

The baby was gone and turned into a lizard.



The father was so angry that he decided to shoot the sun.



Finally he went to the sun's home and shot his left eye.



The sun became the moon. He gave the father the millet to plant and the rules to obey. Since then, Bunun people follow the agreement with moon.



As time went by and the entry of other strong cultures, we gradually forgot the agreement with the moon, and no longer planted millet.



Culture, people share the same value of living

Culture grows from land (environment)
People, the core of culture.
Without people >> Culture can not be passed on.
Neither to the environment.
The traditional knowledge would disappear.




Culture, people share the same value of living

The lost of aboriginal culture
 The mainstream of society pursue for the money, convenience life.
 Leave from hometown to make money.



Find a way home
 Who am I?
 How to become *bunun*? "Bunun" people
 No one is an island.
 Most of us are searching
 the sense of belonging.




Why we need to preserve culture?

Different culture have different vision to the world.
 To keep the diversity of culture, make society more flexible.
 Indigenous people have relative friendly lifestyle to the environment.



How to do?

In college, we learn the culture by planting traditional food, millet.
 Through millet, we learn the wisdom of our ancestor.
 We see the change of plants to know when to plant the millet.
 We know which plant can be eaten and the function of it.



Live in the culture

Go to the village and learn the way how Indigenous people there live.
 The specific topic to learn. → Millet
 Watch, do and ask.



Life change lives

Bring back what we learn to school and share to others.
 Through the process of learning millet culture,
 I find who am I and the way home.
 I cherish the culture of the indigenous people and I want to keep it
 passing on from generation to generation.
 I believe life can change lives.



2019
Sustainable Development of Agriculture

Issue: Circular Economy
 Object: Young farmers and University students
 Speaker: Hsuan-Lun, Chang

Department: Graduate Institute of Bioresources
 Grade: First grade Ph.D student
 Name: Hsuan-Lun, Chang

國立屏東科技大學
 National Pingtung University of Science and Technology

How to form a country

1. Human resources
2. Land resources
3. Nature resources

Labels: Land, Man Power, Nature Resources

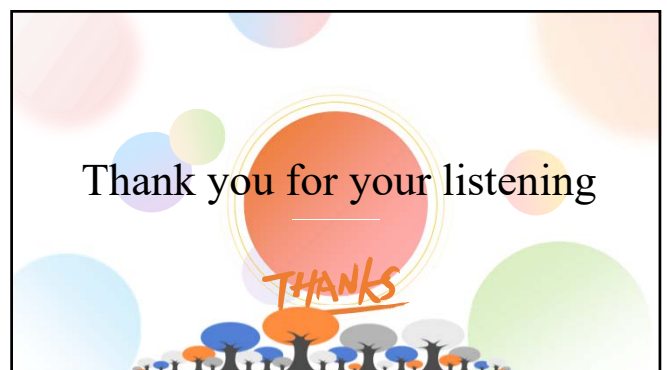
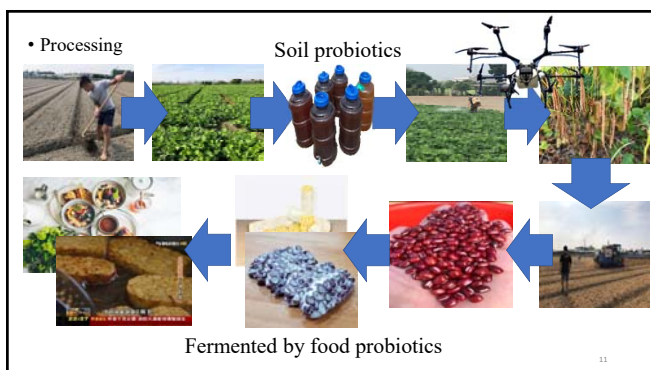
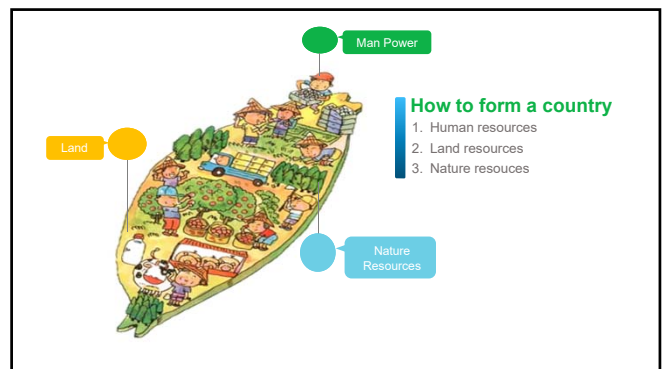
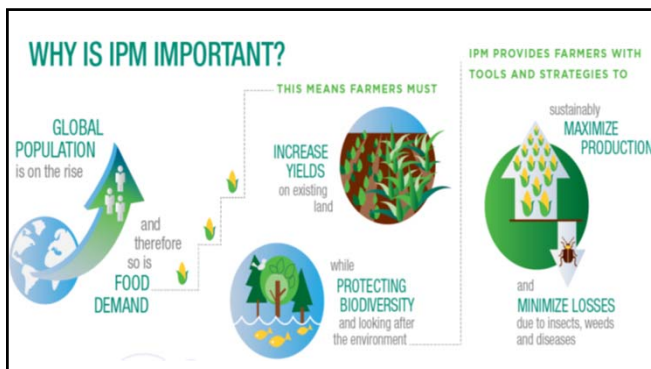
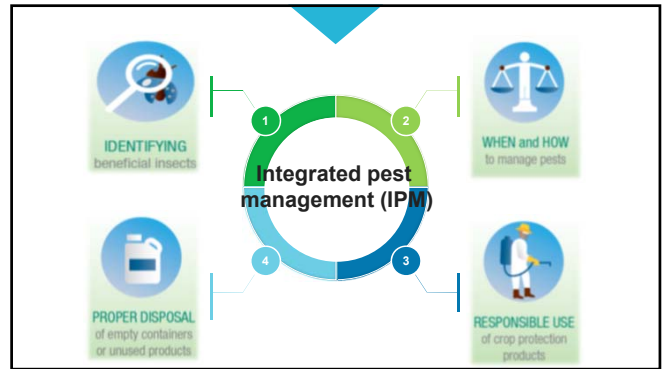
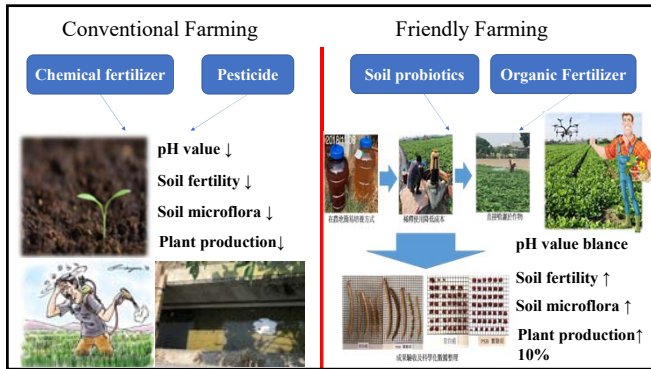
Nature source in environment for Agriculture

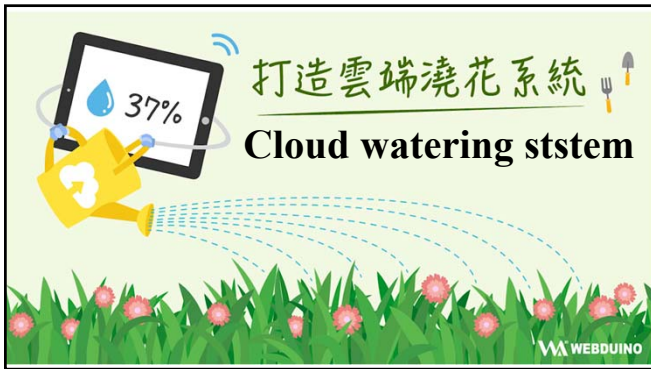
Sun, Water (H₂O), Air (O₂, N₂, CO₂), Soil

A collage of images showing agricultural fields, a dam, a factory, and a road, illustrating the integration of agriculture and industry.

Plant, Soil microorganism, Fertilizer, Pesticide

A diagram showing the cycle of agricultural inputs and outputs, including a farmer working in a field and a crop growing.





Conservation Volunteer

Ecological Conservation

柯怡均

- ## Overview
- Self Introduction
 - Volunteer in New Zealand
 - Present Situation in Taiwan
 - Being a Vegan
 - Summary

Self Introduction

柯怡均(Ke Yi Jun)

**NFU
APPLIED FOREIGN LANGUAGE**

- Beach clean-up
- Work exchange
- Conservation Volunteer



Volunteer in New Zealand





PLANTING TREES

CLEANING UP BEACH

LEARNING WITH SCHOOL KIDS



WHAT WE CAN LEARN FROM THIS EXPERIENCE

The Benefits of Planting Trees



- Combat climate change
- Prevent flooding
- Protect endemic species

Tiritiri Matangi Island



Present Situation in Taiwan



PROBLEM FINDING

The Formosan black bear is endangered.

PROBLEM SOVLING

Protect their habitat.

TAKE ACTION

Be a volunteer.
Raise awareness & Speak up
Enforce bans on the hunting of the creature.

Vegan

TO
REDUCE
ENVIRONMENTAL
IMPACT



Summary



Learn from New Zealand experience



Protect endemic species:
Taiwan Black Bear



Act now!

Thank you for listening

WHAT CAN WE DO TO MAKE THE EARTH A BETTER WORLD?

Why Are Bees Disappearing?



<https://www.ontariohoney.ca/educators/the-honey-bee>

Tung, Yin-chun
2019/07/18

Introduction

- Master's degree in Natural Resources and Environmental Studies, National Dong Hwa University.
- 3 years of working experience in a community based non-profit organization.
- Design environmental programs to help children and teenagers in poverty and special needs.
- A member of Hualien Permaculture Association

Origin

- A beehive of my family
- Almost all the bees died after a neighbor applied agricultural chemical

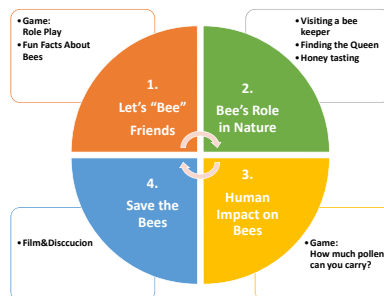


Objectives

Attitude	Knowledge	Action
<ul style="list-style-type: none"> • Alleviate people's fear and misunderstanding of bees 	<ul style="list-style-type: none"> • Introduce bee's life and its role in nature • Understand the impact that agricultural pesticide can have on bees 	<ul style="list-style-type: none"> • Motivate people to take action that help save the bees

Program Design

- Participants: adults
- Number of people: 20
- Duration: 3-4hrs.



How does a honey bee look like?

Italian Bee



https://www.google.com/search?q=honey+bee&source=images&sa=X&sq=&ved=0ahUKEwifjM7P8L7jA1W1sp2Q1W92CUCQ_AUEig&biw=1366&bih=715&img=022u02020110M

1-1 Let's "Bee" Friends


Role-playing Game:

- The male bees' job in the hive is to find a queen to mate with.
- The Queen in the hive lays eggs.
- The worker bees are all female and they do all the work for the hive.

AGE AND RESPONSIBILITIES OF WORKER HONEYBEES

Age (days)	Responsibilities
1-2	Cleans cells and warms brood
3-5	Feeds older larvae
6-11	Feeds younger larvae
12-17	Hive repair, food transport within the hive, attend queen
18-21	Guard the hive entrance
22-45	Field bee collecting pollen, nectar and water

https://www.ontariohoney.ca/education/the-honey-bee/Workers
https://thebobbygames.com/2018/04/02/roles-of-the-honey-bee/



1-2 Bees As Friends: Fun Facts About Bees

Guess which of these facts are true?

- The queen will lay around 1,500 eggs per day.
- Male drone bees don't have a stinger.
- Bees have five eyes - two compound eyes and three tiny ocelli eyes.
- Bees have two stomachs - one stomach for eating and the other is for storing nectar.
- Honey has natural preservatives and bacteria can't grow in it.
- A beehive in summer can have as many as 50,000 to 80,000 bees.
- The average worker bee makes about 1/12th of a teaspoon of honey in her lifetime.
- 70% of the crops depends on bees to be pollinated.


2-1 Bee's Role in Nature - Visit A Bee Keeper

- learn about how to take care of bees and get along with bees
- Beehive observing
- Honey tasting



https://www.flickr.com/photos/deepblue68/7156305229/


2-1 Bee's Role in Nature - Finding the Queen




3-1 Human Impact on Bees

Game:
How much pollen can you carry?

咸豐草



荔枝



Rules of the Game:

- Each player is "a bee looking for flowers".
- At each round, each player draws a card and turn it over to see how many pollen and poison dots he/she gets.
- If a bee gets 10 dots of poison, it dies.
- After 5 rounds, the player who survive and with the most pollen wins.

● Represents the Pollen
● Represents the Poison

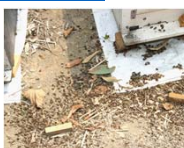
4-1 Save the Bees

Why Bees Are Disappearing?

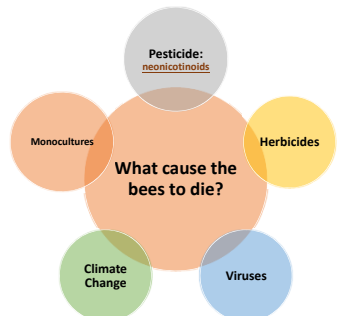
https://www.ted.com/talks/maria_sponzi_why_bees_are_disappearing?fbclid=IwAR1VNDQaaqV7pbTn80WLeWxxc1kW-Dg85ubhKaKHEOXpJmXp9g23ort40z

讓蜜蜂回不了家的原因：楊恩誠教授

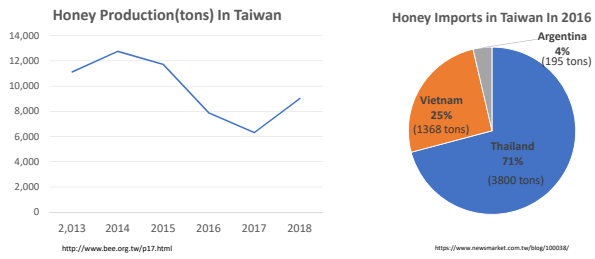
https://tedstarspeel.com/talks/2014-en-cheng-yang/?fbclid=IwAR1VNDQaaqV7pbTn80WLeWxxc1kW-Dg85ubhKaKHEOXpJmXp9g23ort40z



https://www.newsmarket.com.tw/bees-issue/CH01/
https://www.newsmarket.com.tw/blog/81615/

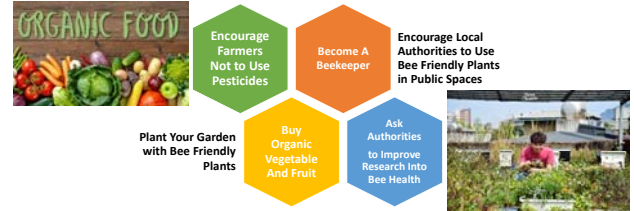


4-2 Save the Bees



4-3 Save the Bees – Discussion & Sharing

What can you do to help the bees?



Thank you for your attention!

Status of the Leopard Cat in Taiwan

LIN LI
Department of Life Sciences NCHU

Motivation



Contents

- ▶ Introduction leopard cat
- ▶ Threats of the Leopard Cat in Taiwan
- ▶ What should we do?

Part1 About Leopard Cat

Basic Information


我是生活在低海拔的
淺山精靈




石虎小檔案

別名：石虎、山貓、金錢貓、華南豹貓
 英文名：Leopard Cat
 學名：Prionailurus bengalensis
 體型：小型貓科動物
 毛色：黃褐色、灰褐色
 最喜歡的食物：鼠齒類動物
 還OK的食物：小型哺乳類動物、鳥類、魚類、兩棲類、爬蟲類、昆蟲等
 最喜歡的時段：晚上、清晨、傍晚

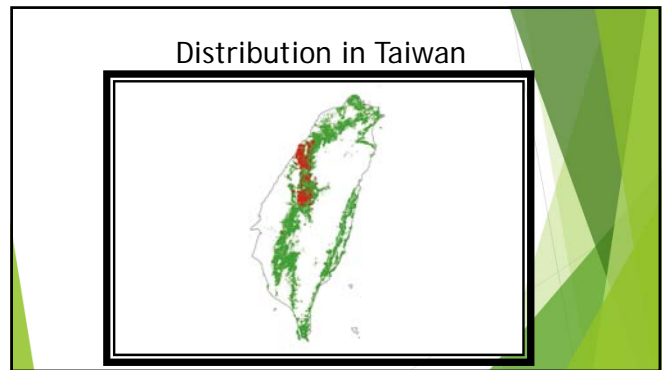
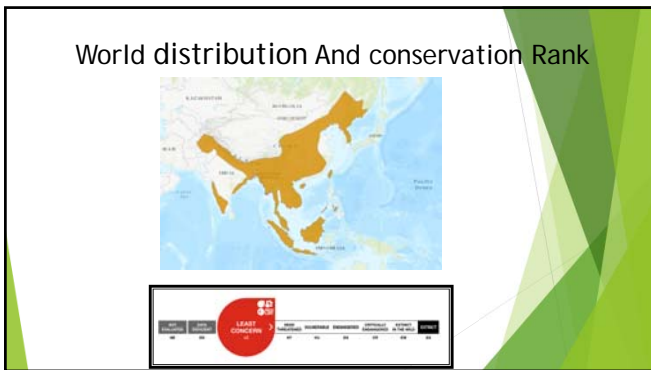
Different between leopard cat and cat



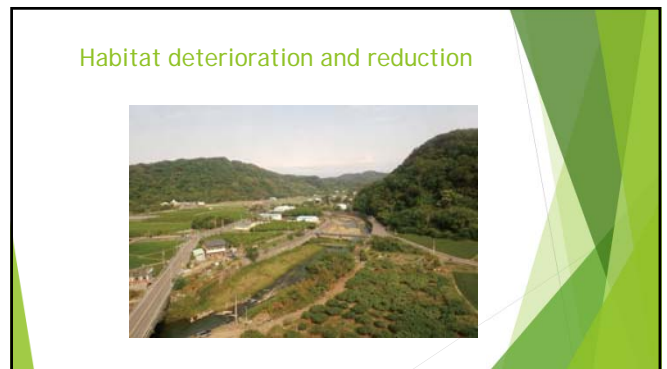
亞洲虎貓 (Domestic Cat)



石虎 (Leopard Cat)



Part2: Threats of the Leopard Cat in Taiwan



Roadkill



- Widening of rural roads .
- Development of private hillside.

Conflict between Leopard Cat and Chicken Raising



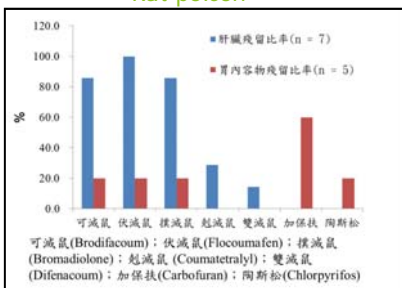
Solution1



Solution2



Rat poison



Illegal capture



Threats of stray animal



南投鹿港鎮在今年一月傳出石虎路斃，慘死亡原因由伊路路機撞死，而路機才撞死。(資料照，取自「守護石虎」臉書)

Canine Parvovirus



Part3: What should we do?

Protect their habitat



- ▶ Increase the eco-friendly rural area
- ▶ Keep natural forests and river banks unchanged
- ▶ Reduce the construction and development of roads that destroy habitats

Prevent roadkill



- ▶ Design green crossing corridors
- ▶ Set the fence
- ▶ Road kill warning system

Amending the law



Reduce stray animals

- ▶ Don't abandon
- ▶ Ligature
- ▶ Don't feed stray dogs and cats

Supporting eco-friendly products



Main treats and solutions

treats	solution
Habitat reduction	Protect their habitat
Roadkill	Design green crossing corridors
Conflict between Leopard Cat and Chicken Raising	Isolating chicken and leopard cat
rat poison	Supporting eco-friendly products
Illegal capture	Amending the law
stray animal	Reduce stray animals
Canine Parvovirus	

Conclusion

- ▶ The conservation of leopard cat in Taiwan is an urgent and important thing.
- ▶ If there is no more positive action, leopard cat may go to extinct in our generation.

Reference

- ▶ The IUCN Red List of Threatened Species
<https://www.iucnredlist.org/>
- ▶ 石虎的美麗家園
<https://web2.nmns.edu.tw/Exhibits/107/LeopardCat/index.html>
- ▶ 2018台中世界花卉博覽會
<https://2018foraexpo.tw/>
- ▶ 窩窩 wuwo
- ▶ https://www.facebook.com/wuwo.tw/?_ftn=32c492c0p.8&eid=ARBNk0wzhdJlru0J44f6nfBE-21895x3p935n3310f111k05xkVY2AF-cw-sc0u0z0V080u
- ▶ 健行筆記
<https://hiking.bill.co/index.php?c=news&act=info&id=12529>
- ▶ 台灣動物新聞網
<http://www.tanews.org.tw/info/9524>
- ▶ 我們的島
<https://ourisland.pbs.org.tw/content/%E5%B4%A9%E8%99%B8%E6%AD%B8%E5%B1%B1%BC%04-%E4%B7%9C-V0U937ZHU-3p035wMj81m20m0U1Z4m0301Z0P10W50>

Thanks for Listening!

2019 EE Youth Excellence Workshop

Local and Multiple governance - Hunting

Tân Su-i
陳思好

Việt Nam

OVERVIEW

- Introduce myself and three difference NGOs in Taiwan.
- Why I choose hunting issue.
- Local and Multiple governance , and also conducive to academic research.

台灣

• (Major) Nature Resources and Environmental Studies
• (Minor) Ethnic Relations and Cultures

地球公民 基金會
Citizen of the Earth, Taiwan

Forest protection Industrial pollution Protest action

sustainable development Renewable Energy

黑潮 海洋文教基金會

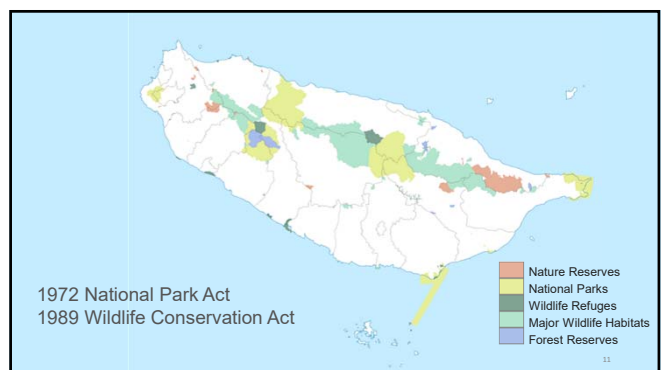
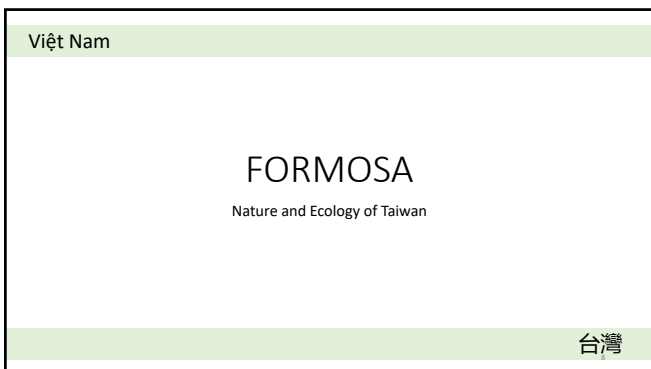
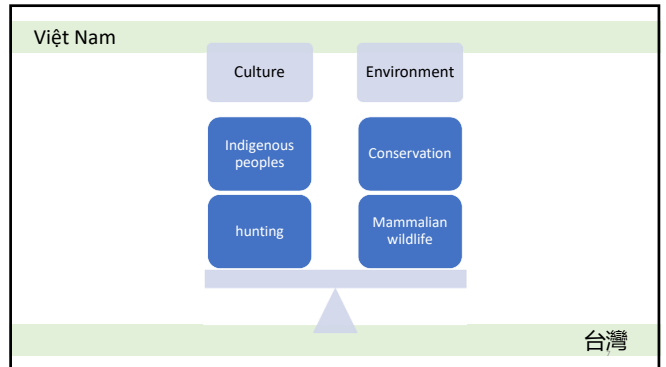
Marine Environmental Interpretation Protest action : Dolphin FREE

島航 Marine Dobris Monitoring Environmental education Local Marine Culture

Taiwan Black Bear 台灣黑熊保育協會 Conservation Association

Environmental education Ambassador

Academic Research Education center Ecological monitoring





Việt Nam

What can we do?

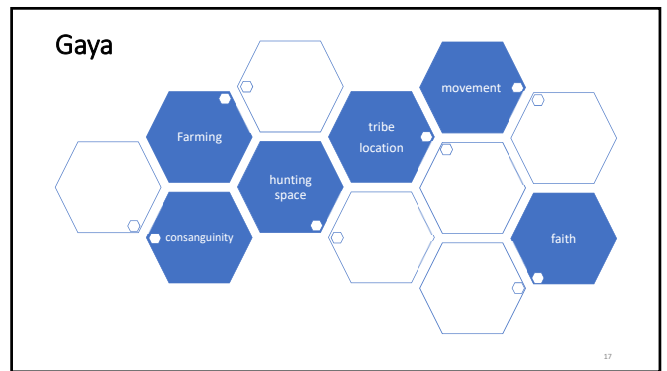
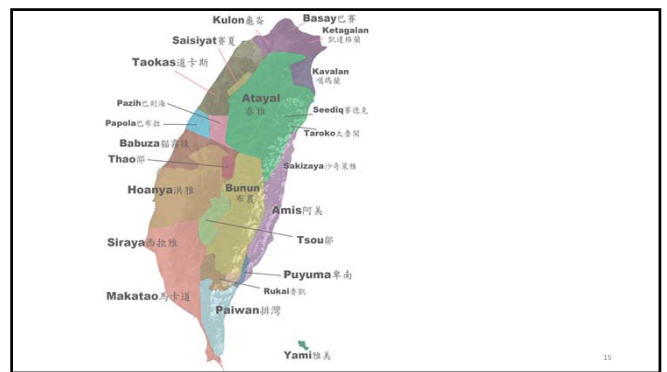
台灣

Việt Nam

Culture Hunting

Traditional Ecological Knowledge

台灣

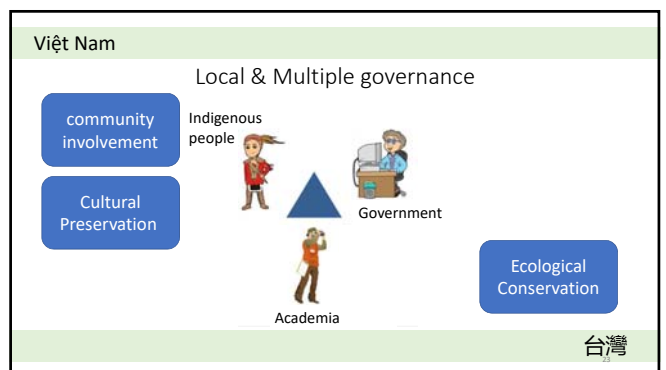
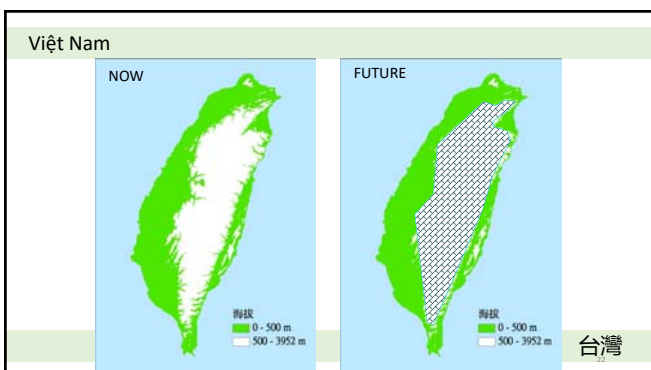
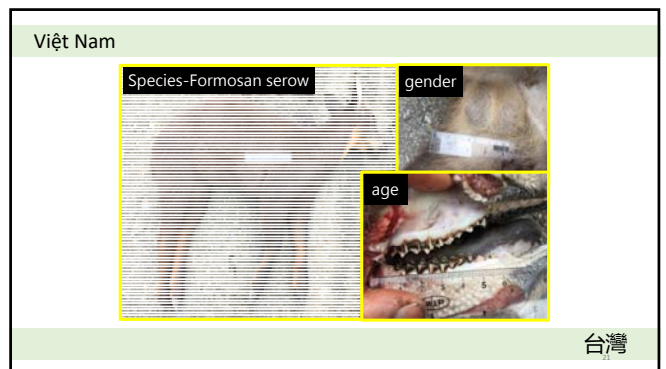
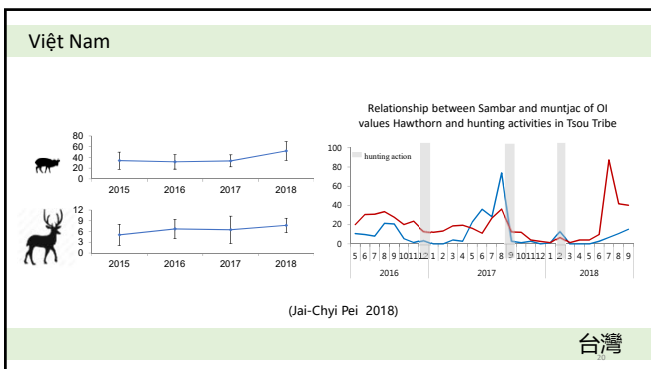


Việt Nam

Mammalian wildlife Academic Research

wildlife population monitoring

台灣



Việt Nam

參考來源：狩獵計畫研究群 裴家麒Jai-Chyi Pei、戴興盛、張惠東、陳毅峰、翁國精、呂翊齊、鄒族人、銅門部落


Make a difference.

Thank you for Listening.

台灣


The Revolution of PLASTICS

Presenter: Yi Chien



Name: Yi Chien(Oscar)
 From: Hualien , Taiwan
 Graduated: Life Science
 Used to be an engineer of chemistry factory
 Habit: **Collecting sneakers**

Material of sneakers



- Upper: leather/
plastics
- Midsole: **plastics**
- Outsole: **plastics**

Relationship with Taiwan



Wang Chou-hsiung
(Founder of Feng Tay)

Phil Knight
(Founder of Nike)

Relationship with Taiwan



From the end of 1900s **Taiwan** has been **world biggest manufacture of sneakers.**

Wang Chou-hsiung
(Founder of Feng Tay)

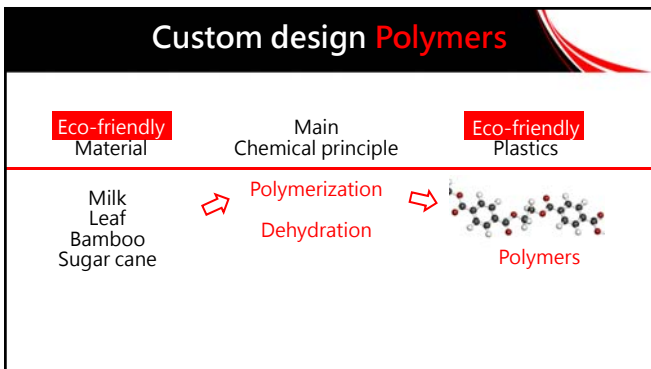
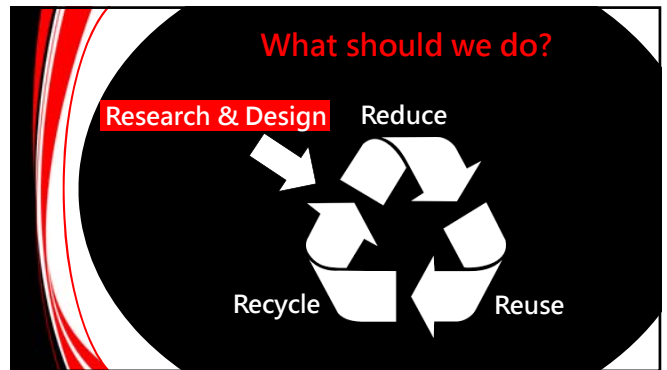
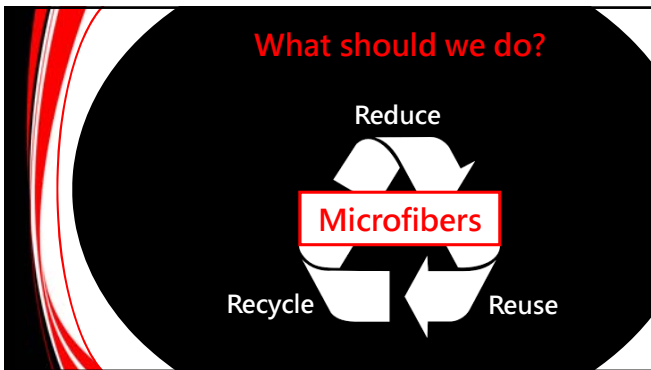
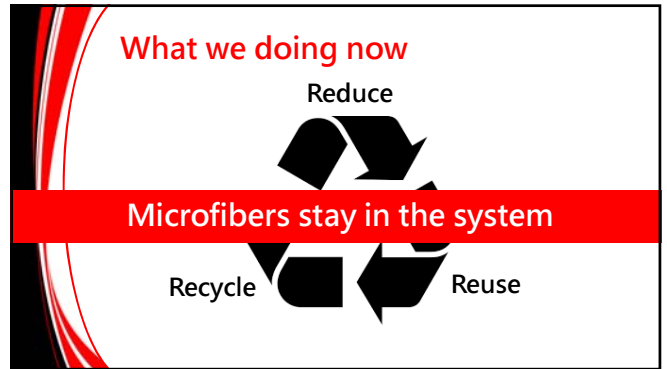
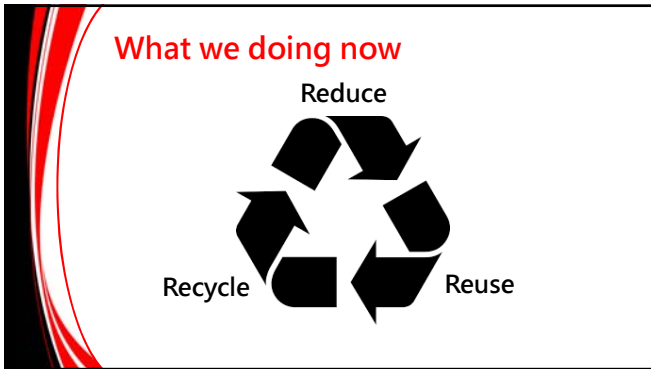
Phil Knight
(Founder of Nike)

Relationship with Vietnam

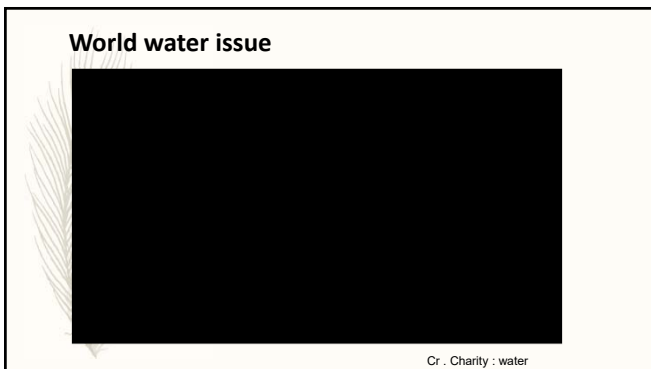
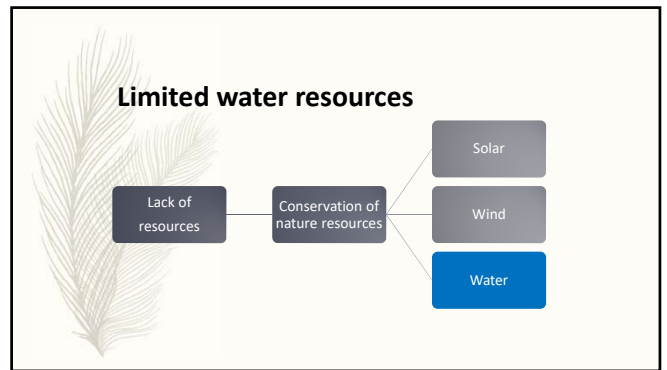
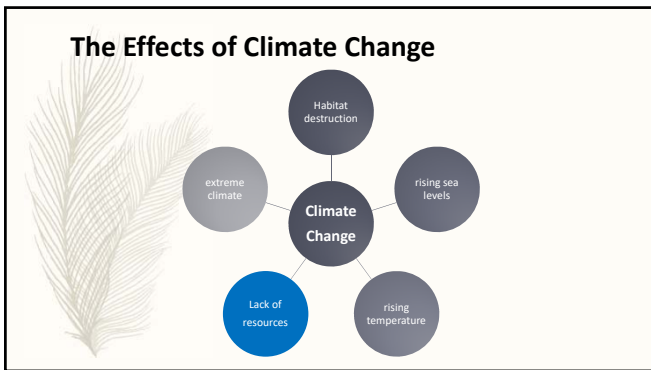
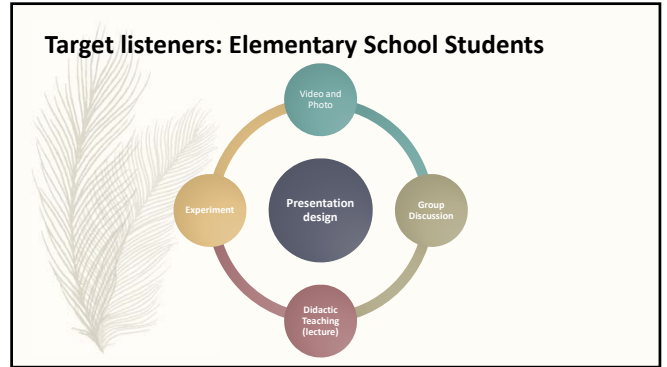


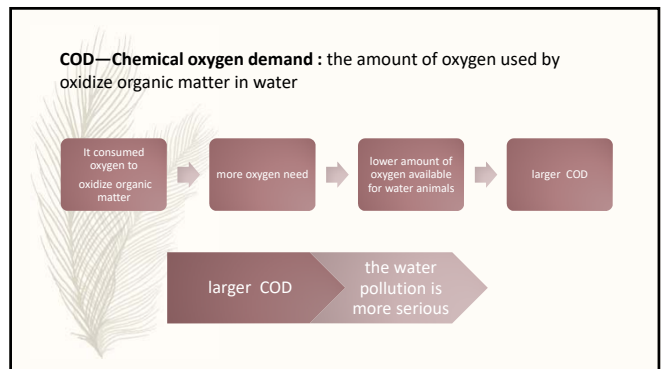
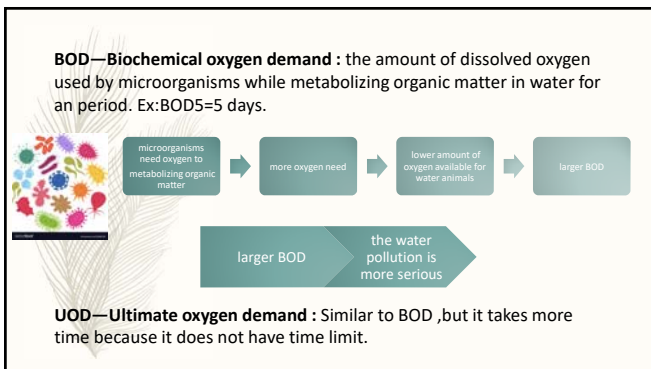
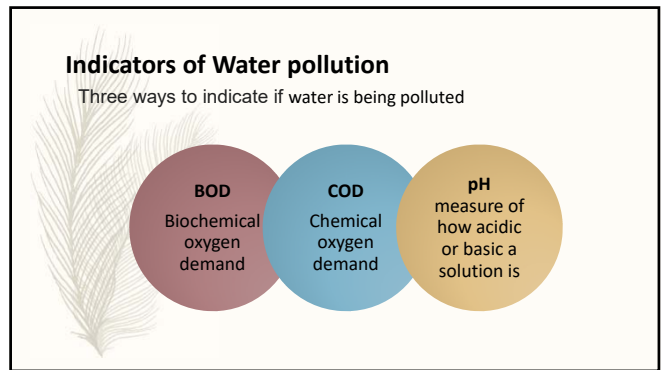
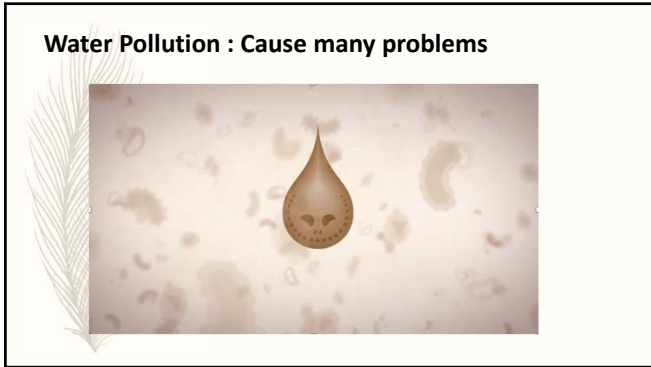
After 2000 Taiwan **transferring technique to oversea.**

During few years so far, Vietnam has been **world biggest manufacture of sneakers**



END.





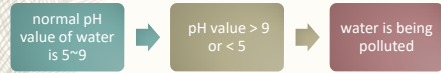
BOD and COD

COD > BOD :COD can oxidize more organic matter in water compared to BOD

BOD/COD: the ratio of BOD and COD show the degree of pollution, larger ratio=more compounds that can be metabolized by microorganisms

Principle of pH

pH: Hydrogen ion concentration of a solution. A neutral pH value is 7. A value less than 7 is acidic, while a value greater than 7 is basic.



Measurement of pH

Two ways to measure the pH value of water



pH meter
pH meter would give you a number of 0-14



pH paper
Dip pH paper into the sample than match the color of you pH paper with the chart

Types of pH paper

Two Types of pH paper to measure the pH value of water



pH paper
match the color of you pH paper with the chart



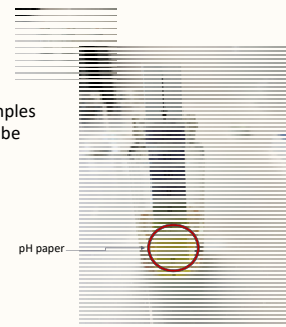
litmus paper
if the color of paper changed from blue to red ->acid from red to blue ->base no change -> neutral

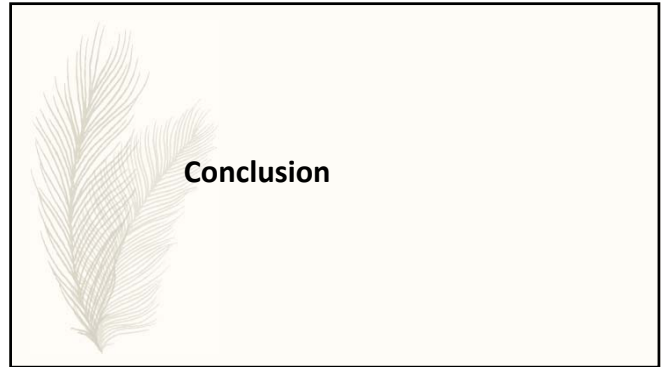
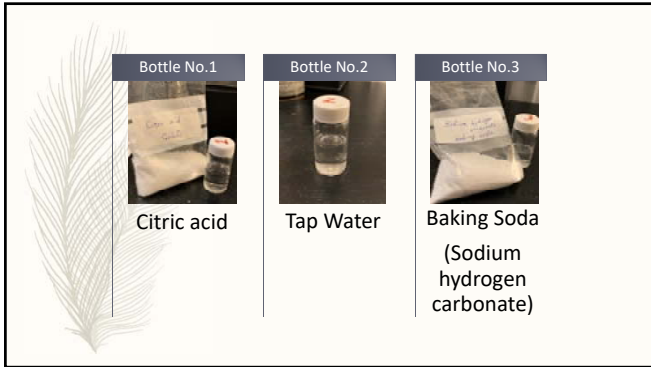
Review: Polluted or not?

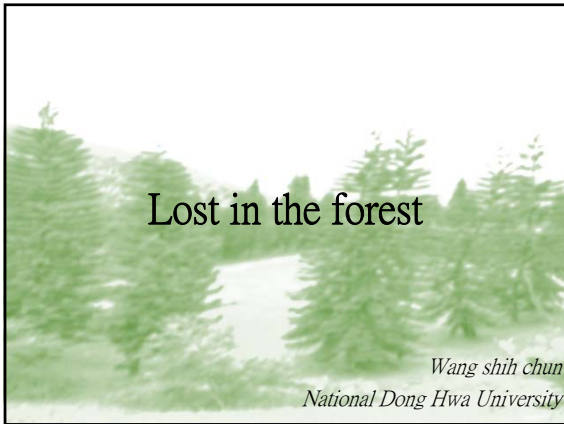


Steps of experiment

1. Observe the color of the samples
2. Use pH paper to test the samples
3. Determine the pH value of the samples
4. Guess what is in the samples : can be used for cleaning
5. Group discussion and Idea sharing





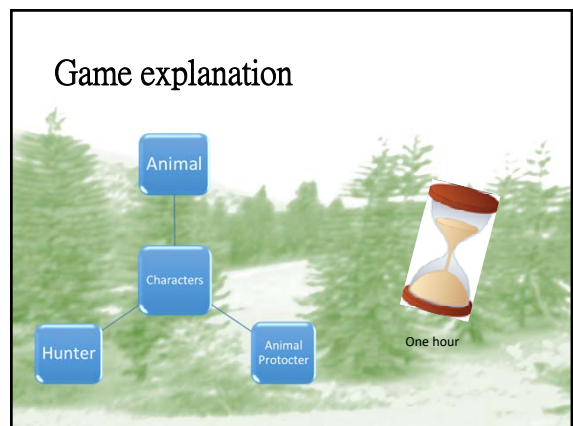
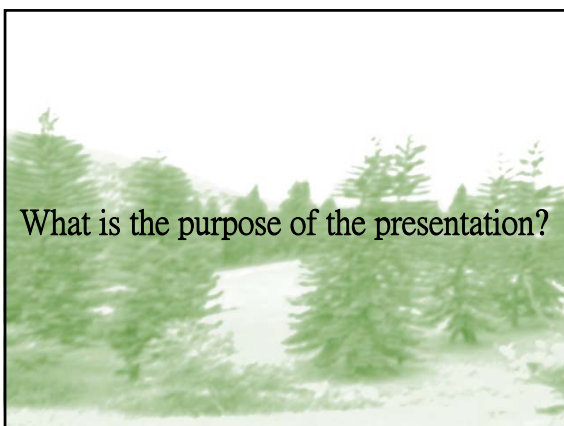
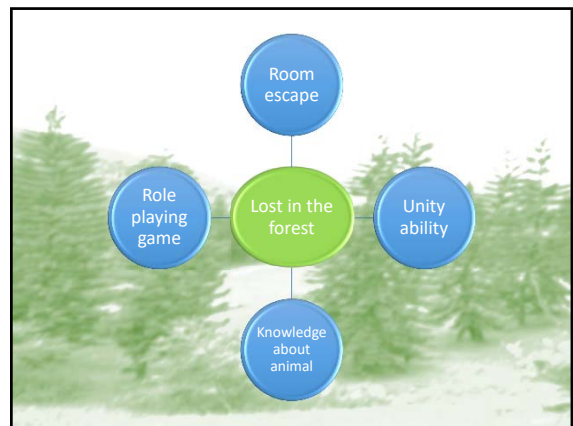


Self Introduction

- Name:
 - Shih Chun, Wang
- Affiliated Institute:
 - National Dong Hwa University
 - Dept. Of Taiwan and Regional Studies

Introduction

- Subject Name:
 - Lost in the forest
- My motivation for choosing the subject:
 - Nature Conservation, A Little Climate Change
- The types of this subject:
 - Nature Conservation, A Little Climate Change
- My target listeners:
 - Senior High School Students(3-9 people)



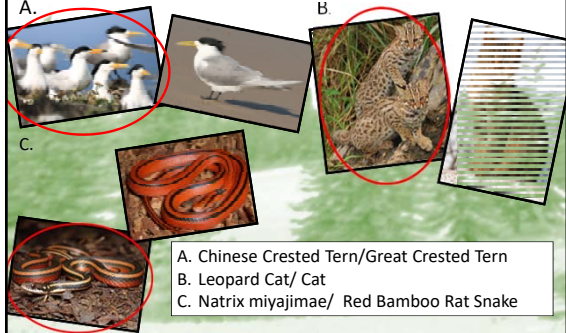
Level overview:

Hunter only

- Animal SOS
- Animal footprints
- To know Taiwan native species
- Animal hide-and-see
- Animals protector – You & I
- To help animals find a home

Animal protector only

To know Taiwan native species



Level overview:

Hunter only

- Animal SOS
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Animal protector only

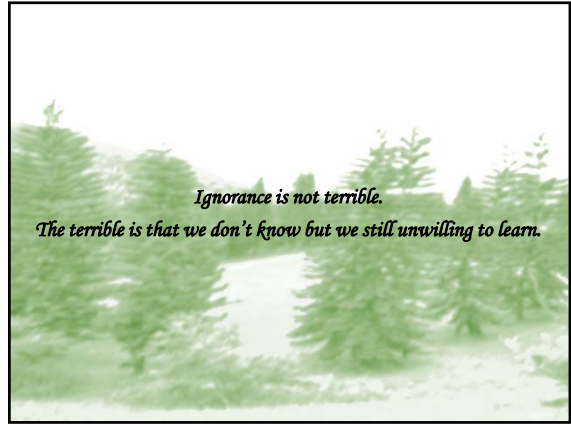
Animal hide-and-see



Explain the level


- After we finish the game, we will start to introduce the level. To explain what knowledge we want them to know and give the information about animals in the level.

Discussion & Conclusion



#16

Greeting



Environmental Education


#10

Intro


- ▶ Name Chih-Hsin Hsieh (Norah)
- ▶ Background Education and Potential Development at Dong-Hwa University
- ▶ Hobbies Climbing mountains, swimming , camping, music, movies

#9
#14

Inspiration



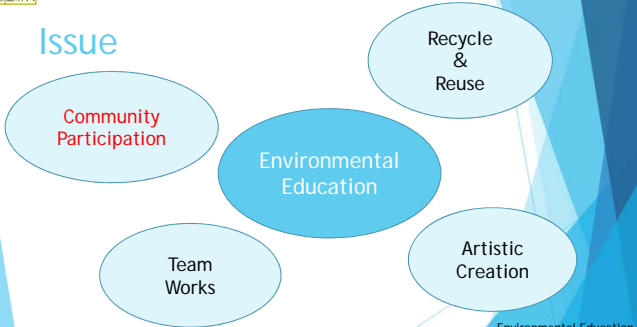
<https://www.youtube.com/watch?v=6KTOGfhfODA>



Environmental Education


#11
#14

Issue



Environmental Education

Topic



ToY story 4
First grade!

Environmental Education

#6
#7
#12

Course

- ▶ Participants 1. 4th grade students(25 ppl/class)→(5 groups)
2. grandpas/mas in the community (5 ppl)
- ▶ Time 3 classes(40 minutes/class)
- ▶ Motivation 1. Toy 4
2. Making toys and designing a game
3. "Show your passion and love to 1st grade students!"

Course

► **Objectives**

1. Each group designs toys and a game for 1st grade students by **only using rubbish and recycling.** (Psychomotor Domain)
2. Help to release the anxiety of 1st grade students through designing and sharing games for them. (Affective Domain)
3. Make rubbish and recycling a higher value and give it a new life.
4. Communicate with team and grandpa/ma. (Affective Domain)

Course

► **Activity-1st class**

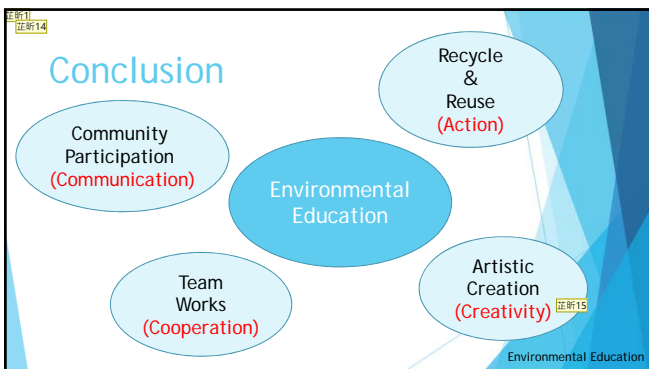
1. Teacher introduce the course. (Teacher shows students **the demonstration**)
2. Students say hi to grandpas/mas
3. Students collecting rubbish and recycling in the community
4. Class Discussion about the collection
5. Group Discussion about their own toys and game making

► **Activity- 2nd class**

1. Make toys and a game, including setting the game's rules and win points
2. Share ideas with others

► **Activity- 3rd class**

1. Share games with 1st grade students



Demonstration*/Clues

- Encourage students to design a game which contains the entertainment and knowledges of school or the community.
- Make the rubbish and recycling to rise from the dead.

