

Sustainable Life Box

Michelle Boggess¹

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Suggested class time: 50 Minutes

Overview:

In this lesson, our class will be divided into small groups to learn about the necessities of living things and needs for survival. We will achieve this by demonstrating all 4 categories of STEM learning. First, we will research the needs of a specific creature (Technology) teaching about habitat, diet, shelter & climate. We will then learn how our creature has learned to adapt to his specific climate (Science) we will build a habitat for our little friend with basic crafting supplies (Engineering) Then the final stage of our project, we will compare our life boxes with other groups to learn how different each creature is and compare their differences, discussing opposites, similarities, shapes & temperatures (Math). At the end of our lesson, we will talk about why it's important to take care of our planet to keep our living things happy.

Vocabulary:

- Climate
- Habitate
- Temperature
- Opposites
- Similarities
- Shelter
- Diet
- Adaptation
- Pollution

Goals:

- Students learn about the necessities of living things
- Students are able to collaborate in order to solve problems
- Understanding of differences
- Learning about other climates

- Students will show teamwork
- Students learn how to use technology for research

Materials Needed For This Project:

- Access to computer or library to research different animals
- Cardstock paper, a shoebox or something suitable for a 'habitat' structure
- Construction paper/felt scraps for creating foliage, food, shelter, etc
- Scissors
- Glue and/or tape
- Assorted small animal figurines of various species (We used a turtle, a butterfly, an elephant, a tiger & a seahorse)
- Crayons or colored pencils

Pre-Lesson:

1. Explain to the class that different creatures need different things to survive (i.e. a fish cannot live on land, a lion cannot live in a tree, etc) And then explain how different parts of the world have different animals. Explain climate, habitat, diets and how animals learn to adapt to their surroundings.
2. Next, divide the classroom up into small groups and assign different responsibilities for each person. For example, one child might be in charge of diet, while the other is responsible for shelter or habitat. Groups sizes will depend on the size of the class, we used 4 kids per group.
3. The teacher will randomly hand out one creature to each group. This alleviates any disagreements on which one to pick.
4. Explain to the class that they will have 10 minutes to research their creature and that they will need to work together as a team to complete the project. Each group will have to learn about what their specific creature needs. Explain that all creature need food, water, sun, shelter in their habitat to survive and it's their jobs to learn about these things and apply it to their life box.
5. Set a 10 minute timer or keep an eye on the clock, give a 2 minute warning to encourage any last minute stragglers.

The Lesson:

Part 1: Applying knowledge through construction & teamwork

- Once the kids know exactly what their creatures need to survive, they will begin construction of their life box. Using the folded cardstock paper or shoe box, the class will get artistic and draw things like food or plants. Encourage your class to cut out trees with construction or felt paper and glue things to the inside of their boxes. Remind the kids that every creature needs food, water, sun and shelter.
- The teacher will walk around the room encouraging creativity and ask the class if everyone's creatures have all of their needs met to life in their life boxes.

Part Two: Discussion

Once everyone has finished up their life boxes and have fulfilled their creatures needs, we will begin learning about other groups habitats and give students the opportunity to teach others about theirs.

- Each group will get a chance to explain the needs of their creature with the rest of the class
- The groups will then begin to learn about other creatures habitats and realize that living things are similar in ways because we all have basic needs for survival, but also a lot of differences in ways that all living things have special needs to survive.
- Encourage the class to ask questions and let the students answer them based on the research they've done.
- Ask questions that make the groups think more about their creatures. Why do armadillos have a shell and why do fish need gills? This will show the science of adaptability. Horse have 4 legs, while spiders have 8. What temperature do penguins need to be happy? The questions should all be STEM relevant so that the class is able to make the cross connections.

Overview & End Of Lesson Reflecting:

Ask students to iterate what they learned from this lesson. Did they learn any new information? Why is a habitat so important? How can we help make the planet a cleaner place so all of the creatures can live happily? What does pollution do to our environment? What are ways we can help? What are some of the challenges their creature face?

Tell the class to pay attention to the living things all around them. Now that they know how animals survive, they can do research in their own backyards!