



Learning Experiences

Ocean Park Hong Kong

Lesson Plan

Bamboo Corridor – “Rescue Giant Pandas” Game

Enduring Understanding	It is very important to protect the natural habitats of Giant Pandas. Living in harmony with the nature is a good way to protect the environment.
Outcomes	At the end of the session, students understand: <ul style="list-style-type: none"> • that bamboo is the main diet of Giant Pandas • the importance of protecting Giant Pandas’ habitats • the importance of land use planning in recuing Giant Pandas
Action	Students spread the message of protecting Giant Pandas.
Materials Required	<ul style="list-style-type: none"> • Mattresses with 4 different graphics: bamboo forest, house, road or farmland • Giant Panda’s hats • Q & A cards • Key chains containing Giant Panda’s hair or human hair • Picture of bamboo forests including different human activities • Egg box • Picture of signs (include recycling sign) • Dice

Introduction	<p>Introduce the food of Giant Pandas</p> <ul style="list-style-type: none"> • Bamboo leaves, stems and shoots <p>Introduce how Giant Pandas eat</p> <ul style="list-style-type: none"> • The structure of Giant Pandas’ paws <p>Introduce the habitats of wild Giant Pandas</p> <ul style="list-style-type: none"> • Natural habitats: temperate bamboo forests at altitude of about 1100 - 3200m • The impact of bamboo corridors on Giant Pandas
Lesson	<p>“Rescue Giant Pandas” Game</p> <p>Background:</p> <ul style="list-style-type: none"> • The habitats of Giant Panda were destroyed by different human activities due to human population growth, such as: <ul style="list-style-type: none"> ➢ Deforestation ➢ Construction • Breaking up bamboo forests separated the wild Giant Pandas. • Giant Pandas could not travel to elsewhere for food or mates. <p>Objective:</p> <p>Mattresses represent the habitats of Giant Pandas which are broken up by houses, roads and farmlands. Students should move the mattresses to construct a bamboo corridor so that Giant</p>

Panda at one corner can access the opposite corner. Thus, the bamboo forests can be re-connected without reducing resources available for human.

Rules:

- Two students are chosen to play wild Giant Pandas waiting to be rescued. They wear Giant Panda's hats and sit on mattresses at two opposite corners.
- Other students help rescue the two wild Giant Pandas by answering some questions related to Giant Pandas.
- If students answer correctly, they roll the dice to decide the number of mattresses to be exchanged.
- After constructing bamboo corridor, students roll the dice again to decide the number of mattresses the wild Giant Pandas can move.
- The two wild Giant Pandas should move alternatively. They can only move straight forward or backward through the bamboo forest mattresses but not diagonally.
- If the dice roll is larger than the number of accessible bamboo forest mattresses, it is limited to the number of accessible bamboo forest mattresses.
- The two wild Giant Pandas cannot sit on the same bamboo forest mattresses but they can pass through each other. (Giant Pandas are solitary animals)
- This is not a competition so the two wild Giant Pandas should not block each other ways.
- The game is limited to 10 minutes, or all questions are completed, or the two wild Giant Pandas access the opposite corners.

Questions:

1. Basic information of Giant Pandas

- Give two black body parts of Giant Pandas. (Ears, eyes, noses, arms, legs, chests)
- What is the color of Giant Panda's tails? (White)
- Which key chain contains Giant Panda's hair?
- Do Giant Pandas eat bamboo leaves only? (No. They also eat bamboo stems and shoots)
- Other than bamboo, what do wild Giant Pandas eat? (Bamboo rats)
- State the function of "pseudo-thumbs". (Help Giant Pandas grip objects firmly)
- Which provinces can we find wild Giant Pandas in China? (Sichuan, Gansu and Shaanxi provinces)
- Which kind of habitats is suitable for Giant Pandas to live? A. Tropical rainforest; B. Temperate forest; C. Prairie (B. Temperate forest)
- How many wild Giant Pandas can we find nowadays? (Around 1600)

2. Environmental destruction

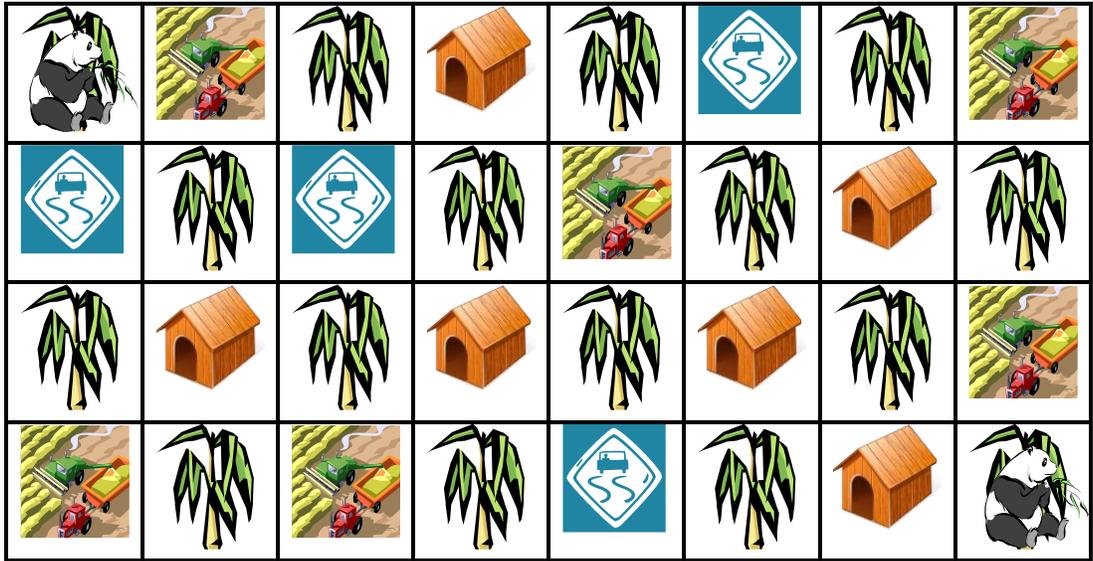
- In the picture of bamboo forests, which activities bring negative impacts to wild Giant Pandas? (Hunting Giant Pandas, excessive logging, separating giant pandas' habitats, washing clothes at riverside, mining)
This question can be repeated until all activities are stated.

3. Environmental protection

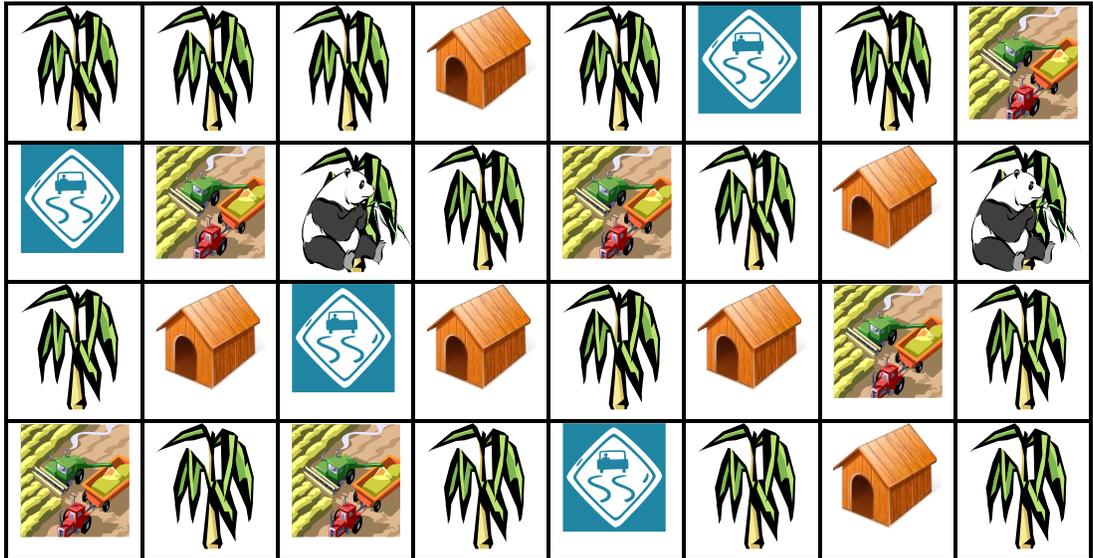
- In the picture of bamboo forests, which activities bring positive impacts to wild Giant Pandas? (Establishing Giant Pandas Research Center, donating to green groups, educating the public about Giant Pandas, cleaning up garbage voluntarily, observing wild Giant Pandas)
This question can be repeated until all activities are stated.
- Tell one method to reuse an egg box.

	<ul style="list-style-type: none"> • From the signs shown in the picture, choose the recycling sign. • Explain why using handkerchiefs is an environmental friendly action. • Which kinds of garbage can be recycled in Hong Kong? Which colors does HK government use to represent these kinds of garbage? (Paper: blue; Metal: yellow; Plastic: brown)
Conclusion	<ul style="list-style-type: none"> • In order to protect Giant Pandas, the first thing we should do is protect their habitats. • When establishing reserve sites for Giant Pandas, we should also consider the lives of local residents. Therefore, humans can live in harmony with the nature.
Appendices	<p>Giant Pandas:</p> <ul style="list-style-type: none"> • Body length: 120 – 180 cm • Body weight: 100 kg • Lifespan: 20 years (wild); 30 years (captivity) • Main diet: Adult giant pandas living in the wild eat 12 - 16 kg of bamboo each day. This difficult-to-digest plant comprises 99% of their diet. They have also been known to eat bamboo rats, small birds and carrion. For every 100 g of bamboo they eat, giant pandas get only 17g of nutriment. • Structure of paws: A Giant pandas’ front paw has five “fingers” and a “pseudo” or “fake” thumb. This extra “thumb” is actually a modified wrist bone that helps them firmly grip bamboo. • Behavior: Giant pandas spend many hours a day looking for bamboo to eat and have no time to hibernate, even in the winter. On average, giant pandas spend about 12.5 hours on feeding, 11 hours on resting and 0.5 hours on other activities. • Conservation status: CITES - Appendix I; The IUCN Red List of Threatened Species – Endangered; Chinese Wildlife Conservation Law: Category 1 <p>Example of game progress:</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>= Bamboo forest</p> </div> <div style="text-align: center;">  <p>= Farmland</p> </div> <div style="text-align: center;">  <p>= House</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  <p>= Road</p> </div> <div style="text-align: center;">  <p>= Wild Giant Panda</p> </div> </div>

- In the beginning (Bamboo forests are broken up by houses, roads and farmlands)



- In the progress (Bamboo corridor is constructing)



- In the end (Wild giant pandas can access the opposite corners through the bamboo corridor)

