

Lions, Tigers & Monsters, Oh My!

Day 2: A Place to Call Home

Teacher/Parent Background:

Lions, tigers and monsters? Yes, you read that correctly; monsters! By creating a unique monster, students will apply their understanding of the needs of living things and their roles in their environments. A living thing's environment is like its home, providing shelter/protection, access to water/food and space. In science, we describe an ecosystem as an environment in which plants, animals and non-living things can be found. There are different types of ecosystems, catering to the needs of its various living things.

Overview:

In this activity, students will create an ecosystem that best suits the needs of their monsters.

Related Standards:

- Develop and use models to explain that plants and animals (including humans) have internal and external structures that serve various functions that aid in growth, survival, behavior, and reproduction.

Key Terms:

- Ecosystem: An environment in which plants, animals and non-living things can be found.
- Non-living: Things that have never lived.

Materials List:

- Pen/pencil
- Possible visual representation resources:
 - Colored pencils/crayons/markers
 - Internet access for images/pictures
- Internet access - optional for *Extensions*
- Computer/phone with audio - optional for *Extensions*
- *Student Resources - Pages 4-6*
 - *Freshwater Ecosystem*
 - *Desert Ecosystem*
 - *My Monster's Home - Portfolio Page 2*

Activity Description:

- Revisit student ideas from *Day 1's: A Monsterous Task!*,
 - How would you best describe your monster?
 - What about your monster's structures help it survive?
 - What else might we need to know about your monster as the project continues?
- As we continue this project, we still need to know a few things about your monster! One of which is where your monster lives. As we have learned, plants and animals live in different environments. A living thing's environment is like its home, providing shelter/protection, access to water/food and space.
 - For example, the birds outside the house have an environment that includes trees for protection/shelter, a water dish for access to water, various seeds in the grass for food, and other trees in the neighborhood for space.
- In addition to the living things, (trees/bushes and seeds) the birds also rely on non-living things. The birds need water to survive in their environment. Water is an example of a *non-living* thing, as it has never been alive. Other examples of non-living things are conditions, for example, the temperature, wind and rainfall of an area. Just like the birds, all plants and animals need to live in an environment that includes living and non-living things. In the science community, we call this an *ecosystem*.
- Today, you are going to create your monster's ecosystem by answering the following questions:
 - Where does your monster live?
 - What other living things are in your monster's ecosystem?
 - What non-living things and conditions does your monster need in its ecosystem? (ex: cold temperature, lots of rainfall, consistent, direct sunlight, etc.)
- To help you get started, we are going to explore examples of two different types of ecosystems!
 - Engage students in the following activity:
 - Using the images in the *Freshwater Ecosystem* and *Desert Ecosystem*, identify living and non-living things.
 - Then, discuss the questions below the images.
 - Freshwater Ecosystem - possible responses may include:
 - Living things are the trees, bushes, plants, and fish.
 - Non-living things are the rocks, gravel, sunlight, and water.
 - The fish may need living things like, smaller fish/animals to eat and plants to hide in.
 - The fish may need non-living things like water, sunlight, rocks for shade and for protection.

- The fish will need a temperature that is not too hot or too cold and freshwater to live in that is not polluted.
- Desert Ecosystem - possible responses may include:
 - Living things are the cacti, trees, plants, and rabbits.
 - Non-living things are the rocks, gravel and sunlight.
 - The rabbits may need living things like plants to eat and bushes to hide in.
 - The rabbits may need non-living things like water to drink, sunlight, rocks/ground for a space to burrow inside.
 - These rabbits will need a temperature that is not too cold and not too much rainfall, as they are used to warm temperatures and dry periods.
- After looking through a few examples of ecosystems, let's revisit your monster! Remember, today you are creating its ecosystem?
 - Where does your monster live?
 - What other living things are in your monster's ecosystem?
 - What non-living things and conditions does your monster need in its ecosystem?
 - Assist and monitor students as they begin creating their ecosystems, by guiding them through the *My Monster's Home - Portfolio Page 2*.
 - Encourage students to use colored pencils/crayons/markers to help them illustrate the parts of their monster's ecosystem.

Closure:

- After the activity has concluded, engage in a discussion with students:
 - How would you best describe your monster's ecosystem?
 - Now that you have created your monster's ecosystem, what changes do you want to make to your monster/monster's structures to make sure it is best suited to live in its ecosystem?
 - Feel free to update your *Monster's Portrait* from Day 1!

Extensions:

Watch & Play! BrainPOP - [Ecosystems](#) (free access to BrainPOP at this [link](#))

Student Resources

Freshwater Ecosystem



Google Image, Conservation Gateway, Healthy Rivers in Colorado Assessing Freshwater Ecosystems for Conservation Outcomes, 2018.



Google Image, Synchronicity Earth, Freshwater Programme: Conserving Freshwater Fish and Ecosystems, 2020.

Circle the living things you can see. Box the non-living things you can see.

- Consider the fish. What living things do they need in their freshwater ecosystem?
- What non-living things do they need in their ecosystem? What conditions do the fish need in their ecosystem?

Desert Ecosystem



Google Image, Arizona Important Bird Area Program, Cave Creek Ecosystem, 2011.



Google Image, KCET, Architects of The Desert: Jackrabbits and Cottontails, 2012.

Circle the living things you can see. Box the non-living things you can see.

- Consider the jack rabbits. What living things do they need in their desert ecosystem?
- What non-living things do they need in their ecosystem? What conditions do the rabbits need in their ecosystem?

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Ecosystem

Ecosystem Brainstorming!

Where does your monster live? What is its ecosystem like? Will it be underwater, in a forest, in the arctic or somewhere else?

What other living things are in your monster's ecosystem? Will there be lots of plants and other animals? What do those plants and animals look like?

What non-living things and conditions does your monster need in its ecosystem? What kind of temperatures will it need? What kind of protection/shelter does it need?