best part of 200 years. They are displayed in purpose-built galleries seen every year by some six million visitors, free of charge. The Museum is committed to display and interpret its collections, communicating to a world audience and providing an international context where cultures can be experienced by all, and contrasted across time and place. The sculptures from the Parthenon have come to act as a focus for Western European culture and civilisation, and have found a home in a museum that grew out of the eighteenth-century 'Enlightenment', whereby culture is seen to transcend national boundaries.

The Museum is always developing new ways of promoting the understanding of the sculptures by the widest possible audience. In 1998 the Secretary of State for Education inaugurated two new galleries to explain the Parthenon sculptures, including a multimedia reconstruction and a touch tour for visually impaired visitors, and audio guides in seven languages. The Museum is also currently developing access to its collection via the Internet.

Behind this broad moral responsibility, the legal status of the Elgin Collection is clearly defined. The Trustees of The British Museum hold its collections in perpetuity by virtue of the power vested in them by The British Museum Act (1963).

For more information about Lord Elgin and his acquisition of material from the Parthenon, see the attached article, 'Lord Elgin and the Parthenon sculptures'.



The British Museum's multimedia database, COMPASS (<http://www.thebritishmuseum.ac.uk/compass>)

If you enter Parthenon into the search facility, you will get a number of images related to the building. If you click on Children's COMPASS, the children will be able to search for topics from ancient Greece, although the Parthenon itself is not featured there.

[http://www.greatbuildings.com/buildings/The\\_Parthenon.html](http://www.greatbuildings.com/buildings/The_Parthenon.html)

This has a few pictures and a plan and some useful information about dimensions. If you can get it to work, there are also schematic 3-D models that can be walked through.

<http://www.perseus.tufts.edu/cgi-bin/archi/index?entry=Athens.Parthenon#Images>

*→ for adult*

This is a huge and very academic site, but it has a wide range of images which you may find useful to download or project.

<http://harpy.uccs.edu/greek/parthenon.html>

This has a few pictures, but also a Flash demonstration of the Golden Mean which might be interesting to explore with your children.

<http://www.greece.org/parthenon/marbles/>

This site is directed primarily at the campaign for the return of the Parthenon sculptures to Greece. Click on 'Picture Gallery' (on the left) to get a good selection of pictures, mainly of sculptures in the British Museum. If you wish to cover the debate about restitution, this is a good source of arguments for the restitution and some material targeted especially at children - click on 'A page for schoolchildren' on the left. For material to balance the argument for restitution, see:

<http://www.thebritishmuseum.ac.uk/gr/debate.html>

## The sculptures of the Parthenon

Greece, late 5th century BC

The Parthenon was built on the Acropolis (the upper city or citadel) in Athens. Dedicated to the city's patron goddess Athena Parthenos, it contained an ivory and gold statue of the goddess, now lost. The term 'Parthenon' (which has been used since Roman times) means 'room of the maidens' and was originally applied only to a section of the building, probably intended for those who served the goddess.

Around 450 BC, the statesman Pericles induced the Athenians to divert for building purposes money collected from their Greek allies (the Delian league), originally to form a fleet for defence against the Persians. Earlier in the century the Persians had invaded Greece and sacked Athens, destroying the old temples on the Acropolis, before their decisive defeat at the naval battle of Salamis in 480 BC. The rebuilding was carried out under the overall supervision of the great sculptor Pheidias and the architects were Iktinos and Callicrates.

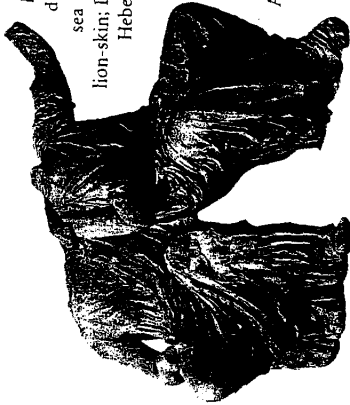


Riders in the procession  
Athens  
Marble, 5th century BC  
North frieze slab xxviii  
h. 99 cm (3 ft 3 in)

The frieze was set high up under the ceiling of the colonnade, facing outwards. Of its original 160 m (525 ft) two thirds survives, of which 60 per cent is in the British Museum, the rest is in Athens or in other museums. The traditional explanation is that the frieze shows the four-yearly procession of the 'Great Panathenaia', a festival in which the people of Athens brought a new woollen robe (*peplos*) for the statue of Athena on her birthday. (A less grand procession took place in the intervening years.) The west frieze shows preparations for the procession, the north and south friezes show the procession under way. The east frieze shows cult officials with the *peplos* and the Olympian gods.

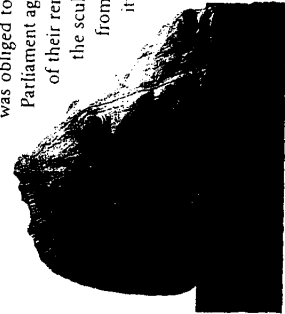
The pediments are described in a second-century AD guide-book by Pausanias. The east represented the birth of Athena, just after she had sprung fully armed from the head of her father Zeus, which the smith-god Hephaistos had split open with his axe. In the

## The sculptures of the Parthenon



Two heavily draped female figures seated on rectangular chests, perhaps Demeter and her daughter Persephone  
Athens  
Marble, 5th century BC  
GR 1816.6-10.94; Cat. Sculpture 303 E and 303 F  
l. 1.6 m (5 ft 3 in)

Head of a horse of Selene from the east pediment  
Athens  
Marble, 447-432 BC  
GR 1816.6-10.98;  
Cat. Sculpture 303 O  
l. 79 cm (2 ft 7 in)  
Purchased from Lord Elgin by the British Government and deposited in the British Museum, 1816



FURTHER READING  
S. Bird and J. Jenkins, *Second Sight of the Parthenon Frieze* (London, 1998)  
B.F. Cook, *The Elgin Marbles* (2nd edn, London, 1997)  
J. Jenkins, *The Parthenon Frieze* (London, 1994)

Museum can be seen Helios (the Sun) driving his four-horse chariot out of the sea at daybreak; Dionysos reclining on a lion-skin; Demeter and her daughter Persephone; Hebe (the cup-bearer of Zeus); Hestia; Dion and her daughter Aphrodite; and finally the horse drawing the chariot of Selene (the moon) sinking into the sea. Substantial fragments remain of the west pediment, much of it in Athens; this portrays Iris, goddess of the rainbow, and the river-god Ilissos, among much else.

There were originally 92 metopes, carved by a number of sculptors, of which the 15 from the south side now in the British Museum illustrate the battle between centaurs and Lapiths at the wedding of King Pirithous (p. 181). Others (not in the Museum) represented (east) the battle between the Olympian gods and the giants who tried to expel and supersede them; (west) Greeks fighting Amazons; (north) the Fall of Troy.

The building was badly damaged when it was converted into a Christian church, probably in the fifth century AD. In AD 1687 even worse damage occurred when it was used as a gunpowder magazine by defending Turkish forces and exploded following a direct hit by a Venetian shell. In 1799 Lord Elgin was appointed British Ambassador at Constantinople. He took with him a team of artists and moulders to record the remains of the antiquities of ancient Greece, then part of the Turkish empire (as it had been since AD 1458). When the continuing destruction of the Parthenon sculptures was brought to his notice, Elgin obtained a *firman* (permit) from the Turks allowing him to remove 'pieces of stone with inscriptions or figures, an operation which led him deeply into debt. By 1815 Elgin's financial position was so precarious that he was obliged to offer the sculptures to the British Government. Parliament agreed in 1816 to pay £35,000 (less than half the cost of their removal, plus interest on the sums so expended) and the sculptures, which included objects other than those from the Parthenon, were in 1816 deposited in perpetuity in the British Museum.

story - at the end + read or tell the story

That mass of rock and earth and fields and mountains caught him in mid-step and buried him beneath its bulk. Even now you can hear the snorts and moans of Enkelados from deep below Sicily's volcanoes. Athena let out a cry of victory that filled the giants' hearts with terror.

**T**he crowd of women in the courtyard muttered with fearfulness as they watched the old woman working. The power and majesty of the gods was clear.

Arachne worked just as quickly, with her dark eyes fixed on the threads as she sent the shuttle across and back, across and back. She was not weaving pictures of death and violence, but of desire.

First she wove a dark, gaping chasm and from it rose Hades, brother of Zeus and god of the dead. The four black horses that drew his gold chariot reared in the unaccustomed light of day as Hades snatched up the lovely Persephone to be his queen. Then she wove the bed of Hephaistos. On it lay his wife, Aphrodite, wrapped in the arms of warlike Ares. But cunning Hephaistos had set a net above the bed and trapped them in it as they embraced. Then he invited the other gods to come and see the lovers' disgrace and the laughter of the gods was heard even on earth. Next Arachne wove a dense forest. Through the forest raced Apollo, who was filled with desire for Daphne. She ran from him in desperation, out of the shade of the trees and across the mountains. He dodged bushes and leapt over rocks in his pursuit. Just as he caught her, just as he set his hand on her, just as his fingers tightened their grip, she called out for rescue and the goddess of earth changed her into a laurel tree.

In threads of gold, silver and purple, Arachne wove all the secret loves of Zeus, the loves he hid from Hera, his queen. Here Zeus had changed himself into a swan and was nestling up to Leda. Here as a bull, he was carrying off the beautiful Europa. Here as a shower of gold, he caressed Danaë.

SIDEY OF  
BIRTH OF  
ATHENA

\* AT THE CENTRE OF THE CLOTH was a hillside and on it Zeus lay with the lovely Metis. Zeus's body was dark upon the gorgeous flowered bank, while the skin of Metis shone silver pale. When three months had gone by the goddess of earth brought Zeus dreadful news. Metis would give birth to a daughter, but her next child would bring destruction on Zeus and all the other gods. Zeus acted. He immediately went in search of Metis.

When he found her, he lifted her in his hands, opened his vast mouth and swallowed her whole.

Some months later, Zeus woke up with a headache. As the hours passed, the pain grew worse. Zeus lay in a darkened room at the centre of his palace with his head buried in soft cushions. Hera sat with him wiping his brow with snow-water and giving him honey-sweet nectar to drink. But nothing helped. As the agony increased beyond bearing, Zeus lost his temper. He stormed from his room and swept through the palace. He howled and raged, tearing at his throbbing brows, swinging his mighty head from side to side and smashing everything that came into his path. Down on earth, the animals looked up anxiously at the dark clouds gathering, and as they heard the rumbling in the sky they scuttled under rocks and into burrows.

Then Zeus bellowed, 'Hephaistos!!! Bring your axe!!!'

Hermes would have been there in an instant, but Hephaistos was much slower. His shortened, twisted leg made it hard for him to move fast. When he arrived, he found Zeus sitting on his throne. Zeus was quiet and his body seemed calm, but his bulging eyes showed the desperation and the torment inside.

'I can stand no more,' groaned Zeus. 'There is a movement, a fretting, struggling movement inside my head. The agony must be released. Use your axe.'

Hephaistos did not dare to disobey. He raised his axe above his head and with all his strength brought the blade down. Zeus's skull split open and from the gaping hole, in full armour, with a deafening war-cry, leapt Pallas Athena, the bright-eyed goddess, daughter of Zeus and Metis.



**T**he light in the courtyard of Arachne's house was beginning to fade, but when the women saw the pictures Arachne wove, they smiled at the passions of the gods and at the tricks of lusty Zeus. And they thought of their own husbands and of their sons and they whispered and giggled and then laughed out loud.

The old woman was surprised to hear laughing. She put down her shuttle and stood back from her loom so that she could see what her young rival had done. Then the anger swelled inside her and she rose to her full height and cast aside her disguise and showed herself for who she really was. The women fled or fell to the ground, and their cries filled the house as Athena roared at Arachne.

# Gifts from the Gods

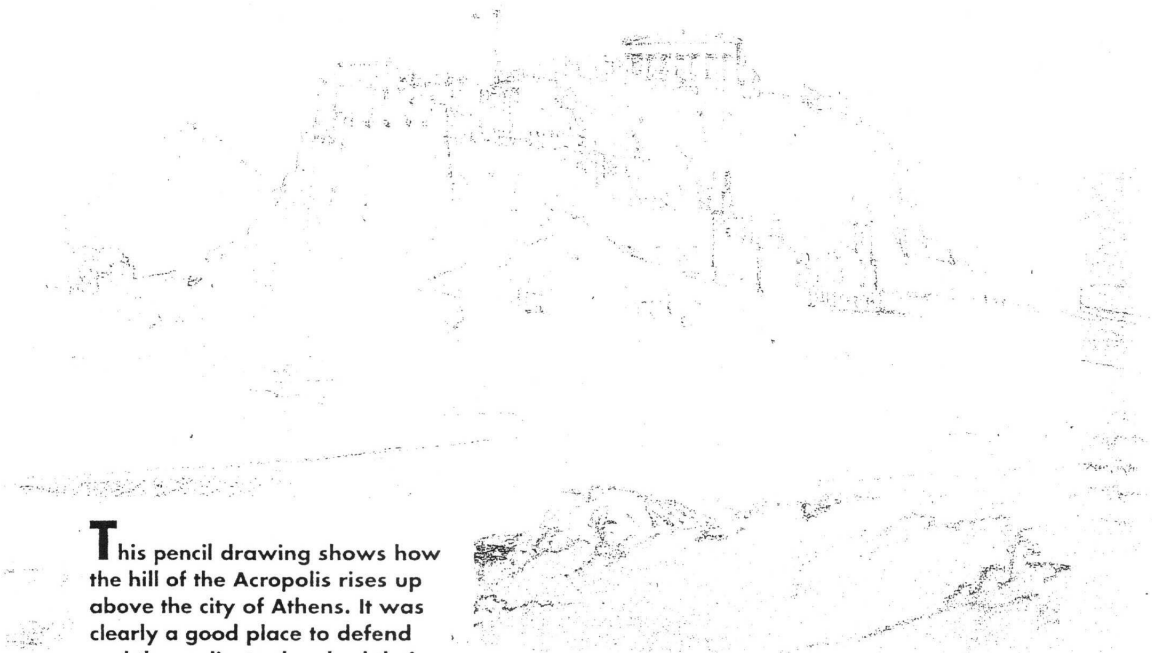
'You never knew your great-grandmother. I remember once she came in to my room late in the evening. She had been out that day watching the procession to Athena's ancient statue. My father was getting ready to go out with some friends. They were waiting for him in the courtyard of the house. I could hear the sound of their conversation and laughter. My mother was flushed with excitement and eager to talk, but there was nobody to listen except me. It was a treat to have her to myself and I nestled in her arms as she told me about all the people and the horses and chariots and the goddess's new dress. Something she had seen on the temples must have stuck in her mind, because that was when she told me about our city's earliest times.

## THE NAMING OF ATHENS

**T**he first people who lived here were born from the earth itself. They made their homes at the foot of the Acropolis, the high place, the great rock that rises above us. From here they could look out across their fields to the shimmering surface of the sea. Their first king was Kekrops and he built his palace on the top of the Acropolis. The soil in these parts was fertile. The sea gave up a rich harvest of fish. The hills around gave fine stone to build with. The people were prosperous and happy, but the town had no name.

Kekrops was a clever man. He knew that if the town was named after one of the gods, it would always have divine protection. One day he made a sacrifice to Zeus and the gods of Olympos. At the centre of the Acropolis was a large heap of ashes, charred wood and bones, the remnants of many other offerings to the gods. Here, Kekrops's men lit a fire and got ready grains of corn, water and the sacrificial knife. Then a fine white bull was led up the slopes of the hill from the fields below. Kekrops washed his hands and sprinkled water on the bull. It tossed its head, nodding its agreement to become a gift to the gods. Then the king scattered the grain and cut the bull's throat with a single slashing blow. His attendants quickly skinned the animal and cut it into pieces. Then they wrapped its thigh bones in rich fat and put them on the fire.

Kekrops raised his hands to the sky and prayed. 'Mighty Zeus, king of the deathless gods, lord of the thunder and the lightning bolt. If ever you



**T**his pencil drawing shows how the hill of the Acropolis rises up above the city of Athens. It was clearly a good place to defend and the earliest rulers had their palace up there. The Acropolis also became the most important religious place in Athens. You can see several of the temples on top. The Parthenon is on the right. In the centre is the gateway to the summit of the hill. The drawing was done by the British architect C. R. Cockerell in the early 1800s. Cockerell went on to design several buildings in a Greek style back in Britain.

have been pleased with the rich smoke of our sacrifices to you, hear me now. Our town is wealthy, our people are blessed with all the gifts the earth brings forth and our children grow up vibrant and strong. Which of the gods wishes to grant us their name and to receive special honours from us forever?

Zeus heard Kekrops' words and called upon his favourite child, Athena, to go and receive the gifts of the people. But Poseidon, Zeus's brother, disputed his decision. He argued with the king of the gods, claiming that the new town was close to the sea and that those who drew upon the riches of the sea must pay their chief respects to him. Zeus could not settle the argument and sent Hermes to speak with Kekrops.

Hermes scorched a path to the palace of the king. He found Kekrops and explained Zeus's dilemma. Kekrops immediately saw his opportunity. 'Hermes, swift-footed son of Zeus, you bring me sad news. If no solution to this argument can be found, my town will be left with no name and no guardian. Would Zeus allow mere mortals to decide? Perhaps if Athena and Poseidon were each to offer us a gift, we could choose which of them would receive our special honours and respect?'

When Hermes brought Kekrops's answer to Zeus, the king of the gods was delighted. He did not like the idea of choosing between Athena and Poseidon. The prospect of facing the resentment of either of them filled him with dread. He nodded his head and granted Kekrops's request.

From the earliest glimmerings of dawn, the people began to gather on the Acropolis. They picked their way up the rocky slopes, following the narrow goat tracks between boulders and thorn bushes. They found Kekrops and his whole household already waiting at the edge of a large open space at the east end of the great hill. In the centre of the space stood the bright-eyed daughter of Zeus and her uncle, Poseidon, the earth-shaker. When the whole population had assembled, Kekrops gave the signal for the contest to begin.

It was Poseidon's turn first. 'Mortals!' he bellowed. 'Your future depends on the protection of the gods and apart from Zeus himself, I am the most powerful of those who live on Olympos. I will demonstrate to you the strength I possess. Choose me and I vow that I shall never unleash this power against you, but I will use it to crush your enemies.' With these words, Poseidon raised his fearsome trident, stretching every muscle and sinew of his broad shoulders, and then, with a roar, he plunged it into the earth. As the triple points penetrated deep into the living rock the whole of the Acropolis quaked and groaned. The people huddled together in terror and babies began to cry. Then, surging out of the rock came a foaming torrent of salt water which gushed into a hollow forming a deep, dark pool.

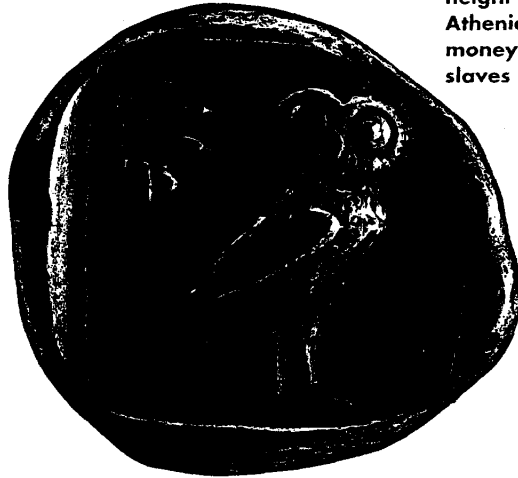
Athena stepped up. She took her spear and without a word drove it into the ground. Then she stepped back. As the people looked on, the straight shaft of the spear began to buckle and twist. Branches and twigs sprouted from it. Buds swelled and opened into slender, dark green leaves. As the breeze caught the leaves, they flickered over to show their silver undersides. Soon small grey-green fruits appeared and fattened in their thousands. It was as if the whole life of the tree had been compressed into moments. Then Athena stretched out her hand and plucked some of the fruits from a branch. She stepped towards the people. Raising her hand in



the air she tightened her grip. As she did so, she crushed the fruits and a thick, clear, green liquid began to ooze between her fingers. She dripped this oil on to the hands of Kekrops and his people. They were amazed as it coated their skin with a satin softness. A fragrance enticed them to taste the oil, cautiously at first with the tips of tongues and then rolling its pungent sweetness around their mouths. 'Citizens,' said Athena, 'this is the olive tree. Use it in whatever way you wish. It will delight your senses and enrich your lives. Its gifts will make you the envy of the world. Let it be the eternal symbol of my care for you. Let this be my city. Name it Athens.'



**T**his silver coin from Athens shows the head of Athena. You can see her helmet clearly. The other side of the coin shows an owl, which was Athena's bird. The slang for these coins in the ancient world was 'owls'. You can also see a sprig of olive leaves and olives. The silver for the coins came from rich mines at Laurion to the south of Athens. The slaves who dug out the silver suffered dreadful hardship. As many as 30,000 of them may have been working the mines at the height of production. One wealthy Athenian made a large amount of money by hiring out 1,000 of his slaves for work in the mines.



# Christ Church C. of E. Primary School

## In-service course

Sackler Rooms, Clore Education Centre

Monday 24 November 2003

### Programme

9.30:	Arrival and coffee
9.45:	Planning and running a museum visit without worksheets: an example using Ancient Greece
11.15:	Break
11.30:	Cross-curricular approaches to objects 1: Arctic clothing
12.30:	Lunch (not provided)
1.15:	Cross-curricular approaches to objects 2: The African Galleries
2.15:	Using websites to prepare for a visit
3.00:	Finish and tea

**Course tutors:** Richard Woff, Head of Schools Education  
Paul Clifford, ICT Learning Resources Officer

**To find the Sackler Rooms:** enter the museum via the main entrance on Great Russell Street; cross the Front Court, go up the steps and through the main door; go straight ahead through the Front Hall and into the Great Court; turn sharp right and go down the stairs in the corner; at the bottom of the stairs, go diagonally right and through some glass doors; the Sackler Rooms are the second door on your left.

**Education Department**  
Telephone +44 (0)20 7323 8511/8854  
Facsimile +44 (0)20 7323 8855  
education@thebritishmuseum.ac.uk

**Access**  
Great Russell Street  
London WC1B 3DG  
Switchboard +44 (0)20 7323 8000  
www.thebritishmuseum.ac.uk

## **PREPARATION AND PLANNING**

Connection with the curriculum or scheme of work

Developing the focus of the visit

Preparing the students:

1) concepts

2) language

3) skills

4) logistics

Preparing the recording method

## **IN THE MUSEUM**

The structure of the visit

Types of looking:

1) scanning

2) focusing and selecting

3) looking in detail

4) holistic looking

Recording the data

Teacher-student interactions

## **AFTER THE VISIT**

Recovering the data

Processing the data

Synthesis and communication

Richard Woff  
British Museum Education Department

# Excavation In Egypt

## Dig Diary



### Instructions

#### Identifying the objects

- Carefully look at the objects in front of you,
- Discuss what you think each object is, what it is made from and how old it is,
- Use the information card to help you find out more about the objects.

#### Filling in your excavation chart

- Work out where on the time line each object goes,
- To help you work this out use a ruler (1 cm = 100 years),
- Draw the objects onto the chart and label each drawing with the name and date of the object.

#### Burying the objects

- Put some glue on the left hand end of the white side of the strips and glue the strips onto the back of the chart starting at the bottom and continuing up along the right hand edge of the chart,
- Glue each strip on just above the one below so that the edges of the strips touch but do not overlap,
- Keep going until you reach the top of the chart,
- Turn the chart over and fold the strips across the chart to bury the objects.

#### Filling in your dig diary

- Fold back the top strip as if you are digging away the top layer of soil,
- Look to see if there is an object buried in this layer of soil,
- Turn to the first page of your dig diary and find the number 1,
- Fill in the required information in each column,
- Day - number the days in order, each layer is a new day of digging,
- Layer type - write down the type of soil for the layer you have just folded back (brown = silt, yellow = sand, grey = ash),
- Depth - measuring down from the top of the excavation chart, record how many centimetres it is down to the bottom edge of the layer,
- Time phase - work out how old the layer is by using the number of centimetres you have just measured down from the top of the chart to the bottom edge of the layer (1 cm = 100 years),
- Description - record what you found within the layer, if you find nothing you must still record all the information for the layer and record in the last column that you found nothing,
- When you have finished recording all the information for the layer draw a line underneath the entry and fold back the next strip,
- Look to see if you have uncovered an object and then record all the information for the layer,
- Keep going until you reach the bottom layer on your chart, below which would be the soil that archaeologists call the 'natural' layer where there are no more objects.

Name:

Date:

Day	Layer Type	Depth	Time phase	Description
Number the layers.	What type of soil was the layer ?	How deep down was the layer ?	How old is the layer ? 1cm = 100 years	What did you find in the layer ?

Day	Layer Type	Depth	Time phase	Description
Number the layers.	What type of soil was the layer ?	How deep down was the layer ?	How old is the layer ? 1cm = 100 years	What did you find in the layer ?

Date:

Name:

AD 2000

Coin from the Yemen  
AD 1300



AD 1000

0

Mummy mask  
20 BC



1000 BC

Leather and wooden sandals  
1795 BC



Excavation in Fáynt

ame

Museum activities after the workshop "Excavating in Egypt" 古埃及的博物馆  
(5级) 9-10岁 古埃及的博物馆

### Glossary of words for our Ancient Egypt topic

- ancient
- modern
- hieroglyphics \*
- pyramid
- canopic jar \*
- Pharaoh
- tomb \*
- goddess \*
- mummy \*
- belief
- flooding
- Nileometer
- artefact \*
- crocodile \*
- barley \*
- Sphinx
- Anubis \*
- Isis \*
- sarcophagus \*
- Tutankhamen \*
- shaduf \*
- irrigate
- Rosetta Stone \*

\*  
You must find out  
as much as you can  
about the words  
underlined while you  
are in the British  
Museum.  
Write about them  
on the back of  
your sheet.

You should be able to write a sentence about each of these words when you have finished the topic

十、 英國博物館、檔案與圖書館審議會 (MLA : Resource) 收集資料...180

1. **MLA : Resource** 推動之「**Inspiring for All**」計劃簡介摺頁
2. 「博物館學習成果與影響之測量」學習影響研究之結案報告
3. 「教師對博物館學習的看法」**London's Hub Museums** 研究報告





*re:source*

The Council for Museums, Archives and Libraries

# Inspiring Learning for All

Museums, archives and libraries belong at the very heart of people's lives, contributing to their enjoyment and inspiration, cultural values, learning potential, economic prosperity and social equity.



## Introduction

Inspiring Learning for All is a new learning and access framework for museums, archives and libraries.

Using examples from current best practice, the framework will help museums, archives and libraries to become more accessible and inclusive in the provision of learning opportunities for users and visitors. Inspiring Learning for All identifies:

- the **outcomes** users might expect from an accessible, inclusive organisation that stimulates and supports learning
- the **processes and approaches** which need to be in place to achieve this goal
- the **evidence** an organisation would need to collect in order to demonstrate its effectiveness in delivering effective learning services.

Museums, archives and libraries will be able to audit themselves using the framework and to plan improvements to their services. It will provide the basis for assessing the quality of learning services in museums, archives and libraries, the extent to which those services are accessible, and their impact upon users and communities.

## Background

Resource believes that there is enormous potential for collaboration between museums, archives and libraries, especially in enhancing learning and reaching new audiences.

This is the first time that a single best-practice framework has been developed for all three domains – museums, archives and libraries – and the first to define what makes 'best practice' for learning and access.

Resource is developing the framework in order to meet one of its five corporate objectives: 'to encourage the development of accessible and inclusive collections and services that provide learning, inspiration and enjoyment for everyone'.

## Consultation and collaboration

The framework is a **landmark** project, and Resource hopes it will be widely used across the museums, archives and libraries sector.

We have undertaken **extensive consultation** throughout the development of the framework:

- regional, national and professional organisations from all three domains have been involved
- a think tank of critical friends has been established to advise on the project
- a two-day workshop was held in July 2001
- over 400 people attended 12 consultation meetings held in each English Region and in Scotland, Wales and Northern Ireland during October and November 2001
- three further workshops were held to look at specific aspects of the framework in more detail: access, IT and e-learning, and further and higher education libraries and school libraries.

## Research and development

Resource has commissioned a Learning Impact Research Project to measure and explore the **impact** that museums, archives and libraries have on learning.

As the first step in the research project, the team has conducted a critical literature review, which will be used to outline a set of **learning outcomes** for users of museums, archives and libraries. This set of outcomes will be tested during 2002–3 to see if it can provide an agreed framework against which museums, archives and libraries can **measure** and **report** on the impact they have on learning.

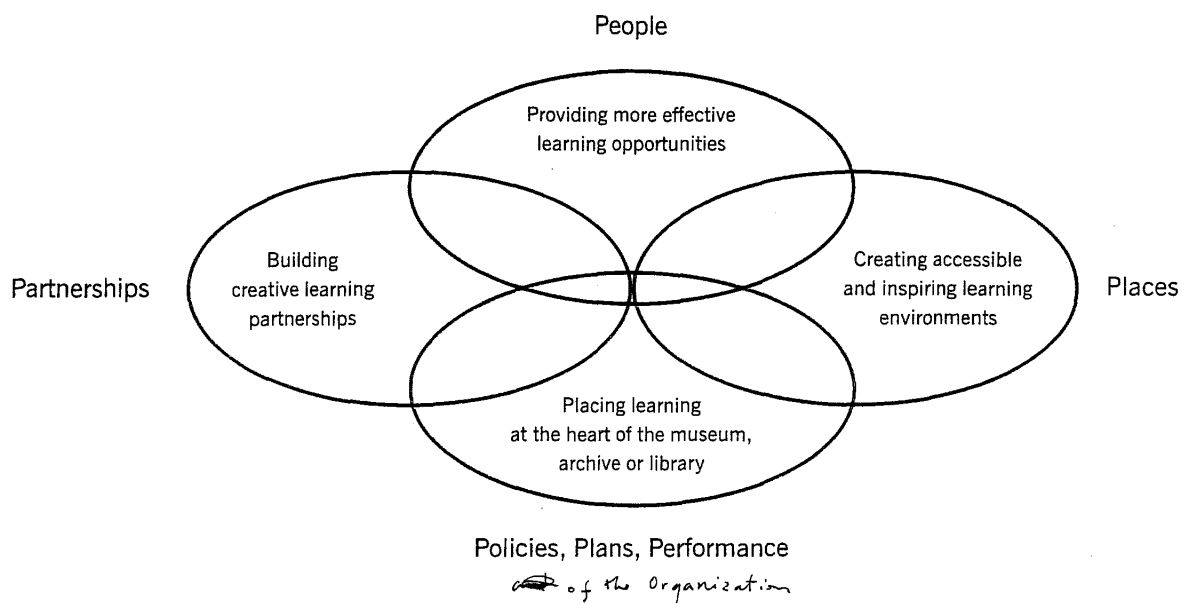
A critical part of the research project is to develop a **toolkit** for measuring impact, analysing data and reporting on the process. The toolkit will support all museums, archives and libraries in the process of measuring impact, from the smallest volunteer-run organisation to the largest and best-resourced.

## Piloting the framework

Inspiring Learning for All is being piloted across 45 different museum, archive and library organisations throughout the English regions, including:

- national, local authority, university, independent and volunteer run museums
- the Public Record Office, county record offices, local history centres and archives
- further education libraries, school libraries and public libraries (including children's library services).

The pilot sites are working closely together to plan the piloting process. They will be testing a range of methodologies and approaches to measuring impact and using learning outcomes to report on the process.



*Outline of the four key areas covered by the framework.*



## Next steps

Piloting will be completed by **spring 2003**. The results of the piloting process will then be fed in to the framework, and the experiences of the piloting organisations will be used to develop a toolkit, as an aid to all museums, archives and libraries in measuring impact on learning.

A range of additional **support and advocacy materials** for museums, archives and libraries using the framework will be developed during 2003. The implementation and monitoring of the framework will be supported by learning and access staff in each of the nine Regional Agencies and by published benchmarks for physical and sensory access.

Inspiring Learning for All will be launched in **autumn 2003**. It will be reviewed in 2005 and any revisions made based on the experience of using the framework.

Resource is the key strategic agency working with and on behalf of museums, archives and libraries, and advising the Government on policy and priorities for all aspects of the sector. Our mission is to enable the collections, resources and services of museums, archives and libraries to touch the lives of everyone.

## Further information

For further details or to comment on the framework or the research papers please contact:

Sue Wilkinson Director: Learning and Access  
020 7273 1416  
sue.wilkinson@resource.gov.uk

Gina Lane Senior Quality Standards Adviser  
020 7273 1468  
gina.lane@resource.gov.uk

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020 7273 1458.**

Resource: The Council for Museums,  
Archives and Libraries  
16 Queen Anne's Gate  
London SW1H 9AA  
Tel: 020 7273 1444  
Fax: 020 7273 1404  
Email: [info@resource.gov.uk](mailto:info@resource.gov.uk)

*Emily Johnson 12/05/03*

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## **Measuring the Outcomes and Impact of Learning in Museums Archives and Libraries**

**The Learning Impact Research Project  
End of Project Paper  
01 May 2003**

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### **Research Team**

Eilean Hooper-Greenhill  
Jocelyn Dodd  
Theano Moussouri  
Ceri Jones  
Chris Pickford  
Catherine Herman  
Marlene Morrison  
John Vincent  
Richard Toon

### **Research Centre for Museums and Galleries (RCMG)**

Department of Museums Studies  
University of Leicester  
105 Princess Road East  
Leicester  
LE1 7LG  
0116 252 3995

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## **1.0 Introduction**

Today, museums, archives and libraries are required to demonstrate their social value. Like schools, colleges and other educational institutions they are asked to give evidence of the learning they facilitate in users.

The establishment of Resource, the Council for Museums, Archives and Libraries brought together three diverse domains. They all have different ways of thinking and talking about learning. There is currently little research available about the character of learning in each domain. There is even less research on the learning outcomes of users. With the need for museums, archives and libraries to provide evidence of learning and their impact upon users, Resource has developed the Inspiring Learning For All Vision. Piloted with organisations across the country, Inspiring Learning For All intends to encourage museums, archives and libraries to adapt and develop themselves to support and encourage learning more effectively.

The Learning Impact Research Project (LIRP) undertaken by RCMG was commissioned by Resource as part of the Inspiring Learning For All vision. The aim was to develop a method of measuring the impact of learning in museums, archives and libraries.

LIRP has created a basic conceptual framework of five Generic Learning Outcomes (GLOs). Successful piloting across fifteen museums, archives and libraries have demonstrated their potential for measuring learning across the sector. They will form the basis of a web-based Toolkit that can be used to help organisations make the measurement of learning a vital part of organisational policy.

## **2.0 Context for the Learning Impact Research Project (LIRP)**

The establishment of Resource, the Council for Museums, Archives and Libraries in 2000 brought together three separate domains. All had different methods, working practices and purposes. One common aspect however is their contribution to public learning.

Resource has developed a powerful learning agenda. The Inspiring Learning For All vision has the aim of encouraging museums, archives and libraries to prioritise the learning experiences of their users. LIRP is part of this vision. Its aim is to develop a method for showing the impact that museums, archives and libraries can have upon their users.

Despite their importance as places of learning, little information is known about how museums, archives and libraries impact upon the learning experiences of their users. Not all museums, archives and libraries see themselves as places that should primarily focus on the learning experiences of their users. In many cases the emphasis has been on service targets. As a result, attitudes towards learning vary enormously across organisations as well as across the sector as a whole. Common concepts of learning and a language to describe the experiences that users have are also lacking.

A broad understanding of the scope of learning across the museums, archives and libraries sector is currently unavailable. There has been little research into the impact or outcomes of learning in museums, archives and libraries. Many organisations are aware of some aspects of the experiences their users have. Data is collected from comments books, interviews and questionnaires for example. However, this is not always analysed and reliable evidence showing evidence of learning is not easy to obtain.

The launch of Inspiring Learning For All is an important development therefore in changing the balance in museums archives and libraries towards facilitating the learning experiences of their users. The challenge for the Learning Impact Research Project was to develop a method that all museums, archives and libraries could use to measure the outcomes and impact of learning upon their users.

### **3.0 Learning in Museums, Archives and Libraries**

Learning in museums, archives and libraries is different from that in formal education establishments and users of museums, archives and libraries are different from those in educational institutions. They are not involved in formal learning systems like those of schools or colleges. Museums archives and libraries do get visits from formal groups such as school groups and adult groups. However, most users are informal users. These can include individuals, family groups or friendship groups. They may be learning as a hobby, or for enjoyment. They may be non-accredited learners. Many users might not even see their visit to a museum, archive or library as a learning experience, although they may be learning whilst enjoying their "day out." Learning is open-ended and self-directed and museums archives and libraries may be used for a wide range of purposes.

Within these learners will be a diverse range of learning styles and learning agendas. People like to learn in different ways whether by reading, interacting with people, or by touching and doing. The range of reasons for learning are also vast. They may be focused and specific e.g. using an archive to research family history. They may be unfocused and unspecific e.g. someone visiting an art gallery in their lunch-break or wandering into a library. On the whole, museums, archives and libraries are unaware of the learning objectives of their users. Learning is not restricted to site visits either. Museums archives and libraries produce a wealth of information that can be accessed by users including web-sites, books, teacher-packs and leaflets to name a few. How many museums, archives and libraries can say why people use these materials and what they learn from them?

The outcomes of these learning experiences are equally diverse. They may include increased knowledge and understanding, development of new skills and abilities or inspiration to learn more. Often, learners use museums, archives and libraries to reinforce knowledge that they already have. Learning can also be short-term and long-term. A learner might not use their new knowledge or ability until a long time after the actual learning event.

Learning in museums, archives and libraries is therefore a complicated business. It is not surprising that the difficulty of measuring learning in informal environments like cultural organisations is continually debated. Added to this is that many of the learning outcomes from such environments are the so-called "soft" outcomes. These include attitudes, values, emotions and

beliefs. Often these outcomes are not even seen as evidence of learning as the emphasis is on "hard" facts and demonstrable skills. Also it would be inappropriate for museums, archives and libraries to set specific learning outcomes for learners to achieve. They do not know the prior knowledge of their users and so would be unable to make judgements about how much users had learnt. Users themselves however are capable of making such judgements about their own learning. At present there is little evidence from museums, archives and libraries to demonstrate this.

Cultural organisations like museums, archives and libraries, however, want, and need, to be able to describe the learning that occurs. The Government is emphasising the importance of lifelong learning and increased access to learning for everybody. It is important to present funding bodies with evidence of the depth and extent of learning in museums, archives and libraries. Museums, archives and libraries provide unique environments for learning. This has long been recognised. However, the actual evidence of the impact of learning upon users is lacking.

Currently, the learning potential of museums, archives and libraries is not fully realised. Learning processes and potential outcomes are not well understood. By developing the Generic Learning Outcomes (GLOs) LIRP gives museums, archives and libraries a means of understanding, analysing and talking about learning. The development of a conceptual framework and the construction of research tools can enable the collection, interpretation and presentation of the evidence of learning.

#### **4.0 Understanding Learning**

The focus of Inspiring Learning For All is on the users of museums, archives and libraries rather than the organisation. This reflects a wider change in how learning is understood. The emphasis is no longer on “education”, which implies a society-wide system with common standards, but on “learning”. Learning emphasises individual learners, learning processes and learning outcomes.

Learning is widely seen as a lifelong process of making meaning. It is not limited to formal educational provision. Current government policy recognises lifelong learning and is working towards equality of provision and easier access to learning possibilities for the many. Museums, archives and libraries can clearly contribute to the lifelong learning agenda. Hence the emphasis on the facilitation and measurement of the impact of learning that is the basis of Inspiring Learning For All.

The traditional view of learning is as a “product” connected to scholarship and knowledge. This way of thinking often sees learning as something that only happens in formal educational establishments. This view is still widely held in many museums, archives and libraries, and many have never had to collect or present evidence of learning in a systematic way before. The focus has been on providing a service for users with little emphasis on the importance of learning within the organisation, or even encouraging learning.

This traditional view of learning does not favour museums, archives and libraries. Learning in cultural organisations is associated with creativity and innovative thinking, and there can also be seen the development of attitudes and values. In this way, learning is not separate from emotions. In fact, emotions can help people to learn more. Enjoyment, amazement or inspiration can provide the motivation to acquire facts and knowledge.

This view of learning is more suitable for museums, archives and libraries. It allows the potential for the out-of-the-ordinary, inspirational and wonderful experiences that are associated with learning in cultural organisations like museums, archives and libraries to be counted as learning. Within the traditional view of learning, these experiences would be ignored. Understanding learning as simply the acquisition of facts and knowledge is not wide enough to include these experiences.

#### **4.1 The Challenge for Resource and LIRP**

The challenge for Inspiring Learning For All and LIRP is to develop and expand the traditional, narrow view of learning into something much broader.

Firstly, LIRP had to develop an agreed understanding of learning for museums, archives and libraries. At present, there is no common understanding of learning across the sector. Therefore, LIRP adopted the broad definition of learning used by the Campaign for Learning and adopted by Resource for Inspiring Learning For All.

Learning is a process of active engagement with experience. It is what people do when they want to make sense of the world. It may involve increase in or deepening of skills, knowledge, understanding, values, feelings, attitudes and the capacity to reflect. Effective learning leads to change, development and the desire to learn more.

This definition follows current government policy. Instead of an emphasis on traditional teacher-centred learning, the emphasis is on learner-centred processes. Learning is a process and an experience rather than a "product" of scholarship and knowledge.

The significant aspects of the learning "theory" adopted by Resource and LIRP is that learning is a lifelong process of making meaning. Individual learning is highly diverse and unpredictable, requiring different modes of attention from wide open to tightly focused. Users in museums, archives and libraries vary in the depth and level of their learning and these differences can also be seen across the museum, archive and library sector. There is an emphasis on the potential for creativity and innovative thinking, a feature of learning within a cultural context. Learning can be individual or social, as learners may often share their learning experiences and outcomes with family, friends or social groups.

From this theory was developed the system of Generic Learning Outcomes that forms the conceptual framework for measuring learning in museums, archives and libraries. Successful piloting across fifteen museums, archives and libraries have demonstrated their potential for measuring learning across the sector.

## **4.2 Summary of the Learning theory behind LIRP**

- A focus on learners and their learning experiences
- Learning is a lifelong process of meaning making
- Learning includes change and development in emotions, skills, behaviour attitudes and values
- Learning as a verb (the act of learning) rather than a noun (learning/scholarship)
- Enjoyment, amazement or inspiration can provide the motivation to acquire facts and knowledge
- Learning is a process of identity-building
- Learning is both individual and social

### **4.3 What are Learning Outcomes?**

Learning outcomes are the results of a learning experience. Outcomes are understood in relation to individuals and may be short-term or long-term.

In the formal education sector, learning outcomes are a well-developed concept. They are used to describe what the learner will learn from a programme of study and can be used to make judgements about a learner's progress.

Learning outcomes are distinguished from learning objectives. These describe what a programme will teach. For example, the learning objective of a library IT programme may be to teach people how to search the Internet or to use email. The learning outcome might be for the learner to develop the confidence to use a computer more regularly.

### **4.4 Specific and Generic Learning Outcomes**

Learning outcomes can also be defined as specific or generic. Specific learning outcomes are related to specific programmes of study and are more tightly focused than generic learning outcomes which consist of broader categories. For example, after a programme of study in art history, participants might gain some specific knowledge about the names and styles of different artists. The generic outcomes of this learning would be an increase in knowledge and (possibly) understanding.

Unlike in formal education, museums, archives and libraries will not be able to make judgments about how much their users have learnt or how much progress they have made. However, users themselves will be able to make judgements about their own learning. They will be able to articulate what they found out and if that was what they were looking for. They can say whether they were inspired or had an enjoyable time. Collecting evidence of learning outcomes in museums, archives and libraries therefore must involve asking users how they feel about their own learning.

LIRP recognises that learners will have highly diverse learning outcomes. The Generic Learning Outcomes have been developed so that these individual outcomes can be captured and grouped into categories, thereby giving a rich picture of the impact of learning in museums, archives and libraries. Categorising the learning outcomes described by individual people into five broad generic outcomes enables the breadth of learning across the sector to be presented.



## **5.0 Generic Learning Outcomes in Museums, Archives and Libraries**

LIRP has developed a system of Generic Learning Outcomes (GLOs) to measure the impact of learning in museums, archives and libraries:

- **Increase in knowledge and understanding**
- **Increase in skills**
- **Change in attitudes or values**
- **Evidence of enjoyment, inspiration and creativity**
- **Evidence of activity, behaviour, progression**

During the piloting phase of LIRP fifteen museums, archives and libraries used the GLOs to carry out different kinds of evaluation and research. Evidence for each GLO was found in each organisation and no additional GLOs were found to be necessary.

Each GLO is described in detail below. Each GLO conveys the richness and depth of learning that is possible in cultural organisations. Alongside are some examples of evidence statements.

## **5.1 Increase in knowledge and understanding**

Learning new facts or information, or using prior knowledge in new ways. Coming to a deeper understanding. Knowing 'what' or knowing 'about'. It includes learning facts or information and grasping meaning more firmly. Well-known information may take on a new relevance or be made meaningful in a new way during a museum, archive or library visit.

Knowledge and understanding might be subject-specific, or might result in making connections between or across subject areas. It also includes learning more about everyday life. Knowledge and understanding includes the development of a more complex view of self, family, neighbourhood, or personal world.

*"I gained an insight into life in major cities and how it is different to my life,"* said one teenage library user in Poole after a reading group discussion at one of the LIRP pilot sites.

Knowledge and understanding can include finding out more information about how museums, archives or libraries operate: *"We thoroughly enjoyed our visit and learnt a lot of what you do and how we can benefit if we want to research anything ourselves"* wrote one user of Somerset Record Office.

## 5.2 Increase in skills

Having a skill means knowing 'how to' to do something. There are many different ways that skills are described.

- Intellectual skills (reading, thinking critically and analytically, being able to present a reasoned point of view, weighing up different forms of evidence)
- Key skills (numeracy, communication, use of ICT, learning how to learn)
- Information management skills (locating information, using information management systems, evaluating information)
- Social skills (meeting people, being friendly, introducing others, remembering names, showing an interest in the concerns of others, team working)
- Emotional skills (managing intense feelings such as anger, channelling energy into productive outcomes, recognising the feelings of others)
- Communication skills (writing, speaking, listening, giving a presentation, making a TV programme)
- Physical skills (running, dancing, manipulating materials to make things)

Following Essex Libraries Big Summer Read a parent wrote: *"It does have an effect on reading, certainly with my son, it maintains his fluency and familiarity with words."*

A 13-14 year-old school student wrote after a visit to the Imperial War Museum: *"I have learnt to look at the exhibits and reflect on why they are there and their importance."*

A teacher's school visit evaluation form at Prescott Museum stated: *"Literacy, design and speaking and listening skills were all enhanced in a practical way."*

### **5.3 Change in attitudes and values**

Change in feelings, perceptions, or opinions about self, other people and things, and the wider world. Being able to give reasons for actions and personal viewpoints. Increase in empathy, capacity for tolerance. Increased motivation. Values and attitudes are an integral part of learning. New experiences and information change or reinforce perceptions and feelings. Values underpin actions and behaviour, even though they are frequently unexamined. Attitudes and values that are especially relevant within museums, archives and libraries include:

- Attitudes towards self
- Attitudes towards others
- Attitudes towards the organisation

Use of MAL can result in more positive attitudes to learning. "*I feel much happier about requesting and getting hold of information,*" said a distance learning postgraduate student after information management skills training at the University of Leicester library).

Empathy makes an important contribution to the development of values and attitudes. "*It was really scary and it felt like you were in a real Victorian classroom,*" a child said after a visit to a Victorian classroom reconstruction at St. John's Museum in Warwick.

#### **5.4 Evidence of enjoyment, inspiration, creativity**

Evidence of having fun, or being surprised while using a library, archive or museum. Evidence of innovative thoughts, actions or things. Evidence of exploration, experimentation and making.

Enjoyment adds to the quality of life: *"I'm retired and I read for pleasure as a hobby"*, said one library user. Enjoyment in learning leads to motivation. A young visitor to the Women's Library drew herself in the archive and wrote: *"I loved the dewey numbers and I learned a lot."* Motivation facilitates success, creativity, invention and innovative ways of thinking and doing.

Visiting a museum, archive or library may result in feeling inspired. A young teenager visiting the Holocaust exhibition at the Imperial War Museum, London was inspired by: *"Martin Luther King and how he was brave enough to stand up to America."*

A visitor to Wolverhampton Museum and Art Gallery used the gallery to lift her out of her everyday routine:  
*"...I think you spend most of your life living from one day to the next, thinking about bills, thinking about going to work, driving up and down the motorway or something – you go to an art gallery and you are living and experiencing art. It's a higher form of living."*

The experience of museums, archives and libraries can result in creativity. A teacher wrote after a visit to Warwickshire Museums:  
*"Almost without exception the children thoroughly enjoyed the day – one particularly hard to please pupil claiming it was the best trip he has ever been on! It inspired some excellent recounts of the day prompting some to write more than ever achieved in class!"*

A parent wrote after the Big Summer Read at Essex Libraries:  
*"Rachel and Nathan enjoyed the Reading Planet very much. Rachel made her own paper and took a sample of it into the library."*

## **5.5 Evidence of activity, behaviour, progression**

What people do, intend to do or have done. The way people balance and manage their lives, including their work, study or family contexts. Actions can be observed or people may report what they did.

A visitor to the Soundtrack exhibition at Leeds Art Gallery, which used sound to accompany artworks, described how this changed their behaviour in the gallery: *"I think the sound makes the viewer use all the senses. I found myself more involved in actually stopping and looking..."*

One outcome of learning may be the intention to act. An email to Essex Record Office stated: *"Thank you for your excellent reply. I am thoroughly impressed by the speed, depth and clarity of your response. The information is wonderful and I will be following up on all your suggestions."*

Sometimes learning can result in profound change in the way people manage their lives. A comment card in Leamington Library read as follows: *"I come here to practise. I am just learning to use the computers. The computer is now an accessory for living."*

## **6.0 Piloting the Generic Learning Outcomes**

The GLO system was piloted in fifteen museums, archives and libraries between September 2002 and February 2003. These were chosen from the organisations piloting Inspiring Learning For All. They were chosen to give the best coverage of museums, archives and libraries in terms of size, mission of organisation and geographical location.

Training was given prior to the LIRP Pilot phase and support was given from LIRP team members during the pilot process.

### **6.1 Aim of the Pilot Phase**

The aim of the LIRP pilot phase was to test the GLO conceptual framework across a diverse group of organisations. Three types of project were set up. Overall, the GLOs were used to:

- Categorise existing data collected by seven of the organisations e.g. Somerset Archives who looked at a range of material including comments cards, emails, user surveys and comments from talks and activities.
- Improve data collection tools in four of the organisations by asking more focused questions about learning e.g. Warwickshire Libraries asked people using their computer facilities "How has using the computer helped you to "learn" – or furthered your work?"
- Develop new evaluation research projects in four of the organisations that focused more directly on learning and its outcomes e.g. Poole library used video to capture a teenage reading group talking about what they learned from a story that focused on anorexia.
- Confirm that evidence could be categorised, analysed and interpreted in relation to the GLOs
- Structure the reports that discussed and presented evidence of the five learning outcomes

The fifteen organisations developed individual plans for collecting data. This data was then coded using the GLOs. Data could then be analysed in two ways:

- Quantitative – counting the occurrence of each GLO and producing tables or charts for comparisons
- Qualitative – describing the range and depth of evidence from each GLO, often using quotes from users

A final project report presenting their findings was completed by each organisation.

## **6.2 Outcomes of the Pilot Phase**

The piloting process was absolutely vital in both testing the conceptual framework and in bringing to light issues that need to be addressed in regard to the pilots' talking about and analysing learning.

The pilot organisations were able to use the GLOs for analysing data, improving tools for data generation and developing new projects for measuring learning. Even existing data that had not been collected specifically to find evidence of learning could be categorised. Initial scepticism was unfounded and no additional GLOs were needed.

“The outcomes of the data analysis did not justify initial scepticism. Although standard comment and complaints, and user surveys, yielded very little, other more focused sources were surprisingly fruitful. The exercise repaid the work that it demanded and yielded valuable insights both in respect of the most effective ways of collecting rich data and the most effective ways of facilitating learning.”

Tom Mayberry and colleagues, Somerset Record Office

Every organisation found a way of using the GLOs. Most participants involved in the pilot process have already enthusiastically incorporated the GLOs into their practice although this was not required as part of the pilot process.

“The Generic Learning Outcomes have given us a language and a framework to demonstrate to more traditional learning providers the unique contribution that museums, archives and libraries make to the learning agenda. This will help us develop local learning partnerships to deliver community learning based on individual learners' needs.”

Fiona Williams, Culture and Community Learning, Poole



Some pilot organisations were innovative in their use of the GLOs. Uses included staff training, future planning for the organisation and briefing designers for an exhibition.

Colleagues working on two major projects at IWM Duxford and the Churchill Museum at the Cabinet War Rooms have incorporated the GLOs into their thinking about exhibition development. For the Churchill Museum the results of this thinking has been incorporated into the brief for designers.”

Sam Heywood, Imperial War Museum, London.

“The Generic Learning Outcomes approach has already been incorporated into the evaluation plan for the NOF Digitise Project “Windows on Warwickshire.” We are very interested to explore how the GLOs can be used to gather evidence about online learning.”

Jo Rice, Warwickshire Museums and Archives.

The pilot phase revealed that many of the participants were unused to thinking about or talking about learning. Some organisations were not asking their users about their learning experiences and the focus was on satisfaction with the organisation’s provision. The lack of experience in thinking about learning meant that some organisations found it difficult to distinguish between the different outcomes and more general comments. Coding in relation to each GLO was also a problem for some. There were instances of multiple coding and mis-coding and some participants were worried about bias and subjectivity.

Using the Generic Learning Outcomes represented a steep learning curve for many participants. This was demonstrated in the majority of reports submitted by the pilot organisations where no claims were made on the basis of the evidence of learning that was collected. While evidence for learning outcomes were found in all the organisations involved, many lacked the experience to interpret the evidence and to make confident claims based on it.

The general lack of experience in understanding and researching learning and its outcomes suggests that considerable support will be needed to introduce the GLOs to the sector. However, the GLOs gave many of the organisations involved in the pilot process a language and a confidence to begin the process of facilitating and finding evidence of learning.

"I think that the generation of new tools has been one of the most positive outcomes of the pilot process. It has really given a new perspective on how to design evaluation that gives you useful evidence and relevant feedback. It has also ensured that encouraging dialogue with users is at the forefront of all our developments."  
Sue Arnold, Knowsley Museum Service.

## **7.0 Value of the Generic Learning Outcomes**

The breadth and simplicity of the GLOs allows them to be used across museums, archives and libraries. It is not a prescriptive framework. It is intended to facilitate discussion, analysis and the collection of evidence.

The GLOs can be used flexibly. They can be adapted to suit the individual needs of museums, archives and libraries. The pilot phase showed that the GLOs could be used in ways that were not planned as part of LIRP. There is also the potential for the GLOs to be used systematically across the sector to give a national picture of learning impact.

## **8.0 Summary**

There are two main ways of using the GLOs in museums, archives and libraries.

First, as a collective way of understanding learning across the sector. The GLOs can be used as a planning tool for auditing, evaluating and improving the opportunities for learning in organisations.

- Establishing a basic framework within which learning outcomes can be identified and described
- Enabling museums archives and libraries to develop and share a common understanding of learning
- Providing a common language and framework to use when talking about learning to others e.g. colleagues, funders, users, evaluators and policy makers
- Providing a set of categories for auditing existing provision and planning for learning

Second, the GLOs can be used a research framework for generating, interpreting and presenting evidence of learning which has been agreed and tested across the museums, archives and libraries sector.

- Enabling the systematic generation, collection, analysis and interpretation of evidence
- Helping to develop new evaluation research methods, design tools and categorise evidence
- Measuring both the depth and breadth of learning in individual organisations and across / between organisations. This is through quantitative methods e.g. counting the occurrence of each GLO and producing tables or charts (breadth), or by qualitative methods e.g. describing the range of evidence from each GLO using quotes from users (depth).
- Evaluating on-site and on-line learning

The use of the Generic Learning Outcomes is not restricted to museums, archives and libraries. There is the potential to use them in other cultural and educational fields.

## **9.0 The Outcomes of the Learning Impact Research Project**

LIRP has resulted in a powerful conceptual framework which can be used to develop a range of research and evaluation methods and tools. These will measure the impact of learning in museums, archives and libraries.

The main outcome of LIRP will be a web-based Learning Outcomes Toolkit. Launched early 2004 this will include:

- Understanding Learning
- The Generic Learning Outcomes
- Finding evidence of learning

Guidance will be given on:

- Measuring learning at organisational level
- Report-writing

Examples in the Toolkit will be given of:

- Different approaches to measuring learning outcomes
- Specific tools that can be used and adapted by organisations

The GLO system has been carefully developed and tested. It has been reviewed in relation to early and current work on learning outcomes. It has been tested successfully with fifteen organisations from the museums, archives and libraries sector.

The GLO system is easy to understand. Once understood it can be used in a range of flexible approaches. The GLO system is a rich resource for museums archives and libraries, and is of value beyond the sector.

*Investigating learning outcomes and impacts of  
visits to London's Hub museums: 1  
Qualitative baselines*

## **Teachers' ideas about learning in museums**

**EPDP Research  
London Museums Hub  
Oct-Dec 2003**

**Emily Johnsson  
Research Officer**

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# ***Investigating learning outcomes and impacts of visits to London's Hub Museums 1: Qualitative baselines***

## **Teachers' Ideas About Learning in Museums**

*Emily Johnsson, EPDP Research Officer, London Museums Hub, Autumn 2003*

### **1. Introduction and Aims**

Following the requirements set by Resource to build up baseline information about current numbers of school aged visitors to the Hub museums, it was suggested that qualitative data should be collected for the purpose of being able to assess any increase of impact of visits, learning outcomes and quality of provision to schools. Further, it was suggested that this research be linked to the *Inspiring learning for all framework* and that the Generic Learning Outcomes suggested by the Learning Impact Research Project Team be explored (see Hooper-Greenhill, Moussouri, Dodd, Vincent, Morrison, Pickford & Matarasso, 2002). To this end, a series of focus groups with KS2 teachers who had visited the London Hub museums were carried out.

Specifically, the aims of the project were

- To provide additional, complimentary baseline data, in the form of a qualitative impact assessment, linked to Resource's Inspiring Learning for all Framework and Generic Learning Outcomes, in order to inform EPDP planning and to facilitate long-term evaluation of the EPDP.
- To investigate how activities that represent the best potential of each Hub museum's schools' provision impact on pupils and teachers from mainstream schools, in terms of Generic Learning Outcomes.
- To gather information from secondary sources; e.g. teachers who have visited a Hub museum with their pupils during the academic year 2002-2003, regarding their views on the impact of the visit on their pupils (and themselves) and their ideas about ways of increasing the impact of visits.

This report outlines the methodology, areas that were explored and why, and research findings.



## **2. Methodology**

### **2.1 Focus groups**

Focus groups are common means of investigating attitudes and opinions of museum visitors in order to inform decision-making about exhibitions, activities and materials.

In particular, the focus group is an interesting method for exploring key issues for a particular set of people (profession, age, gender, interest specific etc), as the group dynamic can encourage rich discussions.

### **2.2 Recruitment of Participants**

Participants for 4 focus groups, 1 for each London Hub Museum, were recruited for the purpose of this research project. The aim was to recruit 8 teachers having visited a particular Hub museum from mainstream schools with their Key Stage 2 pupils. As far as possible, teachers who had used the museums' activities that best reflect the potential of that museums' provision to schools were recruited. The following reasons underlie the rationale of the recruitment procedures:

- Key stage 2 pupils from mainstream schools are the Hub museums' core audience.
- Other research, with teachers from other schools and other key stages will be carried out in the future. It was argued that the core audience had to be prioritised at first instance.
- Knowing something about the impact of visits and participation in sessions that reflect the best potential of the museum's provision to the core school audience will inform decision making about how to raise the quality of sessions offered to schools by the museum.
- Schools' officers and other representatives from the London Hub museums education departments identified activities and sessions representing the best potential of their education service to schools, based on feedback from teachers and those leading the sessions.

### **2.3 Fieldwork**

The groups were carried out during two weeks in October during late afternoons (7/10 Horniman Museum, 8/10 Museum of London, 14/10 Geffrye Museum, 16/10 London's Transport Museum.). Not all participants that had said they would come did in fact turn up. On more than one occasion, last minute cancellations occurred. On average, 6 participants took part in the discussions for each museum. Participants were offered £25 for their time, and were served refreshments. The London Hub EPDP Research Officer, Emily Johnsson, facilitated the discussions.

All discussions were audio taped and transcribed for analysis. The participants were asked for their permission for the discussion to be recorded and confidentiality was stressed. Hence, quotes in this report will not be attributed to any one person or school. Background information, discussion guide and details how to get in contact with the researcher were handed to the participants at the end of the discussion.

## 2.4 Issues to explore

### *Background*

The aim of Resource's Learning Impact Research Project (LIRP, 2002) was to develop a method for showing the impact that museums, archives and libraries can have upon their users. The method developed is a toolkit that organisations can use for measuring learning across the sector.

The challenge for *Inspiring Learning For All*, LIRP and users of this framework, is to expand the traditional, narrow view of learning into something much broader. From this theory was developed the system of *Generic Learning Outcomes* that forms the conceptual framework for measuring learning in museums, archives and libraries.

The definition of learning adopted by Resource and the LIRP states that

*Learning is a process of active engagement with experience. It is what people do when they want to make sense of the world. It may involve increase in or deepening of skills, knowledge, understanding, values, feelings, attitudes and the capacity to reflect. Effective learning leads to change, development and the desire to learn more.*

Learning is thus seen as a process and an experience rather than a "product" of scholarship and knowledge.

The notion of learning outcomes is important aspects of learning assessment and instruction in formal learning environments. These are often linked to performances in standardised test and attainment targets. However, researchers in education and cognitive psychology have over the past decades investigated aspects of learning that if taken seriously, requires a broad definition of learning. Such aspects may be motivation and the notion of 'flow' (Csikszentmily & Hermanson, 1995, Monique Boekaerts, 2002) self esteem, curiosity, values and enthusiasm (see Vosniadou, 2001, *How children learn*).

The *Generic Learning Outcomes* are

- Increase in knowledge and understanding
- Increase in skills: intellectual, practical, professional
- Change in attitudes or values
- Evidence of enjoyment, inspiration and creativity
- Evidence of activity, modification of behaviour, progression

The significant aspects of the learning “theory” adopted by Resource and LIRP is that learning is a lifelong process of making meaning. Individual learning is highly diverse and unpredictable, requiring different modes of attention from wide open to tightly focused. Users in museums, archives and libraries vary in the depth and level of their learning and these differences can also be seen across the museum, archive and library sector.

There is an emphasis on the potential for creativity and innovative thinking, a feature of learning within a cultural context. Learning can be individual or social, as learners may often share their learning experiences and outcomes with family, friends or social groups.

#### *Discussion guide*

The discussion guide was developed on the basis of the Generic Learning Outcomes. In addition, each Hub museum was encouraged to include questions of particular importance to their museum.

The following general issues were explored with teachers

- Views about learning and how to measure learning
- Remembering the visit to the Museum
- Preparing for the visit to the Museum
- Generic Learning Outcomes- What they are
- Evaluating the Impact of the Museum visit in hindsight using the GLOs
- Relationships with the GLOs and curriculum areas
- Special features of activities that encourage GLOs
- Increasing the impact of Museum visits
- Museum support for teaching and learning- general

Museum specific questions related to booking systems, marketing and object based learning.

The discussion guide that was used in this pilot study (see pp 5-11) can be found in the Appendix of this report. It can be used as a script, a general guide or as a map of questions from which themes can be selected and explored separately in more detail.

### **3. Research Findings**

It follows from the nature of the research questions that many of the findings are interlinked. Evidence in the form of quotes from the discussion groups can be found in the appendix (Appendix Part 1). These have been organised under headlines relating to the questions outlined in the discussion guide. The section below presents general key findings and themes.

#### ***Key general findings, London Hub museums GLO teacher consultation***

##### **Definitions of learning & learning in museums**

Participants gave different definitions to what learning is. Some described it as *experience*, some that it was to do with *finding something out that you didn't know before*, and others that it could be something *memorable*.

When asked if learning is different in the museum to the classroom, participants replied that they believed that learning is and can be effective in the museum because of the particular environment. Participants perceived the museum environment to be visual, engaging, 'more alive', contextualised, fun, multi-sensory, imaginative, arousing emotion, that it gave a connection to real life; a place where pupils were given opportunities to explore new skills through interplay, hands-on and minds on learning. Others suggested that learning in museums is 'added on' experience; others that it is 'inclusive' and that it is encouraged by visual and audio resources that did not exist in the classroom. This aspect was seen as particularly important for those pupils learning English as a second or additional language. One participant said that pupils are 'freer' in a museum.

##### **Measuring learning**

Participants placed great emphasis on qualitative rather than quantitative assessment (traditional pen and pencil tests); which most disliked. Some of the older participants felt that they had not for a long time been encouraged to think beyond quantitative assessment, but that they had started out in their careers with a very different outlook. These participants felt that discussing learning in terms of the generic learning outcomes enabled them to revisit, after 25 years, a more child-centred approach to the learning process.

Most participants 'measured' their pupils' learning through observations and discussions and conversations with the children; exploring their memories and how the pupils made links between the museum visit and prior knowledge. In particular, they felt that a trip to the museum enabled them and their pupils to talk informally in a non-threatening environment and to get to know each other better. Such opportunity was seen as key to the development of English language skills with pupils learning English as a second or additional language.

Participants saw evidence of learning outcomes encouraged by visits to museums amongst their pupils through activities that took place in the classroom after the visit, for example in drama and role-play, images, craft work and creative writing.

## **Generic Learning Outcomes**

### ***Knowledge and Understanding***

Some participants felt that for many children there was an increase in knowledge and understanding of particular topics after the visit to the museum. Others felt that learning outcomes *other than* increased knowledge of particular subjects (e.g. skills, motivation, self esteem) were both more important and more evident amongst their pupils. Many participants felt that children got a sense of connection between subjects during the visit to the museum. However, it emerged from the discussions that such connections could have been emphasised more, not only by teachers, but also by the museum staff or materials. Further it was felt that the museum visits were cross-curricular experiences. Another aspect of understanding that was mentioned by the participants was the important connection pupils could gain from visits to the Hub museums with 'time and space'; linking their lives to the lives of people of the past and the future. This, it was felt, influenced pupils' sense of themselves and their environment in a positive and empowering way.

Cultural understanding was seen as enhanced through visits to the London Hub museums as the children were encouraged to connect with their cultural heritage and to find common themes between people of different times and backgrounds.

### ***Skills***

Participants felt that a variety of skills were and could be gained from visits to the London Hub museums. One of the most important skills talked about were literacy skills, as talking and listening were encouraged by interactive sessions. Further, participants felt that the whole experience of the visit gave children something to talk about, to write about or re-enact in the classroom. However, a few participants mentioned that displays need include text aimed at children, and text appropriate for those with special educational needs (appropriate for those learning English as a second or additional language, and Braille). Currently, teachers spend much time reading wall texts and interpreting these to their pupils when going on the self-led section of their visits.

Participants also mentioned the encouragement of social skills through trips to museums. Most participants worked with children in deprived areas of London who did not have any experience of visiting places in London. To these children, some of the most important learning outcomes of the trip to the museum might involve getting a greater sense of the city in which they live and the treasures it has to offer.

Participants talked about the fact that activities in the museum encouraged the children to work together and helped them to 'bond'. This was seen as enhancing team-working skills that echoed back in the classroom, also between children of different abilities. Numeracy had also been encouraged somewhat by the museum visits, but much less so than literacy skills.

Those pupils who attended art or craft workshops learned new skills or developed existing ones within these areas.

Other skills that were discussed as being encouraged by the visits to the Hub museums were higher order thinking skills such as problem solving skills and inquiry thinking. Learning how to *ask questions* and *access knowledge for yourself* were emphasised by participants as important outcomes of the museum visits. This, in turn, encouraged and empowered pupils to start taking responsibility for their own learning (learning for themselves). The ability to *make links across domains* (cognitive) was also seen as being encouraged by visits to the Hub museums. Participants mentioned that these skills were encouraged through activities and question and answer sections of the museum-led sessions.

Some teachers talked about an education for the 'whole child', and about learning across environments as a way of encouraging pupils to acquire 'skills for life'. Using the theme *Creativity*, as encouraged by national targets, was seen as a possible means to explore a more holistic approach to learning and teaching.

### ***Self-esteem***

The museum environment was seen as enhancing or having the potential to enhance self-esteem amongst pupils in different ways. For example, children who might not be performing well according to traditional assessment, or considered gifted by their peers in the classroom, were given opportunities in the Museum to explore and display skills they have not had the chance to do before. Such opportunities made these children 'shine' and teachers and peers get to know them better. In this way, pupils were able to communicate and express themselves in ways they had not been able to do in the classroom. This, participants felt, not only enhanced self-confidence for individual pupils, but also encouraged a more equality-based group-dynamic. One teacher talked about one of his pupils who have great problems remaining still and concentrating for more than very short periods of time in the classroom that had been engaged and focused in the museum environment for longer periods.

Another teacher mentioned psychologist Howard Gardner's theory of Multiple Intelligences in this context and about the importance of recognizing and making available learning opportunities for children of different intelligences and abilities; relating this to the idea of an education for the 'whole' child.

Other teachers mentioned that they felt that self-confidence amongst their pupils had been encouraged by means of gaining a greater sense of a link with people in the past, and through engaging in activities where they had been made responsible for something which they could take ownership of (for example in role-play). The participants described many museum-led sessions as inclusive; in particular for those children learning English as an additional language, and felt that this also encouraged an increase in self-confidence amongst the pupils.

Increased knowledge within a subject area encouraged by the visit made some children 'experts' whom others would ask questions - another way in which teachers were noticing change in behaviours and self-esteem following the visits to the London Hub museums.

### ***Enjoyment***

Participants expressed that the pupils had enjoyed their visits to the museums; evidence of this was seen during the visits themselves through children's participation in activities and their display of excitement. On the way back to the school and when back in the classroom, enjoyment and excitement sparked by the visit was expressed through individual conversations and group discussions and through sharing and re-living memories from the trip in different ways. Many participants told the groups that their pupils wanted to go back to the museum because they had enjoyed it so much. For many children, the visit to the London Hub museum had been their first ever visit to a museum, and for many, their first trip to central London and/or on the tube.

### ***Enthusiasm, Motivation and Inspiration***

Teachers felt that pupils came away with enthusiasm for museums and for learning more about some things in particular. Teachers expressed that it was easier for them to teach a particular curriculum topic if they had been to the museum first, as the activities in the museum had motivated and focused the children considerably.

The ways in which activities were delivered was seen as the most influential factor on motivating the children and generating enthusiasm.

Some teachers mentioned that the way in which the museum education staff had contributed by making sure those delivering the sessions knew about special requirements and provided information for teachers, had subsequently made an enormous difference to the quality of the session delivered, which in turn had affected the way in which pupils were able to engage and be inspired.

Participants saw evidence of inspiration and enthusiasm through behaviour (participation) in the classroom and materials produced.

### ***Curiosity***

One teacher in particular told the group of some of her pupils who normally don't display signs of inquisitiveness or curiosity (apart from when 'testing boundaries' with adults); had showed desire to find out more as a result of participating in the museum-led session, and that they were able to. This participant felt that she would like to visit a museum at the start of every unit.

### ***Creativity***

Participants spoke of different ways in which pupils had been engaged in creative activities in the museum; through drama, craft workshops and through being encouraged to ask questions. A key component during these sessions were that the children's' imagination had been sparked and this, in turn, encouraged engagement, interest and enthusiasm.

Some participants felt that *creativity* (with or without National curriculum guidelines) could be used in the classroom across the curriculum to encourage thinking skills as well as expression; and generally to make things more 'alive'.

For some classes that had come to the Hub museums, the visit was part of a larger programme of study, which involved many creative elements both before and after the visit to the museum.

#### ***Behaviour, Values, Progression***

Participants had seen evidence of modification of pupils' behaviour after the visit to the museum. For example, pupils were able to talk in more sophisticated ways with their teachers, and pupil and teacher relationships were strengthened by being able to interact informally. Further, pupils were seen working better together, also those of varying abilities. One teacher said that their pupils were able to access and offer different interpretations of the activities and displays in the museum from their own point of view. Making links with past and future people and finding common themes between people from different backgrounds and times encouraged empathetic values, participants felt.

#### ***Citizenship & Sustainable development***

Aspects of learning about Citizenship were encouraged by visits to the London Hub museums, participants felt. In particular, it was felt that a sense of 'ownership' was encouraged by the notion of a link with the past, through learning about inequalities, struggles and conditions in which people have lived, and comparing those with how we live today. These were good starting points for discussions about citizenship and sustainability, participants said.

Some participants expressed that they felt that it was particularly difficult to make British history relevant to children who have not lived very long in the UK, and those whose parents don't have experience of what it is like to live in the UK. These participants felt that museums can, and do, provide support for teachers and pupils in this task, by providing a context and bringing British history to life through interactive sessions. Further, one teacher talked about a session with a black actress who played the part of a woman from a certain time in British History which had made an enormous impact on his class of pupils who, to a large majority, are of African Caribbean or African origin. The participant felt that the meeting with the actress had encouraged his pupils to gain a greater sense of a link with British history, of being 'part of' the past of this country. Further, it was felt by a couple of the participants that pupils were encouraged to learn about the importance of looking after the environment and to look after 'things' (objects of a time); and the importance of developing sustainable solutions to problems.

#### ***What was it about the activity that encouraged the learning outcomes?***

Participants felt that the nature of the sessions and the enthusiasm and knowledge of the individual museum staff or actors were aspects that influenced learning outcomes amongst children the most. Some teachers emphasised that these individuals conveyed to the children that learning can be fun.

Further, education staff who had asked teachers about special educational needs or prior knowledge of children, and passed this information on to those delivering the session, were also seen as individuals having made major contributions to the subsequent learning outcomes.



The museum environment *per se*; audio and visual displays and 'props' in sessions; objects to touch, interactive displays, things to try and things to engage with etc were also seen as crucial to all learning outcomes.

Some participants also talked about the museum visit as a *shared* experience, of finding something out together and interacting with the environment.

#### ***'Stand-alone' visits vs. multiple visits***

Participants felt that it was possible for there to be real impact from one single visit to a museum and that they had seen evidence of such amongst their pupils. However, it was argued that learning outcomes are longer lasting if they can be reinforced in some way. Reinforcement could, for example, happen through follow-up work in the classroom or elsewhere. This way, learning environments may be connected, participants felt.

Teachers said that bringing the pupils to the museum was to 'start something'; introducing them to the museum, to museums in general and to learning through museums. The participants hoped that the children would ask their parents to take them back to the museum on weekends and holidays. However, many participants said that the ideal would be to take the same children for another visit to the same museum in order to explore something new or a different aspect of the same topic. Participants said that they had never taken the same pupils twice to the same museum and that it would be difficult to justify such trips (to colleagues, LEA and parents) and that it would be difficult to fund. There were those participants that said that they felt that they were not very restricted by school policy but that they hadn't yet pursued revisiting the same museum with the same class. These were participants from more affluent schools. Some teachers also said that pupils might return to the museum in another year or key stage with different teachers. Further, participants felt that London's museums had so much to offer and that they found it important to take pupils to a variety of places. Participants were fond of the idea to use different museums for the study of the same theme or curriculum area and doing combined visits to museums in close proximity to one another. One teacher suggested that video conferencing, where pupils could engage with an activity in the classroom and at the same time interact with the 'teacher' in the museum after their visit to the museum would be a great way of extending the visit and reinforce learning outcomes.

#### ***Planning, preparation and follow-up, teaching plans and National Curriculum***

Participants expressed different ways of working in these areas. Some participants had planned the trip to the Hub museum as part of a particular teaching programme (for example the Victorians). One teacher had not told their pupils anything about the Museum before the visit as a strategy to provoke enthusiasm. Some were greatly opposed to working in this way, and felt that learning experiences need to be connected across environments. These teachers placed importance on the pre-activity in the school, as well as the follow-up work. However, the individual participant who had not prepared his pupils also emphasised the need for follow-up work of which his class had done much.

Many of the participants had organised activities in the classroom for follow-up work, such included art- and craftwork on a particular theme, drama or creative writing. Others had encouraged discussions and 'recall' sessions and then related the outcomes of these discussions to subsequent work.

Others still, had not done much follow-up work. These participants said they had not done follow-up work because their trip had been an 'extra'; a trip that had not fitted in with their teaching plan.

Many teachers had used some materials from the museums in their preparatory work, but the level to which such were available varied greatly amongst the museums. None of the participants (apart from one who had used a loan box shortly after one of his visits to the museum) had used materials provided by the museum to do follow-up work. Although a few participants said that it was up to the teachers and not the museum's responsibility to follow up the visit to the museum, generally, participants felt that they wanted more, or different support to what is currently available in these areas. For example, participants felt that it would be useful to be able to bring something from the museum back to the classroom (something that pupils made, a poster, a post- visit activity pack) and to have down-loadable materials or video-clips of work-shops and actor sessions from the museum website to use in preparation and planning (both for teachers and for pupils) and in follow-up work.

An estimated 30% of participants used the Internet in preparing and planning their teaching but the majority did not. Younger teachers seemed to use the Internet more than older teachers and those teachers that came from less affluent schools where there is less access to Internet access.

Teachers' packs were appreciated and used in pre-visit activities and planning. Those teachers that had planned the visit as part of their teaching plan also felt that the visit had clear links with particular National Curriculum targets. Those that had come on an 'extra' visit had not. However, most participants felt that this was not the most important reason for visiting the museum. Learning outcomes mentioned above were seen as far more important than gaining knowledge of particular subject areas, although the link with these areas might be the reason why the visit was booked in the first place (e.g. 'Victorians'). Teachers felt that because there were so many targets in the National Curriculum, it was almost impossible to make a visit without being able to link it to some aspect of it. Most of the teachers said they had to justify visits to their LEA and to senior school staff by linking them to the curriculum. This, along with risk assessment and health and safety forms were generally seen as barriers to visits as it involves so much paper work.

Participants had all visited the museums prior to their visits with their pupils. However, most of them had made very short visits where they had had a quick look around the galleries on their own and located loos and lunchrooms. Some participants felt that this was not adequate preparation for teachers. In a couple of cases, teachers had been shown around by front-desk staff who were unable to give adequate information. Many participants were unaware that they could book appointments with education staff to discuss their visit.

Those who had indeed been shown around by a member of the museum's education team or attended an INSET course all had very good experiences and felt it had helped them in their planning, preparatory and follow-up work with the children.

Some teachers felt that this would be good if this was offered by all museums but that it should not be compulsory. However, for those teachers that had attended compulsory INSETs prior to their visit with their pupils only had positive feedback to share.

### ***Learning outcomes for teachers***

Teachers felt positive about their visits to the museum. Many said they had been encouraged and motivated by the way that their pupils had been so enthusiastic. They felt that they had achieved something because their pupils had. Others said they enjoyed learning with their pupils and that they had been able to get to know them better through informal conversations in the museum and on the bus or tube to and from the museum. Others felt that the actors or museum staff leading the session, had inspired them. Some teachers said that visiting museums had impacted positively on the mode and quality of their teaching.

### ***Increasing impacts of learning outcomes***

Participants felt that museum-led sessions (actor, object handling, storyteller) that are **tailored specifically** for the group of children attending, is the part of the visit that generates the most learning outcomes. Further, participants felt that those leading sessions need to be flexible (for example if group of pupils are late due to transport problems) and inclusive. Some participants felt that learning outcomes would increase if pupils were allowed to dress-up in character.

It was also felt that having lots of time for the visit is crucial for learning outcomes. Some participants expressed that they had felt rushed during their visits, which had had a less positive effect on pupils' experiences.

Participants felt that exhibits need to have more child-friendly text (or text in different languages) and be more interactive. Another suggestion included having people in the galleries that can explain and encourage the pupils to look at certain exhibits. Teachers generally felt that although a teacher's pack was useful in preparation, relying on this for the self-led part of the visit did not seem to encourage the same level of enthusiasm from the children as somebody from the museum could. Hence, teachers did not seem to be interested in INSET solely for the purpose of the self-led visit. Participants felt that it was important for pupils to interact with adults other than those from their school in learning situations and that they personally learnt a lot too from the museum staff and freelancers and became enthused: a shared new experience. As previously stressed, it also emerged that participants felt that the museum-led visit was an important opportunity for teachers to interact with the pupils informally in a non-threatening environment, get to know them better and observe the progress of their class and of individual children. These interactions would be less possible if the teachers were responsible for leading the visit in the museum.

However, a couple of participants expressed that they wanted to obtain detailed information about a Hub museum's galleries in order to be able to lead pupils through the museum. These participants said that they wanted this information because they were aware that the museum was short of staff and may not be able to carry out this service for all visiting groups, and that ideally, they did not have to do this.

Some teachers felt that it would be very good to be able to take something back to the school as an aide memoir for later discussions and topics (for example a bullet-point list of things to remember). Souvenirs from the museum shop were perceived as expensive and pens and rubbers with the museum logo were not seen as effective for provoking memories of particular situations. Something as simple as a poster illustrating an object, character or aspect of what had been talked about in the museum to place on a classroom wall was suggested as one way of increasing the impact of the visit to the museum.

Others also felt that it would be nice if the children were encouraged to make something in the museum or take photographs, perhaps that they could take back to the school or display in the museum. Participants felt that such items could be used in follow-up work. Some participants also felt that learning outcomes would increase if the museum could support teachers with ideas about follow-up activities (e.g. a follow-up pack).

As outlined previously, participants felt that support through more detailed information prior to the visit would be useful, and a way to increase learning outcomes.

It emerged clearly from the discussion that teachers felt that it would be of significant help to them if they could be supported in 'difficult' curriculum areas such as Creativity, Literacy, Numeracy, Citizenship and learning across the curriculum. These are curriculum areas that focus on thinking and communication skills, values and attitudes rather than increase in knowledge of particular topics. It was suggested by a couple of participants that museums could support teaching of different curriculum areas and skills (for example research skills) through a well developed website aimed at children.

Many participants felt that an object loan service would be an invaluable aid for teaching about evidence in history, and as preparation for going to the museum, but that this could never replace actual visits to the museum.

A couple of participants suggested that museums work together and lend each other objects for the purpose of encouraging schools to visit their local museum rather than a national museum in central London.

### **Top learning outcomes**

When asked which learning outcomes they felt were the most important ones they had seen evidence of amongst their pupils after their visit to the Hub museum, participants answered:

*Love of learning.*

*They saw that learning could be enjoyable.*

*Confidence in communicating with one another.*

*Increased knowledge and an awareness that makes a sense of themselves.*

*Self-confidence in the fact that they are able to handle the things and make a contribution.*

*That they can actually find something out other than by going to books and by being with a teacher in a classroom. There's somewhere else where they can actually learn and find out for themselves.*

### **Other aspects of the discussions**

#### **Learning Communities, Communication & PR**

Most participants felt that the communication between the Hub museum and the school (and themselves personally) is very important. Generally, many participants felt that the museums market their educational provision badly, although there were variations in the feedback to this question in each group (see individual museum's section). Not only could there be more materials available with information about the educational provision on offer but it could also be targeted specifically to certain themes or key stages and include a range of information relating to the nature of the sessions (with pictures) and those leading the sessions, travel information and practical information (floor plans, where loos, cloakrooms and lunch areas are situated).

However, it was felt by some participants that an over-emphasis on curriculum areas for PR purposes might overshadow the simple fact that museums can offer a whole range of support for learning. Some participants suggested an emphasis on promoting actor-led and interactive sessions and displays.

Further, as mentioned previously, participants who had had the opportunity to talk to a member of the education team prior to the visit to discuss SEN or prior knowledge felt that this had made a major contribution to the subsequent learning outcomes of pupils. Some of those that had not had the same opportunity felt that the session could have been tailored better for their group. It was felt that this would have increased the impact and learning outcomes from that session.

In addition, participants emphasised that a continuous communication between school and museum is important. This would encourage a more holistic way of looking at education, some participants felt. Participants felt that giving feed back to the museum after the visit is of great importance, but did not perceive there to be very good systems in place for doing so at the moment (across the Hub museums). It was felt that having to complete a questionnaire in the museum when trying to round up a group of children was very difficult. Equally, it was felt forms might get lost when brought back to the school to fill in.

However, those participants who had had extremely positive experiences had all made sure to tell the museum staff afterwards, and taken time to fill in a feed- back sheet.

Many participants mentioned the importance of trying to encourage parents to get involved with informal learning in museums in family groups. They felt that it is important not only to encourage parents to come along on schools' visits (where some participants had perceived that parents who for example, are learning English as a second or additional language had been able to learn together with their pupils) but that museums should market themselves to parents via schools. Perhaps pupils could bring a leaflet home to their parents before the start of the summer holidays or similar. Participants mentioned that many parents feel intimidated by museums, but also by schools, as they may not have had good experiences of these environments as children. Some participants mentioned that they actively try to encourage family learning activities with their pupils' parents inside or outside school (sometimes with a museum) and had all had positive responses from participating parents.

Parents had expressed that they felt that they got to know their children better, became better aware of their children's education and got to know their teachers better and parents of their children's friends.

It was felt, generally, by the participants in the four groups, that learning outcomes amongst pupils would be enhanced through repeat visits pupils could make on their own or with their families during weekends and holidays, but that parents need support in these situations in order to confidently facilitate their children's learning. It was suggested that museums could run workshops for parents on literacy and numeracy for example.

Although many participants were positive to the idea a web-portal ('map of London style') for PR and awareness purposes, when asked about how they currently use the Internet in their planning and preparation, only ca 30% said they did this on a regular basis. E-mail was generally not seen as good ways of communicating with individual teachers as they had few opportunities to check e-mails and they already receive more e-mails than they can deal with.

Those teachers who indeed use the Internet for planning teaching and visits to museums expressed that they thought it could be useful to have a simple, but sophisticated on-line booking system for booking visits (e.g. space to write or indicate SEN for example, and system only to show available days) and thought that e-mail up-dates with information about upcoming events was a good idea.

#### **Practical barriers to schools' visits**

Participants felt that barriers to schools' visits were shortage of staff accompanying groups of pupils; cost of transport; safety aspects of using public transport; justification of visits to LEAs and senior school staff. One participant did not feel that justifying to the LEA the reasons for museum visits was a barrier to booking, she felt it helped her think about learning outcomes of the visit.

#### 4. London Hub museums' evaluation

All four Hub museums have carried out a number of summative evaluation reports in recent years. Specifically, all of the museums work in a culture of articulating specific learning outcome- related aims for their exhibitions and events, and attempt to find out to what extent visitors have gained these learning outcomes as part of their museum experience.

The most popular methodologies employed for this purpose have been exit interviews (using questionnaires) and questionnaires or feedback sheets for visitors to fill in. One of the museums has found that visitors are less inclined to answer open-ended questions about learning using these types of methodologies, and that open-ended questions about learning questions are motivation specific (e.g. visitors who have come with an aim of learning more about something in particular, e.g. a study day about Victorians, will be more aware about their learning outcomes). They found that visitors' general views about learning are mainly associated with cognitive learning (e.g. does not necessarily encompass values, attitudes or skills).

However, one report, *The After Schools Project- 1 year on*, which assesses the success of an after-school project at London's Transport museum in 2000, investigates the impact of the project using semi-structured interviews with questions developed with a broad view of learning in mind.

The Hub museums are planning to develop and pilot evaluation methodologies using the Generic Learning Outcomes for the purpose of evaluating the EPDP projects over the next 2 years. Importantly, emphasis will be made on combining methods for investigating Generic Learning Outcomes with cognitive probing methods (see for example Richard White and Richard Gunstone, 1992, Osborne and Freyberg, 1985). Using these types of methodology will be vital in front –end analysis and formative evaluation preceding and during the development of the EPDP programmes.

Probing understandings, attitudes and values of pupils and teachers in front-end evaluation will enable the EPDP programmes to be specifically tailored to the learning needs of its participants.

## **5. Conclusion**

### **Summary- Key findings**

#### ***A) Learning Outcomes***

Participants felt that a wide range of learning outcomes were encouraged by the visits made to the London Hub museums. In particular, it was felt that the visits fostered or encouraged

1. Teacher- pupil relationships
2. Relationships between pupils and team working skills
3. Literacy skills (talking, listening, communicating)
4. Seeing links between subjects
5. Seeing links between self and people of the past and future
6. Self-awareness and self-esteem of individual children
7. Thinking skills (inquiry thinking, research skills, creativity)
8. More equal class dynamic
9. Enthusiasm and motivation to learn
10. A view of museums as places for learning and enjoyment

#### ***B) Areas to improve***

Participants felt that the impact of visits could be enhanced through the way in which museums, schools and individual teachers work together. Below is a list of some of the suggestions for improvement

1. Improve communication and relationship building between museums, schools and individual teachers to encourage connected learning environments and tailored sessions
2. Improve PR strategies to raise awareness about the educational provision on offer
3. Continue to deliver and encourage other museums to deliver actor-led sessions and other interactive sessions
4. Exhibits to include 'child-friendly' text, be interactive and/or have staff in the galleries engaging with the children
5. Offer support for follow-up activities in the school as well as for pre- visit activities
6. Offer support for the teaching of 'difficult' curriculum areas and make explicit links with such subjects as Citizenship, Literacy, Numeracy, Sustainability and Creativity
7. Encourage family learning programmes as a means of extending and enhancing learning experiences for pupils and strengthen alliances between schools, parents and museums.
8. Raise awareness of the value of museum education at all levels in education system.

The aim of this project was to use the Generic Learning Outcomes framework suggested by the Learning Impact Research Project Team (see Hooper- Greenhill, Moussouri, Dodd, Vincent, Morrison, Pickford & Matarasso, 2002), and develop and pilot a methodology to investigate teachers' views about learning in museums. The study has shown that using the Generic Learning Outcomes as a framework for discussions with teachers can generate rich data about teachers' ideas about learning in museums. This may be used to promote and raise awareness about the role and importance of learning in museums as part of formal education, and encourage museums and schools to work together to develop educational programmes that span across learning environments. The key findings generated by the discussions will be used to inform EPDP project development and feed into future evaluation and research methodology.



## Selected Further Reading

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Hein, G The Constructivist Museum, *Journal of Education in Museums*, 16, 15-17 1995.

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Csikszentmihaly, publications: *Flow- The Psychology of Optimum Experience*, *Finding Flow*, *Creativity: Flow and the Psychology of Discovery and Invention*, and *The Evolving Self*.

Hooper-Greenhill. E. publications: 1999. *The Educational Role of the Museum* (second edition), *Leicester Museum Studies Readers*, Routledge, London.; 1994. *Museums and their Visitors*, Routledge, 1992. *Museums and the Shaping of Knowledge*, Routledge, London.; 1991. *Museum and Gallery Education*, Leicester University Press, Leicester.

Learning to Listen- Core Principles for the Involvement of Children and Young People  
[http://www.homeoffice.gov.uk/docs/learning\\_listen.pdf](http://www.homeoffice.gov.uk/docs/learning_listen.pdf)

Measuring the Outcomes and Impact of Learning in Museums Archives and Libraries; The Learning Impact Research Project End of Project Paper, 01 May 2003  
[http://www.resource.gov.uk/documents/insplearn\\_wp20030501.doc](http://www.resource.gov.uk/documents/insplearn_wp20030501.doc)

Moussouri, Theano: A context for the Development of Learning Outcomes in Museums Libraries and Archives, 15 July 2002  
[http://www.resource.gov.uk/documents/moussouri01\\_ver2.pdf](http://www.resource.gov.uk/documents/moussouri01_ver2.pdf)

Osborne and Freyberg (1985): Interviews about instances and events

Sternberg, R: *Beyond IQ: A triarchic theory of human intelligence*. New York: Cambridge University Press, 1985

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<http://www.ibe.unesco.org/International/Publications/EducationalPractices/EducationalPracticesSeriesPdf/prac07e.pdf>

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# **Appendix**

## **Teachers' ideas about learning in museums**

- Quotes**
- Discussion guide**

## Exploring Generic Learning Outcomes with teachers

Emily Johnsson, EPDP Research Officer, London Museums Hub

### Discussion Guide

<b>Introduction</b>	<ul style="list-style-type: none"><li>- Explain purpose of the group. Background info about Resource, Renaissance in the regions, London Museums Hub</li><li>- Explain how the information generated from the discussion will be used.</li><li>- Stress confidentiality</li><li>- Introductions- each participant to introduce themselves.</li><li>- Ask if ok to turn on tape recorder.</li></ul>
<b>Remembering the museum visit</b>	<p>You have all visited the museum with your pupils, but attended different activities.</p> <ul style="list-style-type: none"><li>- What do you remember about the visit? Can you tell us about it?</li><li>- Was there anything particular about the visit that made you remember it better?</li><li>- What were the highlights of your day?</li></ul> <p>-Did you visit the museum in preparation of the visit? Yes/no: why not? Can you tell us about it? Was it useful? Did you meet anyone from the museum's education team?</p> <p>-What materials did the museum provide you with?</p> <p>(Did you use the museum website or other web-based materials in planning/preparation? Do you normally use the Internet for preparing lessons/museum visits?)</p>
	<p>Now, lets think a bit about what you do in your classrooms every day and your views about learning. I will start with a Big question...</p>
<b>General: Views about learning</b>	<ul style="list-style-type: none"><li>- Learning – how would you define it? What is meant by it?</li><li>- In what ways do you measure your pupils' learning?</li><li>- In your view, is learning different in different environments? E.g. is learning in the museum different from learning in the classroom? How, in your view, are they different?</li></ul>

<p><b>Learning outcomes- General</b></p> <p><b>'Prop'- if needed</b></p>	<ul style="list-style-type: none"> <li>- You've just mentioned a whole range of things that learning is. For example, you mentioned.... (Read out what participants have already mentioned)</li> <li>- So, learning can mean a lot of things.</li> </ul> <p>(This is a broad way of defining learning... read;</p> <p><i>Learning is a process of active engagement with experience. It is what people do when they want to make sense of the world. It may involve increase in or deepening of skills, knowledge, understanding, values, feelings, attitudes and the capacity to reflect. Effective learning leads to change, development and the desire to learn more.) (Campaign for Learning, 2002/3)</i></p> <ul style="list-style-type: none"> <li>- So, learning can mean a lot of things.</li> </ul> <p>I'd now like us to relate this broad view of learning to your visit to the museum, pick it apart, and talk a bit about what kinds of learning outcomes you could see evidence of amongst your pupils after the visit to the museum, or what kind of learning outcomes you feel that the visit encouraged.</p> <p>(Relate to what participants have said during the 'Remembering' section)</p>
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## Explore Generic Learning Outcomes (expect answers with examples relating to one or more learning outcome)

<b>Knowledge and Understanding</b>	<b>Skills</b>	<b>Activity, Behaviour</b>	<b>Attitudes or values</b>	<b>Enjoyment, inspiration, creativity</b>
<p><i>In your view...</i></p> <p>Was there an increase in knowledge and understanding after the visit? Or: In what ways do you feel that the visit to the museum encouraged the following?</p> <ul style="list-style-type: none"> <li>• Increased learning within a subject area?</li> <li>• Increased understanding of connections between subjects?</li> <li>• Increased learning across subjects?</li> <li>• Increased cultural understanding?</li> </ul>	<p><i>In your view...</i></p> <p>Was there an increase in skills: intellectual, practical, social, amongst your pupils after the visit? Or: In what ways do you feel that the visit to the museum encouraged intellectual, practical, social skills?</p> <ul style="list-style-type: none"> <li>• Increased ability to work with others?</li> <li>• Literacy &amp; Numeracy Skills?</li> <li>• Thinking skills? (Ability to make informed choices beyond and within planned experiences?)</li> </ul>	<p><i>In your view...</i></p> <p>Was there evidence of activity, modification of behaviour, progression amongst your pupils after the visit? Or: In what ways do you feel that the visit to the museum encouraged activity, modification of behaviour, progression amongst your pupils?</p> <ul style="list-style-type: none"> <li>• Increased involvement in class, school or community events?</li> <li>• Behaviour towards teachers? Peers? (Empathetic behaviour?)</li> </ul>	<p><i>In your view...</i></p> <p>Was there a change in attitudes or values amongst your pupils after the visit? Or: In what ways do you feel that the visit to the museum encouraged change in attitudes or values?</p> <ul style="list-style-type: none"> <li>• Increased cultural understanding and respect and tolerance for others?</li> <li>• Increase in enthusiasm (for subject, skill, museums, school etc?)</li> </ul> <p><b>Self</b></p> <ul style="list-style-type: none"> <li>• Increase in self-confidence and self-esteem for children?</li> <li>• Increase in curiosity (desire to learn more)?</li> <li>• Increase in motivation?</li> </ul> <p>(Lead on to talk about inspiration, enjoyment creativity)</p>	<p><i>In your view...</i></p> <p>Was there evidence of enjoyment, inspiration and creativity sparked by the activity</p> <ul style="list-style-type: none"> <li>- during the visit?</li> <li>- echoing when back in the classroom?</li> <li>- sometime after?</li> </ul> <ul style="list-style-type: none"> <li>• Fulfilment and satisfaction from achievement for children?</li> </ul>

Ask when exploring each learning outcome, or explore separately for all learning outcomes:

### Evidence of Learning Outcomes

How do you know there was? How do you know there wasn't? In what ways did it manifest itself? Inside school? Outside? Materials produced? Discussions? Activities? Shortly after the visit? Longer-term?

What was it about the activity that encouraged this learning outcome/ these learning outcomes?

### **Post-visit activity/ follow-up**

Did you do anything when back in the classroom relating to the visit? What was it? Did materials from the museum help with this activity? Was this part of a specific plan for the visit?

Did you encourage your pupils to reflect upon the visit when back in the classroom? Later on? How? In what ways?

*Ask when exploring each learning outcome, or explore separately for all learning outcomes:*

### **Teaching plan & National Curriculum**

Did the visit to the museum fit in with your teaching plan? In what ways? Why not? Did this matter? In what ways? Why not?

Were there clear links with the National Curriculum and attainment targets? (Explore in addition for example Citizenship? learning about Sustainable Development? Literacy, Numeracy? Creativity? etc)

Did this matter? In what ways? Why not?

	I would now like us to talk about how you feel that <u>you</u> (personally) benefited from the visit to the Museum
<b>Impact on teachers</b>	<p><b>Learning outcomes for teachers</b></p> <p><b>How did you benefit from the visit to the museum?</b></p> <p><i>Explore:</i></p> <p>Attitudes and values</p> <ul style="list-style-type: none"> <li>• Positive attitudes to experience and desire for further experiences</li> <li>• Increase in confidence, expertise and personal satisfaction of teachers</li> <li>• Increase in satisfaction of schools with museum education programmes (eg: as seen through educational attainment of children)</li> </ul> <p>-Do these relate to you? In what ways? In what ways did they manifest themselves? Why do they <i>not</i> relate to you?</p> <p>-What was it about the activity that encouraged you to feel this way?</p>

	Lets now talk a bit about how the impact of visits can be increased, for your pupils and yourself and about how the museum can support teaching and learning in the classroom
<p><b>Increasing the impact of a visit to the museum</b></p> <p><b>Preparation of visit</b> (relate to answers given in 'Remembering the visit' section)</p> <p><b>Pre and post-visit activities</b></p> <p><b>Number of visits</b></p>	<p><b>Explore</b></p> <p><b>How to increase the impact of a visit</b></p> <p><b>In your view...</b></p> <p>-Did you find that <u>you</u> were adequately prepared for the visit?</p> <p>- Did you find that <u>your pupils</u> were adequately prepared for the visit?</p> <p>-How could <u>you and your pupils</u> have been better prepared? Could the museum have helped you in this preparation? If yes, in what ways?</p> <p>- In your view, how important is preparation of visits? For you? For your pupils?</p> <p>-Is there anything you could have done <u>in the school</u> before and/or after the visit in order to increase the impact of the visit to the museum? If so, what would that be? How could that be possible? What support would you need? In what ways could the museum help?</p> <p>-Is there anything the museum staff could do <u>in the museum</u> to increase the impact of a visit to the museum? (Additional staffing during sessions? etc)</p> <p><b>In General</b></p> <p>-In what other ways do you feel that the impact of a visit to the museum can be maximized for <u>your pupils</u> and for <u>yourself</u>?</p> <p><b>Number of visits</b></p> <p><b>The visit you made...</b></p> <p>-Was it a stand-alone visit?</p> <p><i>Relating to what we have just talked about..(See above)</i></p> <p>-Do you think the impact would increase if you came back to the museum soon after your first visit with the <u>same pupils</u>? Does it matter? How? Would it be possible for you to visit the museum again with the same pupils? How? Why not?</p> <p>-What kind(s) of impact do you think <u>one</u> visit can have? What is possible? Realistic? (Relate to answers given to the above questions)</p>



<p><b>Contact &amp; support</b></p>	<p><b>Contact with the Museum</b></p> <ul style="list-style-type: none"> <li>- What kind(s) of contact have you had with the museum so far? (Phone, e-mail, website, Partnership? etc E.g. close or distant)</li> <li>-Would you like more contact with the museum? With other museums? In what ways? (In what ways would you like to have contact with the museum?)</li> <li>- What is an appropriate amount of contact? (Would you be interested in working in Partnership with a museum/ museums?)</li> </ul> <p><b>Support</b></p> <p><b>Explore Examples</b></p> <ul style="list-style-type: none"> <li>- Would a teacher's club (network building, special events and materials etc) help increase the impact of visits to the museum for you or support you in you teaching in the classroom? (E.g. would it be better if...? Would you like it if there was a..?)</li> <li>- Would additional or improved materials (subject specific, links to National curriculum, ideas for activities etc) help increase the impact of the visit to the museum or support you in your teaching in the classroom? (E.g. would it be better if...? Would you like it if there was a..?)</li> <li>- Would an improved website (subject links, links to National curriculum, ideas for activities etc) help increase the impact of the visit to the museum or support your teaching in the classroom? (E.g. would it be better if...? Would you like it if there was a..?)</li> <li>- In what other ways could the museum support you do you feel? (Outreach?)</li> </ul> <p>(What, in your view, are the challenges/difficulties with Museum Visits? Barriers? How can they be removed?)</p>
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<p><b>Summary</b></p>	<ul style="list-style-type: none"> <li>- To sum up- do you think that the visit to the museum benefited your pupils in terms of the Generic Learning Outcomes? (How much compared to a normal classroom lesson?)</li> <li>- If you could choose one or two of the most important learning outcomes that you feel you pupils came away with or were encouraged by the museum visit, what would those be?</li> <li>- Anything else you would like to say about how the museum can better support teachers and pupils to come away from a visit to the museum with a variety of learning outcomes and support the development of these when back in the school?</li> </ul>
<p><b>Thank you</b></p>	<p>Thank participants for their time and their interest. Stress confidentiality again and what the information will be used for. Ask if everyone has been paid. Hand out details of how and where participants can contact those conducting the research.</p>

*Emily Johnsson*  
 Education Research Officer  
 London Hub Museums

Access & Learning  
 Museum of London  
 London Wall  
 London EC2Y 5HN

tel: 0207 814 5781  
[ejohnsson@museumoflondon.org.uk](mailto:ejohnsson@museumoflondon.org.uk)

## **Quotes- Generic Learning Outcomes: focus groups with teachers**

The quotes below have been arranged under headlines used in the discussion with participants from schools in Inner and Greater London. The quotes represent a sample of what was said during the 6 ½ hours of recorded discussion.

### **General: Views about learning**

#### **How you define learning? What can learning be?**

- Experience.
- Memorable.
- Finding out one new thing you didn't know before.
- Learning can take in different places, obviously the school environment, And then coming to a museum, where you've got different resources and things here.
- ..Providing kids with so-called meaningful experiences.

#### **How do you think learning is different in the museum to the classroom?**

*More alive. It's different from what we do everyday.*

*..Extending the school world into the wider world*

*The expectation wasn't really to have a particularly historical experience, that wasn't the prime focus. It was to get something (!) It was to engage children who weren't really engaged by the things on census documents and maps, children who learn best by handling things, touching and taking them apart, although that wasn't allowed. Or frowned on anyway. But also children who have difficulty with technical language. There's a lot of technical language in history, which a child who has only been in this educational system for a year or so, won't get. And therefore to look at their own language and stretch what they've got to say, or rather what they can say, to what they've got to contribute. It's a thinking skills approach as much as anything else. I really want the children who aren't good learning from books or chalk and talk to try out their own skills as well. See what they can get from smell or texture.*

*More visual isn't it? Much more visual. I think you can see more in one day than in ten days or half days at school, trying to explain about what the Greeks or the Romans did.*

*Coming out, it's so visual, and actually feeling... coming out of school and finding their interests there.*

*... a wonderful thing about experiencing a museum visit... It isn't just about looking, it isn't just about seeing, it's about perceiving in a new, yes, possibly new, different light, with different interactions and to be able to explore. I think it's that exploring that is very important. And it is very important on all kinds of levels. I'm aware of feeling it on different levels. I'm aware of experiencing it on the level of a teacher, on the level of a parent, and on the level of an individual who loves to interact with the environment and with the people around me. And what you were saying also about validating and sharing the multiplicity of experiences that everyone has to bring is very important. We have come from... we are, inevitably, embedded in whatever background, society, that we have, that we are coming from. But what is interesting is it's not only where we are coming from, personally, but in a shared way, but also where we are going to. You can see, in these rooms, there is so much in common. There is so much that as a mother, a parents, a person, you can see, you can imagine it, empathise. It brings a range of thoughts through stimulation, imagination, the senses, and interplay that basically, you know, I think it gives a new dimension to learning. We have a curriculum with a starting point, it is a starting point, with the national curriculum, but inevitably, that's about learning to live and we are learning from the way others have lived and we are learning how we might live in the future. It's that interaction on all*

*levels, using all senses, using all the experiences, using all the possibilities and parameters that people are coming from and going to, that really is so exciting.*

*It's added on.*

*I think our children are more visual. Everything is visual. They sit at computers, they go on the Internet. They don't read it. They have to see it to believe it, kind of thing. And you bring it more....*

*Having the interactive opportunity, because it's not just visual, like looking at a board, looking at a book, but it's having the opportunity to actually see things up close. To actually be able to touch, feel, play and observe and actually be part of that, and they get a lot more from that*

*For me it's that sharing and comparing experiences. The more of a variety of people, children, parents, teachers, everyone that you can bring here and bring together, compounds the experience. Because they are interacting with it, they are bringing their experience to it, as well as getting something from it. The tangibility is very important. And I feel that it's very important to be able to touch as well as to see. To be able to use all the senses and be able to share, with each other, with the group that you've brought, but also to be able to share the knowledge and experience of the people you are with, that are introducing you to the experience, but also to interact with the environment itself. Although there are different rooms in the museum, and they might appear very different, as people might, there are a lot in common and there is a lot that people have in common. Gardner and his multiple intelligences theory comes very much to mind.*

*Alive.*

*... alive for them. Once they've seen it with their own eyes they will believe you. With year three I find they are still at that stage where you could tell them anything and they'll believe you. They are not quite sure, they are not quite that streetwise yet. So you could be telling them anything. But if they actually see it.*

*It enforces it.*

*The connection to real life. Where we were talking about materials and properties, and whatnot. And for them to see that a bus is made out of materials, like they learned at school, the connection to real life really helps my kids, because then they see the point in what they were actually learning in school. Because it effected them.*

*We have a lot of children who speak English as an additional language, a lot of SEN children, and it was particular help for them because they walked through London. They walked through Victorian times. They heard about it, they saw it. They saw the pictures. Because that makes it so much more alive for them and easier for them to visualise. The visual and audio is so important to children who have English as an additional language.*

*Also, I think, for the children we have with special needs and English as an additional language, the way the actors did the thing about London was very inclusive, and they were all able to take part equally. And I thought that was brilliant.*

*I think learning is really powerful if it arouses emotions, like you were saying. And if the impact it has is so powerful that it stays with you. And what we want is that learning is something that stays with you, and it's not just in the classroom but outside the classroom. And children learn from so many different people in so many different settings, and it is to use the different stimulus's that are provided outside and in schools we don't have access to resources that are here. You know if we had access to resources like this we could make learning real. It does become real. And it's good to be experiential and fun. And the fact that having the freedom to walk a bit more, have a bit more space, to spread out into the environment is so conducive to learning. It's very special. Learning can be interesting, fun and stimulating.*

**Can you say anything about the behaviour of the kids in the museum, compared to being in the classroom**

*They were freer, when you do the bit after the tour they were just roaming around the museum, because they are year three, and they are not going to go out of the boundary, and if you say - don't go through that door, don't go that way. And that's very nice.*

**In what ways do you measure your pupils' learning?**

*It's all about child-centred learning. Learning is not necessarily about work. Work has kind of perceptions surrounding it and there is a tendency, in order to validate what one is doing, to feel the need to be able to measure, in terms of constructs that are laid down.*

*Speaking and listening is becoming progressively more important. Certainly in the secondary sector, I've taught in the secondary sector before, and I've taught in primary, and we did assess speaking and listening as part of the English curriculum. And that's becoming... that is becoming a greater part of primary. We are bringing that... there are recommendations about to be presented in relation to speaking and listening.*

*I think it's a qualitative measurement rather than quantitative. How the child has made the link with prior knowledge and built on it, has taken it forward and informed someone else, has talked about it, has moved it forward.*

*I think making links is important. That's the phrase I'd pick up on. Making links, I think, is very important. And the whole speaking and listening is important and an area that's difficult to assess. And you have to think as well, about the objectives and criteria on which you are going to assess them. I mean, if you look at foundation subjects like history, for example, it's quite difficult to assess history, learning in history.*

*I think through assessment really.*

*Observations and conversations.*

*I think that's quite a dangerous thing, to actually insist on some form of formal assessment. These are skills we want them to access without that.*

*And I think through discussion you learn a lot. I don't think the kids have to take a test to show you what they know. If you talk with them about what they've seen and what they thought was the most interesting part of the day you can learn an enormous amount.*

*>All kids are obviously sitting tests or working towards attainment targets. That's a kind of very stereotypical, school-based, what Tony Blair would want, type of measure.*

*> But going beyond that?*

*>We are not supposed to think about that anymore, as teachers. I mean, you are talking about something that existed twenty five years ago, when the child was actually the starting point to the learning process and basically they are not anymore...*

*> When you talk about measuring learning, in each class there is a whole range of learning, from a child who just has a basic concept to a child who is way above their learning ability, so to measure learning is just a base thing that they can absorb and work with, and actually we give the goals to work towards, that they work towards the personal goals for themselves.*

**How did you find evidence of learning outcomes form the museum visit when back in the classroom?**

*The fact that they took the knowledge and made it their own and were able to talk about it, that was evidence of learning, because if they hadn't learnt anything they would never have been able to talk about it.*

*And talking to the children as well, you can actually have a proper conversation with them about what you've seen.*

*Also if you remember anything they talk about, just on the bus, on the way home, what they talk about.*

*We went to the British Museum yesterday, and even though I didn't ask them, someone came in with things all written out about their visit to the British Museum.*

*I think it's good if they can all say one thing that they remember and one thing which they like. We talk to them and try and say - what did you see, what did you learn? Sitting down and speaking to them. Get the feedback and if there is one thing that they've found out about the Romans or whatever.*

*What I think... I don't like the idea of measuring learning. I mean, I know we have to, and I know that's what we do all the time, in a very formal setting. So what we found from taking our children to the museum, and I know it wasn't this one, the evidence we saw that the children had learned a lot in the exhibition is that they could talk about it, they could discuss it, they could draw it, they could write about it, they could explain to someone who hadn't been, about it. And I don't know if you can measure that by amounts*

*And also because they wanted to re-enact it. They wanted to be the actors and do it again. They replayed it.*

*Just referring back. Memories.*

*when back....doing our papier mache, on the decorating bit.*

*In pictures, in imaging. At one time I brought a year one class, also, and they were mainly dealing in images. So we are talking in images really. But you know, the great thing about that, and it wasn't even my class at the time, because at the time I was teaching a whole range of different year groups, but I was teaching history with year one. And they are still talking about - do you remember when we went to.. and we did that....? And since then I went to this other place.....And they talk to me about it, like we've got something we share, we have an experience that we share. And that was three years ago and they are now three years older, and you think - maybe they've grown out of that. But we shared a moment that stuck with them and stuck with me and we still share it, and they still come and tell me about it and we still think about what other possibilities might there be.*

*I think it's good if they can all say one thing that they remember and one thing which they like. We talk to them and try and say - what did you see, what did you learn? Sitting down and speaking to them. Get the feedback and if there is one thing that they've found out about the Romans or whatever.*

## **Generic Learning Outcomes: Knowledge and understanding**

### **Was there an increase in knowledge and understanding after the visit?**

- **Increased learning within a subject area?**

Yes. *Why they developed the transport system as they had. They knew much better....*

*Definitely increased knowledge and an awareness that makes a sense of themselves.*

- **Increased understanding of connections between subjects?**

Yes. *We did science and materials. But they also learned a bit of history in there as well, seeing the different modes of transport.*

*It's intended to be the focus of several plans and at the time we came it was time for the change over to the Christmas displays, so the Victorian room, that was something all the children could relate to, but of course there were serious differences, like no television, which forced them to think about their own situation and how it had changed a lot.*

- **Increased learning across subjects?**

*Oh definitely cross-curricular.*

*I think across subjects, definitely. I couldn't put my hand on my heart and say they knew anything more about Romans before or after the visit. That's not the museum's fault, it's just a fact, I think. They may have found the brickwork more interesting.*

*We need to look at objectives, I think, across the curriculum, and see the value across the curriculum, and the potential.*

*I really dislike teaching history in isolation. It should be brought in like almost anything else you can get through the door, and the other way around, as well. I would bring history into maths and English. For example, teaching the metric system, and the Imperial. They love it when you talk about the difference between defeating Napoleon and keeping the metric system out for so long. Several children.... it's a chestnut of mine, but several children remember that one in the following years. And you will get all sorts of things like that which... a good way of assessing the impact that history makes (I) making history easy. Didn't do a lot of heavy written work. I don't like the idea that they have to go back and write the diary of a chimney sweep and things like that. I think it should be made easy and it should be accessible.*

- **Increased cultural understanding? Citizenship? Sustainability?**

*It has enormous cultural value. There was one boy in my class who had been to the puppet thing here, and he was promoting it to the others. And his mother was saying - why don't you try going there? ..The mere fact that they've crossed the threshold. Because it's unlike any other kind of experience.*

*Well, our children, most of our children are from a variety of cultures and they were quite shocked to hear about horse manure and the amount that was throughout London. And all of these things made them realise what it was like to have lived in this country. Most of them never having lived in this country, and their parents don't have an experience of living in this country. So it helped them to see a little bit about what it was like.*

..... *Our children felt quite .... they felt like they were the East End, and they were saying - but how could they treat people like that, and how could they squash people all together? And why are they squashing us all together in Barking? That's not right. Why can't we move out to these other places, why don't we have more money? And we still have the largest adult literacy problem in the country, I think, in Barking. So there are still problems. And they did feel quite.... they took it on personally. It was a good point of discussion.*

*I think they show you how to take care of things and how important it is to take care of things for other people. And that came across to all children at the handling session. But also, I was quite surprised at the remarks I had from some children on the way home, about ownership, about their environment, and they felt more London now, than they thought they were before.*

*I did the Roman soldier last time but the best was what we did yesterday, and a woman performed a play, and she just happened to be black. And that was really magical. She was very, very, good and the kids were just - I never realised there were black people then. My school is ninety per cent Afro Caribbean or Asian. Amazing. And that sort of led into... we did a lot of follow up work.*

*>Yeah, ours is... a very mixed school. Our class is Kosovans, Arabic, everything, real mix up. Which is lovely. And I think the secret is, having an actor. Having the artefacts is brilliant, but having someone they can talk to dressed up in funny clothes, for a start. It's like you say, they can look at it in a picture book, but when they see somebody in those clothes walking around the whole thing takes on a different....  
>They take it very literally. Asking questions about where she lived as if she was real.*

*But London isn't always as it seems, is it? London, in Victorian times was quite different and certainly Hackney was. Who knows what's going to happen in the future? But things change and that's what we've got to prepare them for.*

*But I think an understanding of where you live, and the process of change, and you can understand that, and talk about that, it gives you a sense of ownership. And on the way here we counted how many date plaques they could find in the High Street. And a lot of them remembered that, and somebody told me a year afterwards that they'd found another one.*

*I think it's just being there in the first place, in a way. The government of Rome or of Greece or whatever. I always try to push the education for sustainable development now. They didn't throw that away, or they will use that again.*

### **Generic Learning Outcomes: Skills**

#### **Was there an increase in skills: intellectual, practical, social, amongst your pupils after the visit?**

- **Intellectual, practical, social?**

*They grasp bits and pieces. I don't think you can define it. It's a bit like a mixing bowl and different things go inside and you stir it together and get something at the end of it.*

*I think it's a culture of trying to encourage them to actually visit places anyway, because so few of them go to places, so if you are taking them out on a regular basis, although with our new senior management regime.... they seem to think, some senior managers seem to think trips are trivial, skiving off for the day. But they don't come into central London, a lot of these kids, do they? And even just getting on the bus and coming in and seeing things on the way... because when we talk to them about, in geography, which city we live in, they really haven't got an idea, some of them, have they? Where are we near? Don't know. Hackney, my nan's, that's it. A lot of them, just coming in and encouraging a culture of visiting and finding out.*

*I think you open the door. For one child it might be.... I mean, we might be coming for Ancient Egypt, but somebody in my class might have seen the ostrich egg. I might bring them for one thing and they come away with something different. It's about opening their minds isn't it? They are not going to get it from television, if they are going into central London they are going to a different universe. The children who live on our estate, if they are travelling to Catford they are going very far. And to come to a museum like this, you are actually saying - wow, look at this world that we've got. And you might only have one child who is going wow at the same time as you, but that's what education is about, isn't it?*

*I don't really, if I'm honest, I don't think you could do that from one visit.*

*>I think hopefully it is something that is going to reinforce a subject a bit more. But it is also a social thing. And they do remember them.*



>Yeah. They do.  
>They really do.

*You know the fact that it's local as well, is important. Because they realise that all this was happening within walking distance, virtually. And it's part of their area, part of their heritage, whatever other experiences and cultures as well, they might bring to it. But that was always the case in the past. So it opens their mind to... just opens their mind. So everything is not just the way they see it now, and that is not always the way it is going to stay and that is not the way it has always been. Just something that makes them think. And the kind of holistic aspect of it, in experiencing different levels in different ways, the curriculum is very important too.*

*It is about their life, their locality, and their experiences, their own personal experiences of people that have lived in the area before, that everybody has something to contribute to the future.*

*They are not doing something we are looking for in tests. It's kind of how we learn by just going that bit higher...  
Well, that's higher order skills, I think.*

*...I think what you were saying about thinking skills, I think that is a key and to get children to make links to clues, to find out for themselves, what life was like... I know the interiors here are, I guess, more privileged interiors, but now that the (I) has been opened, you've got them really thinking about what the reality was, for people. And I think if we can, as teachers, if we can get their curiosity, get their ability, to ask questions, to make links, and to kind of come up with something for themselves, something that we can't do in schools, but it's by having the reality, having the artefacts, having the exhibits and bringing them to life, that you are going to get people saying -*

*Problem solving. They were given the problem of what to do with the horse manure and stuff. It put them in a position of being responsible for the transport.*

*It's a thinking skills approach as much as anything else. I really want the children who aren't good learning from books or chalk and talk to try out their own skills as well. See what they can get from smell or texture.*

*...research is an important skill that I feel quite passionate about, coming from a background of being a librarian as well. Being able to develop those skills is very important. And it's another dimension. Here we are looking at the past, but also thinking about the future. And the skills are an important part of what the children are learning because they are going to move forward into whatever opportunities present themselves. So that, as well, is part of the learning experience.*

*They could ask questions and handle them, and questioning skills, high order skills really, that they gained, and talking about history in a way they wouldn't have talked about before. It was like - how can we learn about history? And asking questions and investigating why there was a white residue around this wooden thing, was it a soap build up? And hopefully they'll be able to stay with them and they'll apply them in other areas.*

*I think they did well at getting the children to understand how long ago it was. She did get them asking a lot of questions, which, with our children is quite an achievement.*

- **Increased ability to work with others?**

*I think it's the community thing isn't it? They've gone out and there's more bonding between a class. It comes with a number of visits, I think, not just one.*

*I wouldn't say it was all based on this one trip, but it was a little bit more than I had seen previously. Because you had higher achievers helping lower achievers and it seemed that they were a little bit more patient with them, and they were having fun doing it as well. So just being able to work together, not only with children of their own ability*

*And I think one of the things that really helped was what you said earlier about the kids, everyone could participate. Anyone they chose, it didn't matter if they didn't speak English that well, or weren't reading at the same level. It was just valuable.*

- **Literacy and numeracy skills?**

*Speaking and listening a lot really. Having to listen to questions, talking to their partner on the train.*

*In the museum, I would love it if they made special interpreted signs for children, maybe a child with like a bubble, that they knew they could read... where you read the little one that's got something childlike that they'd latch on to, just simple text that would not only help them with their literacy but help explain what's going on. Instead of you always having to be there to explain what it was they were looking at.*

*Literacy skills, definitely, because of the aural... there was a lot of language going on, with lots of interaction, and they were able to discuss and ask questions and talk.... Numeracy skills, all I can remember is they had twenty four people on one thing, and they said it would double and be forty eight, and they did remember that.*

*With the timeline, because we were looking at how long it took from one thing to the other... we were doing that.*

*.. it also impacts very much upon other areas as well, certainly literacy and numeracy. It's ways of describing things, ways of feeling things, sensing things. It's the bringing it to life, which is what we've talked about time and time again, I know, is important, because it does awaken those senses. Those words that describe the senses, those adjectives those objectives, that are going to occur, certainly in literacy, in numeracy, yes, we are going to be stimulated to think about how many sacks of coal did that child bring? How much did they weigh? What was the conversion between Imperial and metric units? It's stimulating. In a way it's a starting point.*

*The language they used was really interesting, because we've got a lot of children whose language is really limited, very narrow. They don't use language the way that we would, as adults, but they were exploring the things that they could say to describe it. Really pushing their language quite a lot. And, of course, because they'd drawn it they were able to come back with it. And again it was the source of lots of writing. Because in the world gallery there were lots of textiles and symbols from other world cultures, there was lots of talk. And because some of the children are from West African backgrounds, they were saying - oh, I know what that means. And they, then, became the experienced people. The people who knew. And that was really nice too. They got so much out of it. It was really good.*

## **Generic Learning Outcomes: Attitudes or values**

### **Was there a change in attitudes or values amongst your pupils after the visit?**

- **Increase in self-confidence and self-esteem for children?**

*There are a lot of skills, confidence that it aroused, the motivation and the interest. The interest of the children and the kind of questions to ask. They are on the right path to learning for themselves.*

*It's very empowering to learn so much from the past.*

*It also, I don't know, made them feel more confident. Because I started my unit before I came to the museum, they actually had some prior knowledge and they had that sense of power, that I already know this, and I'm going to learn a bit more now.*

*I think it's where SEN children shine, when they come places like this, because they latch on to the visual and the questions that people ask in the workshops, and things like that. You'll find they are the ones that actually shine and it's great to see them.*

*We always come back and say - did you see what so and so did? The child who is always crawling under the tables in the classroom is sitting up and paying attention and asking questions and being interested. And it just shows how we should be conducting education, instead of sitting in rows and pumping them full of facts...*

*I wouldn't worry so much about knowledge, I'd say it's self-confidence in the fact that they are able to handle the things and make a contribution. They'll go on to knowledge. And with the other end, which we haven't really talked about, the (I) children, that they can actually find something out other than by going to books and by being with a teacher in a classroom.*

*There's somewhere else where they can actually learn and find out for themselves.*

*...and the work that the children did, I mean, the year group as a whole is very, very, low, they have low self-esteem. And what the museum did for them was raise their self-esteem. And they were able to talk about it. They felt they had done something really valid. And they were able to talk about it in a very experienced way. The explorations that they undertook... I mean, we came out of there absolutely beaming*

*I think what it did for the children that we brought, it made children who were not experts, experts. There was one particularly boy who was a Romanian refugee, and he didn't speak English, so was quite perceived as quite low status within the group, but was a very talented artist. And when he was here and making the image of the peacock feather from the aesthetic room, and then kind of making that link when we came back, to do that with ceramics, with what they'd seen in the ceramics exhibition. His work was of such high quality, because of his talent that nobody had been aware of, until he was here. So he was then able to make the... we made a ceramic tile, and overlaid it in the image of a peacock feather, and he could then teach someone else how to do it, and in that way we could then link words to it. So for the first time he was able to make that link. We could see it was tangible, it was embedded in a real experience, so it had meaning...*

*And that's what that child will remember. And eighty per cent of what we learn, what I learn now, I'm going to forget. But that part that you remember, what you've experienced, what you've touched, what you've felt, and what has had meaning.*

*And I think, from what's happening now, what's going on in museums, is that museum education is very vibrant and it's aware of that and it's building on that. And that's why I think your research is quite pivotal within that, for things to move forward, and in terms of literacy, history, lots of things that are going on in schools, but to make them have much more dimension and depth.*

*When they were doing recall the person who had done that part would say - no, it wasn't that, because I remember saying.... They would correct each other. Because they were so proud of being that part, they'd remember their part so they could correct the others if they'd got it wrong. They were a source of information. They'd go - if you want to know about something go and ask such and such.*

*I was coming with a year three class, and I think what our aim was, when we came here, was just to broaden out our children's experience from maybe a very prescriptive kind of curriculum and look at more what was in the environment and what could develop the whole child or the best of their abilities. And basically looking at it in terms of their self-esteem and their sense of themselves*

- **Increase in curiosity (desire to learn more)?**

*And these children, probably your children are very similar, they are not as curious or inquisitive as maybe other children. They will be curious and inquisitive about whether they can break something. Or how far they can go with.... And they were... what's next? They wanted to find out more, and they were able to. It was really..... In a way one of the things I thought was every time you do a unit, before you get on with it, you should go somewhere first.*

- **Increase in enthusiasm (for subject, skill, museums, school etc?)**

*Well if they want to come back... if they ask their parents... I think that was another thing. Not to this museum, but I took the children a couple of years ago, to the British Museum. Again, a group of third years. And our coach broke down. We had two coaches and one broke down and we managed to get one and a half classes onto the first coach and there was about twelve left. I stayed with them and put the TA and the other teacher onto the coach. And the children said to me - I hope it doesn't come, and we can go back. They had never been to a museum before, and they'd had such a good day that they wanted to stay. And I hoped that with that experience then, they would want to visit museums on their own, or they would badger their parents to take them to a museum. So that was an added on part. Nothing to do with history. Just to do with finding information and being able to see some of the treasures of London in the museum.*

*I took different groups from every year group around and there wasn't a huge number of finds, but they were incredibly stimulated, and even more so, I think, than the museum, they were fascinated that you could put your hands in the earth and pull something out. And a bit of willow pattern plate, as much as Roman pottery, was stimulating them and getting them excited and getting their verbal juices flowing, and we didn't leave the school premises, and one child said it was the best school trip they'd been on. That's the thing, to be able to get mucky with it would be good.*

*>I think it was magic. The kids were so excited. And we get back on that train and... I've been on nearly a hundred trips in my career..And when you've got them on that train it's magic. And then the kids are really excited, be it what they saw, what they bought in the shops, it's lovely. Lovely.*

*..my class, always at the end of the year, when you say - what do you remember about being here? They often remember the visit. They do remember and talk about it. What they've done and what they saw.... They always come up with a hundred and one interesting things... But not what we taught them.*

- **Increase in motivation?**

*Yes. My class (I) they could relate to the books a bit better, because they'd been to the museum. It wasn't just a book. They really enjoyed it.*

*Back at school they were more interested in different forms of transport following the trip.*

*>Sometimes the children pick up on something that you wouldn't have thought of. And you find when following up when you get back, things that you took for granted, that they were surprised about or really interested in, and we can pick that up when we get back.*

- **Increased cultural understanding and respect and tolerance for others?**

*That exhibition they had some time ago about the people of London, similar to the exhibition they've got here now. But where people had come from. That was really, really, good. It was a shame that they didn't leave that permanently. It was good to be able to bring children here to see where people had come from. And I think just telling them that the Romans and the Vikings all lived here, and the Anglo Saxons actually weren't, and I get great pleasure in telling white children, that the Anglo Saxons came from somewhere else. And I can see them going home and saying to their parents - if we are Anglo Saxons we are actually foreign. Breaking down the stereotypes and some of the racist comments you get.*

### **Generic Learning Outcomes: Enjoyment, inspiration, creativity**

#### **Was there evidence of enjoyment, inspiration and creativity sparked by the activity?**

*One of the over-riding things for me, is that the children enjoyed it and will come again. If I didn't get anything else but they actually thought - the Horniman is a nice place to go and I want to come here again - that they actually don't feel the museum's an institution, that museums aren't boring, they enjoyed themselves and learned something. But they will come again. And they will be stimulated enough that they will come again. And they won't be stuck in front of a PlayStation for the rest of their lives. And I think visiting with the school and having such a good museum actually encourages children to come back.*

*Mine enjoyed going into the theatre. The taking part is the most important thing to them. Because we were doing about the Victorians. And we were doing about movement and how people got to work, and they had where the river was, and moving people, and so those children could remember their part and they re-enacted it when they got back to school. Well, they could remember what they said and what their role was. So they could repeat it back. When we got back and we were asking them questions about what they'd learnt, they all remembered their part. So it wasn't me trying to remember everything. They'd all remembered a certain part and the kind of jigsaw went together.*

*Sometimes the impact is later. A couple of years go by...I've had a boy come back to me and say - I remember... I was doing history in secondary school, and I remembered you taking me to such and such, and I remembered that, and it brought it all back. So it's underlying. It's dormant until it's accessed again. And it doesn't matter, because it's for later on as well. Surely what we are teaching is not merely facts, but how to access knowledge when you need it.*

*I remember meeting, after the year four visit last year, meeting a little girl, who I had taught a few years previously. She's very, very quiet, and hadn't really spoken to me since she'd left my class, and I met her in the street with her mum, and she must have spoken for about five minutes non-stop, about the trip and what she'd seen and what happened. And it was really lovely. She hasn't spoken to me since...  
But for five minutes it was great.*

*...I know that within the national data now, in terms of the latest document, Excellence and Enjoyment, it's bringing creativity back. And I think this is the only way schools can move forward now, because I think the very narrow minded competencies they've been focusing on in their strategies, and how QCA has compartmentalised a lot of things, it's only through this sort of... dare I say sixties dogma, that it's going to create a learning environment in which children will flourish, given the right kind of resources. How teachers are prepared to make learning appropriate right across the whole curriculum.*

*>This is the essence of our teaching, is creative, and to share that with the children, and not just go by formal national prescriptive documents. But to make it alive in the classroom. We look for other means. What can we do? How can we go outside the classroom? When even the journey here....*

*>You say journey. It is an exploration. It is an exploration for us. It is an exploration for the children and we are preparing the children for life. They are going to explore the future, and we need to prepare them with the skills and the tools and the imagination and the creativity to make the most of it.*

*..A child going behind the curtains and being totally transformed, not just by the mask but material and everything.*

*After our talk we did go to the masks and they did choose things to draw and look at. But there were some fantastic things that they added, that nobody had ever added before. I've done that sort of thing (!) it was fantastic. They were inspired, and they thought anything could go. They were inspired. Anything goes, anything's possible.*

### **Generic Learning Outcomes: Activity, behaviour**

#### **Was there evidence of activity, modification of behaviour, progression amongst your pupils after the visit?**

- **Increased involvement in class, school or community events?**

*Children were very enthusiastic on the train, all the way along, because they had never experienced anything like this and it's a new situation for them, and they get to talk to the teacher, one to one, and they can talk all day, in a non-threatening environment.*

*Well, I was interested by what you said about the change in the group, because there were children who could access and offer different interpretations from their own point of view. And I hadn't actually put that into a form in my mind, but that did happen.*

- **Increase in empathetic behaviour?**

*>I've noticed that they behave differently towards you. And they have quite sophisticated chats with you on the way or on the way back.*

*>They talk to you.*

*>Yes. They do. In the playground they change the way they speak to you, obviously, and in the classroom they do. But they seem to be quite nice don't they?*

*LAUGHTER*

*> think you find with the younger children, I taught year two and remember we went to Kew Gardens for three or four years. And I remember on the way back they'd be falling asleep around you, and you became mum or dad, depending on what they knew of gender specification at the time. It's kind of a closer emotional link between you and the class, and you notice it with younger children.*

*>..I think they see you in a completely different light. They realise, from a practical point of view you are in charge of their safety. You've got to make sure they are fed, watered and toileted, and they look upon you as a surrogate parent, which they don't do in a school. They are working with you rather than against you on a trip.*

*...when we got back to school we got them to make a Roman ink pot using clay and we taught the children at very early stages of English how to do it first, and then they had to teach a very high status mono-lingual child, who didn't know how to do it. And the pairing was really good for both children, because the child who was making it, doing the thing with the clay, because it was such a tactile thing, it was very good. And it was linked to what they were doing in year four, because if it's year four, term one, it must be the Romans. But we tried to do it so it would have more to it than that, so it was doing quite a lot of things at the same time. And I think it was something that could not be measured. What it did for the teachers and for the other children, so they were viewing each other through different eyes.*

### **What was it about the activities that brought about the learning outcomes?**

*It can depend on who is doing the talking, can't it? I've been here quite a long time, and go to various things. And some people have the knack of talking to children. And if they can talk those children are spellbound, and it obviously has an effect, they want to know more. And I think getting the right person to do the talking... and the right understanding, again, it goes back to age group, what the age group actually need to further their learning. And then once you've got that you'll spark it because you can offer so much more than we can give them.*

*There was a ceramics exhibition here and the key, I think, would be education officers who work here as well, and how they liaised with us in school, before we brought the group here, and how they were able to make links between the [indistinct] room and the current exhibition... and I can't quite remember the artists' names, there were two ceramicists and one was a very vibrant woman who was doing pineapples and things that were important to her, how her identity was reflected in the objects that she collected, and a very kind of minimalist exhibition. And the children were absolutely fascinated by both the contrast between these two ceramicists, but also,*

*In the room that they saw they focused on the peacock feather and the links there, and the ties, the ties, that they could relate to their own experiences, which was a very kind of diverse thing for children. And it was just the very skilful way that the museum's teacher was able to build on what we had provided to them, and pick that up from the children, and the skilful use of questioning with those children, which really heightened their awareness of what the museum had to offer. And as you said, when the children were sketching, they were children who were fluent in their first language, but learning English, through their art, they were equal. So that's the work that we produced back at school. We did tiles and we put on a big display and got parents involved with it. And it was actually very, very, high quality. And I think the coming to the museum was the key to that quality. I think without the museum visit what we produced wouldn't have had that kind of excellence.*

*..their voices, they really are actors, and they really used all of their abilities to engage the children, and having the pictures on the wall at the same time, and very simply changing, going behind the screen, they never left the room, but they engaged them out on the floor of the museum as well. And explained things to them, got them to come back and play the game, and got them to teach the others, so it was all very interactive.*

*I think it was good because it was simple. There was nothing else to take away from what they were doing. There wasn't anything to distract them.*

*The first visit we made we spoke to someone who sort of tailored our visit with our curriculum. The kids do timelines of various sorts, and so she took the kids to three of the museums, from that perspective and talked to them about each stage of transportation. But the next time we went we did the Victorian actor session and that was really beneficial as well. And my kids remember it too, and even in the fourth quarter of school, we study London, different sites in London, they were still talking about what they'd done.*

*They loved the fact that they got to press the little buttons. That was hands on, which was very good for them, because many times we don't have all of the resources in school to provide that hands on type interaction. And they did have a couple of actor led sessions as well, and they explained things that the kids never knew about. And so they were really quite fascinated about it. It was good.*

*They went out into the museum in two groups, and they had to solve a problem about transportation, and they were led to the answer, and I thought that was really good. Because they had already been into the museum and seen everything, and walked around, but then they went back and looked at one thing in more detail, which made it more meaningful to them.*

*A lot of our children don't speak English, or have English as a second language, so we told her that before and so she pitched it exactly right, which was very good. Did this little acting scene.*

*It is about their life, their locality, and their experiences, their own personal experiences of people that have lived in the area before, that everybody has something to contribute to the future.*

*He [the actor] was very good and very good with the children, made them all laugh.*

*I think the involvement with the children*

*..A woman performed a play, and she just happened to be black. And that was really magical. She was very, very, good and the kids were just -- 'I never realised there were black people then'. My school is ninety per cent Afro Caribbean or Asian. Amazing.*

*They were more interested in things they could try.*

*When you come here you know the staff are child friendly. And they are not always in museums, but here, they are, which is really good.*

*I think the massive thing is the shared experience. It's the opportunity, at the end of the first term, and doing something on handling, and we all discuss what we saw. We saw something that we shared and built up a picture of what the person who might have used one of those... who might have worn a top hat. Those things. That was a nice part of it.*

*It needs to be put into story form for that age. It's the people.*

*..it's that imagination that starts them off and sews the seeds for another topic.*

*The person that ran the slot, I thought, was really brilliant. She made the puppets come alive, the kids were totally hooked on her. She was very funny, very amusing, and it was a really, really good half an hour. She told them lots about the multi-cultural aspects of the puppets. She was pretty clued up on things like relative gender and stuff like that. I was very impressed with that*

*...The fact it was interactive, she actually called different children up to actually interact with this puppet coming alive. The fact that they saw hand puppets through to string puppets, she got a variety, and again, puppets from around the world, so it wasn't just taken from one particular area, but actually involved different captivities, specific areas, which she managed to pack into that half an hour. And I was impressed by the fact that afterwards we were then allowed to have small groups of children able actually to look at the puppets and play with them and see how they were made, how they were used. So it gave them more understanding, more than just seeing it in a book or whatever, it was visual, it was actually there in front of them, to actually feel how it was used.*

*If I just teach the children in class it's very difficult to bring history to life. And these rooms really help the children to be able to see first-hand how it looked, how it felt, how it must have been to sit in these rooms. And also, talking about Victorian children, things like looking at the pipes, and discovering that actually children were employed to smoke these pipes and so on. All these things were really fascinating. Most of the time I ask the questions but this was a time when they were able to go - what's this? And handle things without fear of being told off. Some aspects we had fear of damaging, but most aspects were for handling by children. For them that was an experience that could make sense of it. It's just sounds like a story for them if they don't understand how they lived.*

### **'Stand-alone' visits vs. multiple visits**

*Year five. Every year, year five*

*One visit per year per group.*

*Well, we've come for three years, different modules, different teachers, different class.*

*Well, they come back at a different time, for different reasons. And also the parents who accompanied the children will take their children back at weekends, and that is very important. So what we do with one stage of a child's education is revisit, it's like looking at a book. You come back and back and back and see different things every time you come.*

*That's down to economy as well. Remember we are asking people to pay for the trips and we can't afford to ask parents more than once a term, to pay for trips. Not that we don't want to go on trips, but we can't afford it.*

*I think it would be good to have a continuation*



**Do you think it is realistic to expect impact/-learning outcomes from one single visit?**

*I think you can. I think you can.*

*Without a doubt.*

*Yes.*

*And also, having introduced them to a museum, it's that interest to go to other museums, which is what we want to do. We want to get them to visit other museums in their holiday, so it's opening the doors and once you go through one door...*

*It's starting something, really. A springboard for... in history, looking at evidence. So they know where to go and look. And they might not necessarily go to the Transport Museum again, but other museums to confirm knowledge that they have. It's a starting point. A place for them to... start...*

*It just gives the children an eye opening experience.*

**Would you have liked to been able to come again with the same pupils and do something else?**

*It's difficult to do that when there are so many resources in London. The same group I brought here last year are going to the British Museum next week. It's a different module of work, and also a lot of them haven't been in the British Museum and it would be a big shame if this was the only London museum they experienced in their primary school life.*

*> Yes. Definitely.*

*> Taking another angle.*

*> And remember being there.*

*I think the children I brought last year would want to come back. I think they'd want to come back and do something else.*

*But also I think it would be good to have a continuation...a few years ago our school was involved with the London Transport Museum and they did all different aspect of.... and that was absolutely fantastic, because each week they are going out and kind of building on what they've learned before. And that really did work well. But it comes down to costs.*

*We were lucky enough to get one of those boxes from the Museum of London, that's got artefacts in it, a couple of years back. So after we'd done the visit we got this box and they said - oh, we saw that at the museum. There were things that were 2,000 years old or whatever, and some replicas as well. And that's a really good way of extending it.*

*It would have been much better to have gone to the museum and then done a video conference after. Because that's basically like two trips. Now, I don't know if you have them, but they are pretty powerful things, and in the museum you've got the person talking to the children and you could be having a conversation with anybody in the world really.*

**Top learning outcomes**

*Love of learning.*

*They saw that learning could be enjoyable.*

*Confidence in communicating with one another.*

*Increased knowledge and an awareness that makes a sense of themselves.*

*Self-confidence in the fact that they are able to handle the things and make a contribution.*

*That they can actually find something out other than by going to books and by being with a teacher in a classroom. There's somewhere else where they can actually learn and find out for themselves.*

## **Learning outcomes for teachers**

### **How did you benefit from the visit to the museum?**

#### *Attitudes and values*

- *Positive attitudes to experience and desire for further experiences*
- *Increase in confidence, expertise and personal satisfaction of teachers*
- *Increase in satisfaction of schools with museum education programmes (eg: as seen through educational attainment of children)*

#### **Do these relate to you? In what ways? In what ways did they manifest themselves? Why do they not relate to you?**

*I have learnt a lot as a teacher, by coming to museums. So for me it's made an expansion and then that has impact on my planning and the quality of work that I'm doing in school.*

*Well, it's the same thing as our kids, any experience that I share with children outside the classroom...I think as a teacher I wanted to share, and I came back having loved the day. I think this is why I became a teacher. Why isn't the whole of school like that?*

*It's like [the] children, if you can do and touch things it will make it more interesting. And you are more likely to go back to the classroom really enthusiastic*

*Enthusiasm.. my actual feeling. I will make the effort to come back here.*

*I think you find out more things. You find out things with the children.*

*For me I had literally just arrived in the country a few months prior to taking the kids there. So I was not nervous necessarily about connecting anything with the history to do with London, because I hadn't been taught anything about British history, really, that my kids would be expected to learn. So to be able to take my kids somewhere where I was able to show them something for them, but at the same time kind of understand it myself, was good. Because I came out of it learning something as well, and they came out of it learning something. But it made it easier for me to bring in something to the curriculum that they needed, than would otherwise have been more difficult for me.*

*I made a point of telling people when I got back that it was really good. I wasn't expecting it to be all that good. I thought it would be fine, I've been there before, and I thought seeing all the buses and trams and things would be great. But I wasn't expecting the actor-led session to be that good, because it didn't sound that exciting, to be honest. But I just thought it was great the way they did it. And I learned a lot.*

*That's really nice to know that these people [the actors/freelancers] are really enthusiastic about all the museums, and getting involved.*

*It's actually very nice if you can be with the museum officers, because of the amount they know.*

*I just remember being really interested and amused*

*I thought it was really stimulating. I want to make a point of coming back with the class I've got now, maybe in the summer term*

*I learned something when I was there.*

### Links with the National Curriculum

*We went around the collection as well, I brought thirty ten year olds, my class, and we came just before Christmas, to support several units that we'd been looking at over that term.*

*We've cut our curriculum so on a Friday afternoon we now do something just called Enrichment. So it's nothing to do with the National Curriculum, and more to do with the Citizenship thing. And we have key stage working parties on what you could do in Enrichment. And this sort of follow up stuff would be perfect to do, something they could do with their parents.*

*For literacy we were doing tenses, so on Thursday we wrote - we are going to be going to. Boring, but we did it. And when we'd been we changed it to the past tense. And the kids quite liked that. The literacy link. So yesterday we went. Obviously. The other thing we did was we discussed the role of actress.*

*I think the museums have got so much to offer, but a lot of the teachers are not aware of what they've got to offer because they are blinkered by the straight jacket of the curriculum. So when we even went to the alms houses here someone did say - oh but of course it's the Victorians you'll be interested in. And luckily the people who were there thought no, it's not that. The curriculum is not the be all and end all. At the end of the day you have to adhere to that, but it's highly creative, possible subversive, so you can do it for what you feel learning is about.*

*I know that within the national data now, in terms of the latest document, Excellence and Enjoyment, it's bringing creativity back. And I think this is the only way schools can move forward now, because I think the very narrow minded competencies they've been focusing on in their strategies, and how QCA has compartmentalised a lot of things, it's only through this sort of... dare I say sixties dogma, that it's going to create a learning environment in which children will flourish, given the right kind of resources. How teachers are prepared to make learning appropriate right across the whole curriculum.*

*Well, ours was just an extra.*

*QCA, I'm sure I speak for everybody.*

*>Well, you book it because you are doing the Tudors.*

*>And it reinforces it.*

*>It reinforces it. But it's not the only thing, obviously. And you get the learning objectives from it, but you also get lots of different things as well.*

*>It wasn't directly linked with anything, any topic we were doing in the summer term, it was an extra, but I thought it was a very valuable extra. Maybe I could have made a few more links...*

*>There's usually something isn't there?*

*If you are studying a specific topic and the kids can come here to do research and improve their knowledge then that's one very learning based outcome. Other teachers bring their class here for a break from routine and a shot of inspiration and experiential time and a one-off, so I think they all have their place.*

*> We had an ongoing thing and we tied it in with our literacy at the time. We were doing tenses at the time.*

*>Time Flies.*

*>Time Flies, yeah. And I think we were doing portrait painting anyway. So we were doing quite nice Tudor portraits.*

*>all our work following the trip linked back to what we'd seen on the trip.*

*>Yes. All the following work, you could relate back.*

*> So they've had work before and build on it after the visit.*

*>I think we did an assembly on it, didn't we? On Henry Eighth. We had all the puppets. But our work was very definitely based on our visit afterwards.*

*> So your work was integrated within your teaching plan really...?*

*>Yes, we have a curriculum map and we plot what the children are doing each week, objective-wise. And that included the trip.*

**Does it matter if it is part of your teaching plan or not?**

*No. Not at all. I thought it was a really excellent thing and if I'd known it was that good I would have put it into my plan.*

*There's so much, isn't there? Too much, in all of those units. So you can't help but meet some of them as soon as you walk through the door and look at them.*

*We took the decision not to bother. We always have a subject that's a one-off, otherwise it's completely integrated, and history is a one-off. Completely independent, not linked with anything.*

**Learning communities**

*I think linking is very important. That, in a way, is where I come from. Somebody who is interested in the way people learn. As someone who is a child librarian as well as a teacher, I can see possibilities in working together, sharing expertise, resources, knowledge. Because otherwise, potentially, it's wasted, some of it. It's dissipated, and the message isn't getting across. I think it is valuable, sharing that, which, is what we are trying to do as teachers and educators anyway. All these people are involved in that same process, the pupils, the teachers, the librarians, the archivists, they are all involved in the same thing. So some kind of centralisation without losing the soul would be really important.*

*It's about partnerships, it's about outreach really, also about how the resources reach out to the perspective users. And that sounds cold and cynical, but it's not. Different people are going to respond to different stimulus in different ways. And you would perhaps have to target, and be aware of probably who you were appealing to, and also that people don't fit neatly into groups. And really broadcast what you have and make it not feel too precious, in a way. It's something we can all share and something we can all share and contribute to.*

*That ongoing contact is potentially quite important. And also if the teacher is enthused then very often so are the students.*

*I believe we can learn more by working together. That's what drives me, personally, to... the possibilities of what you can do by working together and not just looking at our own individual roles but what we can do by combining our expertise and imagination and creativity.*

*Last week we had our fourth annual Celebration Day for parents, and that's bringing teachers, family learning tutors, learning assistants, EAL teachers, everybody that works in school or with parents, we brought them to a learning centre and six workshops. And three of the workshops were staff coming from, one of them is based here, and from Bruce Castle, and the National Portrait Gallery. And we did some work with the National Portrait Gallery here as well Bruce Castle, so it was introducing all the staff from the galleries to a very big group of people, parents and teachers and to the borough. And it was like - oh, they may now go to the National Portrait Gallery, they may come here, and they might see a familiar face. And we had a display of a project we did with the National Portrait Gallery on portraits. And some of the other teachers said - oh, we want to do that. And put their names on the mailing list for the museum. It's got to be both, people from the museums into schools as well as the other way around.*

- **Parents**

*Well, after, if the parents could come to the school, because we are having parent workshops in literacy and numeracy, and I think parents would be very interested, especially in history. I think people would become more inhibited if you said it was about maths. But if you said we were going to have a workshop on history I think the parents would be quite keen.*

*And I think when you are getting the parents enthused about coming, when you are saying you are having a trip, you could use that information to make really good displays from the website, so parents who have never been, who don't know where it is and say - oh, I don't know if I can let my child go - you could say this is where it is and it's in Dalston, this is the bus you get there.... quite specific....*

*And some of the parents weren't born and raised here, and don't know about it, so it's something they can learn with their children.*

*Yes, and quite often we break up into groups, and parents will go around with a group, and quite often parents are very, very, self-conscious and inhibited and they tag along with either a teacher or teacher assistant, and what happens is that group misses out on the activities because they don't know what to read, they haven't really had that experience. So if there was a person who knows about the exhibits they could engage the children.*

*..The museums need education officers who are aware of these issues. I don't know ...there's some way that the museums can still go, because London's such a diverse community, there are still some things that museums can do to make it more accessible for these children, and parents who feel really... I know my mother would have felt really horrified at having to take me here for the first time. I discovered it myself and I had to bring my mother in here. But for most other parents it's quite a scary thing, they can't explain it, they don't know the histories.*

*>If the parents hear it's free then they might think - OK, I'll take them away from the video and television.*

*>But they've got to know it's there.*

*.. if the children go home and say - oh, this and that and this at the museum. And the parents come in and ask where it is? And you give them the name of the museum, and bus routes, blah blah, and give so many positive points across that when it comes to summer holidays or weekends they might drag their children away from the television, or back garden or whatever and actually come to see it themselves.*

*>I have to say a couple of parents said - oh, you touched them. When we went around we just had to look at them. And I have to say maybe if there were sessions at the weekend you could sign up for, and the children could touch them.*

*>it wouldn't even need to have a story, as long as they could get to feel something, instead of it being behind glass cabinets.*

*>That's what they look at all the time. Everything's behind glass. And the interaction is so good, because with television you don't have to interact. And I find it quite hard sometimes. It's a good experience for them to have to work with*

*...we bring parents in. And parents speak of our work as (!) so the parents come on excursions to the museums, so we've been to the National Portrait Gallery, to Tate Modern, the Geffrye Museum, just for the parents' group and then when we bring the children we get the parents who have been here to accompany us. And then they have knowledge of what to do.*

*>I get parents who say - if you are organising any more trips I'll go..... Because we've had a fun day.*

*>Yes. That's right. And they feel they are getting to know us and getting to know the children.*

*>And they've done some learning as well. Perhaps that's something they've missed out on. Perhaps for them school wasn't a worthwhile experience.*

*>Some parents, you were saying, feel intimidated by museums, and some teachers do as well. And I think to have certain things that they can comment upon. So they don't have to feel a loss of confidence themselves, that they don't have the knowledge, when they are looking around the rooms with the groups they are with. I'd be like that in some subjects but OK in others, and other people feel like that in history.*

## **Communication and PR**

- **Booking**

*It's so difficult to actually book, I think. By the time you get around to thinking, you phone up and then it's a matter of where, how....? And if you have got something you want for a particular term, and you are not booking for that, but you think I'll book it then. And then when you want it you come back and it's chocker. So you were lucky, I think, to get what you want, really. That's hard.*

*Until this year I've spoken to someone from the education team which has been brilliant. But booking the visit this time I don't know who I got through to. It was a real battle. And he kept saying - no, no, you've got to wait. But I've got it in front of me, I kept saying.*

*It [internet booking system] should be proper. Once that space is full you should be able to see that. As long as it had that facility. It would be very irritating to find that out through Emails and stuff.*

- **Pre-visit**

*I did a reccy to the Roman bit, but I had no idea what the education was like. And that was a long time ago.*

*I usually do a reccy so I can do a worksheet of something.*

*>Just turned up I didn't we?*

*>About half an hour before it's due to close*

*I was fine just being able to walk around by myself, knowing that if I had any questions...*

*I came here on the Saturday before. But whoever I spoke to, maybe on a Saturday there was nobody here from the education department, so I got some slightly dubious information from the person on the desk, which, I think, turned out to be not a hundred per cent correct. I can't be more specific than that. And because the secretary had done all the work of booking it things went a bit astray there.*

*We met the person who did the booking. She came and sat with us and said - when would we like it? And we said three classes on the day, and it would be the beginning of our topic.*

*I just basically walked around in five minutes and had a vague idea of where I was walking, but to be perfectly honest I thought it was a waste of my time. I'd given a day of my school holiday to look around and it wasn't really... and again, we weren't told that if we wanted to look around we had to book a time.*

*Yes, we actually came in our holiday. We came after the June half-term and we were expecting a proper look around, and the person looked a bit shocked as to why we would be there, but I wanted to know where their coats went and lunchboxes, and to get a general idea of where we would be walking the children, because I'd never been there. And especially if you've got parents along you could end up looking a complete twit basically. And I have to say I got quite a blank response, like what's the problem? And I just had to keep saying - I'd like to know where the loos are, and just basic things. And I wasn't actually shown, it was - through the door is where the loos are and....*

*I think, for a group of teachers, we had all the year five teachers come on this trip, and it would have been nice if the four of us together could have been given an explanation of what we were going to do. Because quite often we have a new teacher....*

*I think if we make the effort to actually come along and see the place beforehand, for the sake of five minutes... I don't want a great half an hour chat, just introduce myself and somebody to say - hi, I'm doing the talk, this is what we'll do. Lovely. If I have any more questions I can speak to them about it then.*

*I liked the fact that they allowed me, and a guest, to come into the museum, ahead of time, before my class, to have a chance to look around familiarise myself with the place and speak to someone about what my class was doing, and it helped me because I wasn't coming in here blindly. I thought that was actually very good, as well, besides the teacher pack.*

*A couple of years ago an NQT was coming along on her first ever trip, and we met up on a Sunday and came and the museum were absolutely fantastic. I hadn't phoned to say we were coming, but somebody really did show us around absolutely everywhere. I think they could perhaps see the fear in our eyes. They were really, really helpful.*

*I think especially on your first visit. If somebody could say - this is where you'll be eating. All the practical things. And if you've got children with special needs, will there be toilets for them, or whatever. That would be quite good.*

- Preparation

*There was preparation but not from the museum.*

*I think most times you take children out and you kind of prepare them for what they might be given, but when you don't have anything apart from a vague... yes, we'll give a talk on ancient Egypt, you can't really give them anything, apart from getting on with your topic so they don't look complete idiots. You try to give them a little bit of information but you don't want to take the edge off the visit. Yes, I think we do prepare them, safety wise as much as we can, where are the exits and what to do.*

*>I find it really boring actually, to look forward to a trip and having to learn these boring facts, or feel you have to. Because actually, that's when it becomes boring. I just love it - oh we are going on a trip today. And quite a lot of them have no idea what's happening and then it's off we go. And it's wow! It's the first time they've heard about the Romans, really, and it's a very powerful introduction, it's very physical.  
It's a strategy. That's all it is.*

*>I think for us, we've a totally opposite point of view. I think the pre-prep stuff is crucial actually. In terms of everything. What they are going to see and what to look out for.*

*For literacy we were doing tenses, so on Thursday we wrote - we are going to be going to. Boring, but we did it. And when we'd been we changed it to the past tense. And the kids quite liked that. The literacy link. So yesterday we went.*

**>Do you normally use the internet for preparing things?**

*>No.*

*>Not a lot.*

*>It depends what on.*

*>Yes.*

*>I don't do it regularly, no.*

*> I looked at the website for how to get here. The nearest train station, so that was the best way for me.*

- Materials

*>The kind of think I would find helpful is the kind of thing you would say, you would bring out, and...*

*>But for different age groups.*

*.>.for different age groups. How you would deliver the session, to bring out your expertise, but in a very simple sort of accessible way that gives us information about all the rooms, the questions to ask and a bit of factual information. So if we had to take a class on our own we would feel we had done justice to that room.*

*>And if we haven't had a chance to visit before it would help to see what to expect of you*

*>Some other focus is sometimes useful. And it's not always possible to attend a pre-visit. Really, whatever information is useful.*

*The teacher packs were very good..*

*We had a bullet point list of the kind of talk you would be given, and it's actually quite valuable.*

*And very interesting worksheets, we were given.*

*They were excellent, and you get photocopies for those who were less able to colour in, to put in their books afterwards, and others drew it.*

*There was plenty of information for me.*

*There was a lot of information, but very appropriate. And what we used was extremely appropriate.*

*>Can I tell you a museum that I find really, really... The Ragged School Museum, a museum I take children to... they send me information before I go, they send me all about the session, some basic facts, and I find it really useful. And before I turn up I've got the information of what it's going to be like. And then what clothing or anything, they tell me to prepare me about... and what I can buy in the shop, they make me an order, so I can just give them the money and pick up my bag and go instead of having to take three children at a time into the shop to buy stuff. And then we just turn up at the museum at the right time and we just go through exactly what I expect them to do and we just come out and there are still some ideas to take away with me. All of that I find really useful.*

*>It's very important. All these organisational facts are very important. When one is arranging a visit the more information that one can get the better. All of these other things that we've talked about are really important and they come from that. But one really has to make sure the organisation is well planned, you've done all the analysis of possible problems and things like that. You have to do that as a teacher, and then you can move on from there. But that's very important.*

*My kids had question sheets that was part of the pack that I had got, and they kind of turned it into a little scavenger hunt for themselves, where they wanted to go and find answers to the questions we were looking for. And it was just really, really, good because we were able to talk about it beforehand and we had something to do with it afterwards, but it all connected with what we were doing to begin with. So it was wonderful.*

*I'd say we got a lot of information before we went. There was nothing else really that they could have given us.*

*I would use it [website]. I am sometimes worried I don't get enough time to look on websites and I actually like the personal contact and conversation on the phone, because you do ask specific questions and it is direct and sorted out. But for the children, maybe some information, maybe just a picture of the museum to show them what it will be like, would be useful to share.*

*You could use it [website] but it would not be the main factor, the main point on which one arranged a visit, because you want to ask specific questions relating to children with special educational needs, etc. You'd want to ask specific questions. It could give you a good overview.*

- Promotion

*'I think they need to sell themselves better, because it is an excellent programme. And it's not obvious from the materials that are sent, and the papers that come. And having seen it, we actually have come every year and we do all our year fives, and we don't do other year groups, so they have something to look forward to in year five.*

*Couldn't they all get together, couldn't the museums get together and say - this is what's going on all over London?*

*If there was something that schools could actually call, like a museum line, or something, and say - hi, we are going to do a topic on Egyptians, And can you advise me which museum could provide me with this information? And they could say - well, we may not have this at the moment, but we've been in*



*touch with the Horniman and they will provide the .....*

*I don't think a museum should be so intent on saying - this is going to meet this, this is going to meet that. They should say - we've got really fantastic stuff here, and fantastic people who make it come alive.*

*I often wonder whether Key Stage One might be appropriate for Key Stage Two children, because we've got a lot of special needs children, with particular needs and so on. The more specific you make it, maybe it closes off interesting avenues.*

*We need something we can use, and museums not to be afraid to turn around and say - we don't actually have that, but we can, because we will be in touch with our sister museum, and they will bring over, or we will get it sorted for you. Because then the teachers and the children will be inspired to come along to the museums.*

*I know the museum officer has come into school and seen what the children have done, from their visit. And I think something like that, where you can publicise how different schools, from different backgrounds and different needs, have used the museum. And I think that would be quite useful. We often come to the events, when they opened the almshouse last week, and just coming together with different teachers in London, I really enjoy doing that.*

*Continuity is important. You can share that with parents.... one doesn't always have the time or the opportunity to be aware of everything that's happening. So to have something communicated is important.*

*I think the updating thing, I think only once a year you send something out, and if you happen to mislay it.... So emails and things, that's great, on a regular basis.*

*When I was in charge of history at our school, I would get loads of things through from the museums, and you don't have time to go through everything. It has to be bold and obvious, if it's something good.*

#### **How would Emails work? Being on the Email list?**

*No. It really needs to come in the pigeonhole.*

*If there was a way of registering with a website to be sent an E-mail, if there was a new exhibition or something.*

- **Evaluation**

**>On these evaluation sheets, what would you want to focus on there? The session or the practicalities?**

*>The practicalities and the quality of the work, the session. But it has to be short for teachers. Or it will just get shoved away.*

*>Yes, in some ways you want to give something back before leaving.*

*>But it's difficult when you are rounding everybody up.*

*I think they want you to fill them in too quickly. You are too busy trying to get them together to go home and they want you to fill in a form, so it's quick, quick, quick.*

*I filled it in after. I went away and sent it back. I wrote quite a lot.*

*I didn't write very much actually. Between myself and all the other teachers who had gone, they all said it was good. But people don't have time.*

*I hardly ever fill them in at the time. It's quite rare, I think, that you find a museum that has something that is that good.*

- Teachers' club & INSET

*I think that would be really good.*

*Or even like, on a Saturday, where teachers can get together, or just make it an open kind of thing, on a Saturday, an open house. I can't do the evenings, usually.*

*It would probably have to be age specific.*

*It sounds good if we could come between nine and three thirty. I'm being a bit facetious actually. I think it's a great idea in theory.*

*Teachers often say to me - why are we worried about the Tudors? I wonder whether it would be the case that the museum could do a day course on everything you need to know about the QCA. Not how to teach it but the interesting historical facts. Because I do get asked a lot. Because nobody can read a book about it, they haven't got time.*

*That would be fantastic.*

*If there was a teacher-centred course that would be really interesting*

*Every teacher in London should have a day off every term to go to a museum.*

*There are things in the evening aren't there? Which I have to confess I haven't been to. I keep saying I'll come but then I don't. Because if something comes up and it's been a really hectic day... But if it was during the day.*

*The inset day was really helpful*

*You think to yourself, that's where a teacher club might have a two-way aspect. The staff say to us - da da da, and we can say - hang on, I've been here over many years, you've got this and this, is it possible for you to put a few of these things out for the children? But also, what we could do, for our part, because we are actors and actresses in our own classroom, and we have our own way of getting the children involved. And sometimes you think - why don't I try this? And that would be quite good for them, wouldn't it? Because that's a really hard job that they are doing, meeting groups of children all day. And sometimes you think - if only you'd just tried this you would have had the children in the palm of your hand.*

*you need this kind of network first to make people more amenable to ideas, including ourselves.*

### **Increasing the impacts of visits and support**

*With seven or eight year olds, with an exhibit, some of them haven't really developed great literacy skills, to be able to come up to an exhibit and be able to read what it says. So to have somebody there to put it into child-friendly, fun language is better than having exhibits just standing there.*

*... In the museum, I would love it if they made special interpreted signs for children, maybe a child with like a bubble, that they knew they could read.*

*If they went to a place where you read the little one that's got something childlike that they'd latch on to, just simple text that would not only help them with their literacy but help explain what's going on. Instead of you always having to be there to explain what it was they were looking at.*

*The people that are there.*

*>Making child-friendly things in the museum, so they can look at them independently, or having people to help them.*

*>Because they like to explore.*

*You almost need it [the exhibits], as well, now, in different languages. And Braille. We have three blind children, one completely blind, in the school. And how many deaf children? We've got a sound system for them now, in every single class and the library has it's televised ..... so if it's available in the classroom it should be available outside as well.*

*... when that [ the session] finished she suggested we went and looked around an exhibition which I think was on the ground floor. That was kind of almost a semi-wasted opportunity, I thought, because the kids drifted around, although the exhibits were fantastic, the kids just drifted and went through it in five minutes. And there was nothing I could do, not having any kind of knowledge really, of what they were looking at, apart from reading out very rapidly, what each thing was. It was kind of a lost experience. And yes, we were through that far too quickly.*

*we found the actor led sessions good, but when they went out onto the floor, they would have benefited from having more people around, and to talk to them, because when we came, there was the one woman with the machine and that was all. And there really wasn't anyone else. And the children would have benefited from having more, and explaining and talking to them. Because the woman talking to them as if she was in that time period. And they didn't quite grasp what she was going on about, but she didn't come out of character, which was brilliant, because they were gradually getting to understand what it was she was talking about. So in the same way, having that kind of person around, in all different exhibits and getting the children to engage*

*>Our children talked a lot about the pictures on the wall, that were by children.*

*>Yes, they said - can we make some pictures? They didn't in the end, but they were very enthusiastic when they were here.*

*If they did models they could bring in design and technology, or art or history, or geography. Bring in some of those other things. You know, you could do so many things. You know, you have to teach literacy, you have to teach numeracy, you have to teach science. But with all those other subjects....*

*Taking photographs. The children love that.*

*if people are actually explaining what they are actually coming for, surely it's important for museums to think - well, it's important that we encourage schools, especially the local schools, to come here, so if that's the case, and they've only got one cabinet, then, the inner London museums have got more facilities, then they should actually loan them....*

*Redesigning. If you had the opportunity to redesign a London bus, how would you design it and why? And they would have reasons for changes they would make, would I imagine.*

*It would be great if there were more things that they could go on, more buttons to press*

*I find it difficult at the moment teaching year five, to find suitable things, basically, other than on the internet. I'm teaching a unit which is about searching and analysing data and I've taken them to the local library but something other than that and other than the internet would be good. I mean, maybe there could be things that were geared to certain units but there are units that it's difficult to find material for. I think, if you have a website as well, you need to think about who it's aimed at. Whether it's aimed at teachers, aimed at children, or whether you have particular areas that...*

*I like taking my children to the computer room and I would appreciate a website that would have information especially for children with maybe a search engine where they can search out..... You could do a little search on it and find out information. If they could maybe have the Victorian room, and you could click on an artefact and have information about, which they might not have had time to ask about at the museum. It could stimulate them to ask questions.*

*[Staff to be] More flexible, more connective when things do not run smoothly.*

*Maybe something that doesn't matter quite so much if a little bit broke off in their hands. And that is really what they want to do, and it would give it the - wow factor.*

*Maybe they could have larger things, as well. On display. If they know we are coming.*

*I enjoy so many other things here as well. But the history aspect, because we were doing Egypt, and so much of history with the juniors certainly relies on what we learn from evidence and objects,*

*that, you know, it would have been good if we could have seen more, or even if there could have been a loan service. And that was something we really wanted to bring up today.*

*> A loan service would be absolutely invaluable.*

*>I would like a loan box, even if we had to collect it ourselves. That would be invaluable.*

*> It wouldn't be instead of the visit. You want children to handle things, you do want them to go - wow! And then to come to the museum, you've already added that extra dimension before we get here. Especially if you come to the museum, and you might have a talk and maybe a few objects and then a glass case. You know?*

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**How would you like someone coming into your classrooms with objects?**

*>Yes, that would be good.*

*>It captivates them.*

*>And if they could dress up in character that would be great*

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*I think some way that it would be good for the children to be able to come back and ask questions afterwards. Instead of coming away and feeling... Being able to come back afterwards and say there was something they'd seen, and what about the baths? Asking about... I don't know, maybe something that if you could email in to...*

*Well, if you had a preprepared website, with the actors answering questions or...*

*One of the things, when you were talking about things you could do afterwards, I think that's really valuable, for a teacher with not a lot of experience, how you put it into practice, and hearing what other people have done, that's very stimulating.*

**How important do you feel that a follow up session is?**

*>Very.*

*>Incredibly.*

*>..a follow up session makes sure it's worth your while, and if it's worth going back, I think.*

*>We did do some follow up, but it was mostly referring to what we'd done in the context of .... I don't remember getting anything from the museum.*

**>Would that have been a good thing?**

*>It could have.*

*>It depends on the person as well. I mean, if you were confident in teaching history, I mean, you might appreciate it and somebody might not.*

*>Yes, it would be nice to have a worksheet in a subject you are not very confident in.*

*>But you can use it or adapt it as you wish, CDs or something that you could work on yourself, as well.*

*>It didn't occur to me at all that the museum would support us, because they'd given us the stimulus and the support here, and then it was up to us and the school to develop that. And by taking lots of photographs when we were here, and when we got back to the school we did lots of creative writing and made the tiles and displayed the tiles and then linked that with a visit to the mosque, which linked in with the (!) But that, I thought, was our responsibility, that the museum had started us off.*

*>I think it would be really nice to do a follow up. It would be like the kids knew, it would be them working towards something.*

*As far as follow up, maybe some sort of poster, for me, because we were doing a science topic, maybe a poster of one of the cars or buses they had seen here, maybe outlining the different materials that the children had heard about but might have forgot by the time they got to school. They didn't forget much, but there were a few things you had to remind them about, so maybe a poster like I referred to, with a little discussion, would remind them.*

*..having something visually that recreates what they physically enacted might help them to put it more clearly in their minds, and also to locate them then.*

*Maybe follow up. There was a lot you could do to prepare and consider ahead, and I don't remember there being much of a follow up.*

*Maybe if the museum had given you a bullet point sheet then you would be able to remember....*

### **Challenges:**

- **Making British history relevant to pupils from diverse backgrounds**

*I think, as well, it must be really difficult, coming from another country. Like me, for example, if I ended up living in Somalia and had to learn about some Somalian monarch from four hundred years ago, I'm not sure... even now I would find it really difficult. It must be so complicated and difficult for them. I think they could realise that the actors, for example, wouldn't fit into the tube situation. But others, they are still a bit wavy on it, aren't they? We asked the children, the other day where the Vikings came from. You know, having taught the lesson, and they said Croydon.... Because Croydon is the place that deals with immigration. It's quite clever really. You can see how they thought that. Go to Croydon to see lots of Vikings.*

- **Paperwork**

*This was very definitely a part of the curriculum, so I wouldn't have to justify it. But we have to get justification from our local education authority, do you all? We have to submit where we are going, why we are going, how, everything. Pages and pages to our local education authority and then they tell us whether we can go.*

*From Easter onwards they said we had to fill out forms and apply to the LEA, what we were going to, why, and what part of the curriculum it was for, and all of that. And then they wrote back to us. I don't know why. Obviously the risk factor means more and more people were just... so it was becoming very pressured.*

*Actually it's becoming now that teachers do not want to come on trips, and that's only within the last year, because of all the risk factor. And you have to do a risk assessment, you have to do a health and safety form, and you have to do pages and pages, plus we have to apply to our LEA. So going on a trip takes an enormous amount of paperwork.'*

*Things are going to disappear unless we get support from the LEA*

- **Costs & transport**

*the children in my school are quite poor. And so I would say that a lot of the children, if I and the teachers didn't take them on trips like this they would never have the chance to visit them. Because if they come from large families and they'd have to pay for them all to get in, and make the effort to get over here. And so I think it's good for museums to present this kind of learning opportunity.*

*That's down to economy as well. Remember we are asking people to pay for the trips and we can't afford to ask parents more than once a term, to pay for trips. Not that we don't want to go on trips, but we can't afford it*

*They've come out on a daytrip and they've got their little bit of spending money and there is never anything that is affordable to them, that will remind them about the museum. You can go and buy a pencil and a rubber, with Museum, but you could get that anywhere. So it's having something that's affordable.*

*As soon as you order a coach nobody can afford it. The price, how much it's going to cost, is a really determining factor as to whether it's viable*

*Public transport wise. If you need to go that far you don't go very often.*

Quotes Generic Learning Outcomes focus groups, Autumn 2003, Emily Johnsson EPDP Research officer

*My school has been criticised for not taking kids out enough. And the previous year to coming here I'd arranged a trip in to London and then a walk in the centre of London, and I had to ensure it wasn't going to cost more than a quid, like a bus pass, to ensure they could all come.*

*I've only just started coming on the tube, because I do think that travelling at half nine in the morning, with thirty kids who are seven, and you can only get so many adults free, and lots of the parents can't come. And you can't take any more staff from school, so you are restricted. I was lucky my sister wasn't working, and she came along with me. And usually I get a coach because I just think, for my safety, and for theirs, because you are up for litigation, whatever you do, whether you do it right or wrong, you are going to get caught.*

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聯絡人/電話:

黃潔瑩/23432435

出國人員:

左曼熹 國立自然科學博物館 科學教育組 助理研究員

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關鍵詞: 博物館教學、中小學生團體參觀教學、實物學習

內容摘要: 本報告為筆者於2003年9月至12月赴英國倫敦，針對「博物館如何協助中小學生團體在博物館中學習」的議題，在賀立門博物館(Horniman Museum)、自然史博物館(Natural History Museum)、大英博物館(British Museum)與其他相關機構中，透過參與觀察、深入訪談、閱讀收集資料等過程，整理集結出的紀錄與心得。除以賀立門博物館為基礎，介紹各博物館針對中小學生團體通常均有的教學資源與服務。三個博物館再各選擇一個最具特色的教育資源及其活動範例深入介紹，以期深入分析了解各館有關「中小學生團體在博物館中學習」之業務如何發展運作，以及其背後的教育理念。最後提出以下的結論與建議：(一)博物館教學活動應加強標本實體的運用，並以培養學生針對實物自主學習的能力與興趣為目標。(二)博物館應建立運作良好的教育用標本的蒐藏與管理政策，以利於教育用標本持續地充實與運用。(三)博物館教學活動可參考MLA所發展的學習評量系統，擬定活動目標與簡易的評量執行方法。(四)博物館教育部門應有專為學校服務的團隊，並為學生團體發展專屬的博物館教學活動。

本文電子檔已上傳至出國報告資訊網