

Our Class Pet: Examining Ecosystems

Ecosystems

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Grade Level	2nd Grade	**Time Frame**	2-3 class period(s)
		Duration	120 minutes

Essential Question

How do ecosystems meet the needs of the plants and animals that live there?

Summary

Students will make observations of various plants and animals to determine how their environments meet their needs. They will then decide which animal would make the best class pet and design a living environment for that animal.

Snapshot

Engage

The class discusses what humans need to survive.

Explore

Students make observations of different animals and plants in their ecosystems.

Explain

Using a Card Sort, students match the plants and animals to their ecosystem.

Extend

Students decide which animal will make the best class pet.

Evaluate

Students draw a picture of the new class pet in its habitat.

Standards

Next Generation Science Standards (Grade 2)

2-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats.

Oklahoma Academic Standards (2nd Grade)

2.PS1.4.1: Heating or cooling a substance may cause changes that can be observed.

Attachments

- Ecosystems Card Sort.docx
- Ecosystems Card Sort.pdf

Materials

- Ecosystems Card Sort (cut and placed in baggies/envelopes for small groups)
- Paper
- Markers, crayons, or colored pencils
- Sticky notes

Engage

As a class discuss the following question, “What do humans need to survive?” Draw a picture for the class to go along with the discussion.

Example Answers: Food, water, clothes (to keep us warm and protect our bodies), families/friends, shelter, entertainment

Explain that today we will observe and compare different types of plants and animals in their ecosystems, and we will think about how the ecosystem meets the needs of its residents.

Explore

Using the I Notice I Wonder strategy, have students observe the following organisms while watching brief videos:

- Changing Tree (Watch the entire video.)
- Fish (Watch 30 seconds.)
- Penguin (Watch one minute.)
- Chameleon (Watch around one minute.)
- Giraffe (Watch around one minute.)

After each video, come back as a class and discuss student's observations and questions. Record the observations on chart paper or the whiteboard.

The following questions can help guide the conversation if needed:

- What did the penguin and the fish have in common?
- What kinds of plants did you see with the giraffe?
- Were there places that looked the same?
- What was the strangest looking ecosystem?
- Why did we observe a tree?
- Do plants and animals need some of the same things to survive as humans?

Explain

Break students into groups of three or four and pass out copies of the Card Sort. Instruct students to match the plants and animals with their ecosystem.

Have groups share out one pair and why they put them together. Ask the rest of the class if they agree and why or why not.

Strengthen the connection that ecosystems have certain things that make it possible for the plants and animals in that ecosystem to survive.

Extend

Using the Sticky Bars strategy, have students determine which of the living things observed would make the best pet for the classroom. Instruct students to write down at least one claim or reason why that this animal or plant would make a good class pet.

Evaluate

Ask students to draw a picture of their choice of a new class pet and the habitat where it would live in the classroom. The habitat must include the different things the pet needs to survive.

Evaluate each student’s understanding by using the student's picture and sticky bar claim.

Resources

- BBC (2013, Jan. 30). Keeping cool - Nature's microworlds - Episode 9 preview - BBC Four [Video file]. Retrieved from https://www.youtube.com/watch?v=AkzUuResd5Q
- CBS Sunday Morning (2016, Dec. 18). Nature: Penguins [Video file]. Retrieved from https://www.youtube.com/watch?v=LqI0DWuNOOs
- Free School (2015, Jan. 13). Giraffes for kids: Learn about giraffes - FreeSchool [Video file]. Retrieved from https://www.youtube.com/watch?v=bNYXweQ81vI
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- MoneySavingVideos (2013, April 1). Relaxing 3 hour video of ocean fish [Video file]. Retrieved from https://www.youtube.com/watch?v=sI9OTeTGcrw