

The Great Habitat Build

Grade 4 Life Systems

<h2>Lesson Plan</h2>	Assessment	Research, Experiment
	Cross-curricular	Language

Big Ideas

- Plants and animals are interdependent and are adapted to meet their needs from the resources available in their particular habitats.
- Changes to habitats (whether caused by natural or human means) can affect plants and animals and the relationships between them.

Overall Expectations

- Investigate the interdependence of plants and animals within specific habitats and communities.
- Demonstrate an understanding of habitats and communities and the relationships among the plants and animals that live in them.

Specific Expectations

- **2.2** Build food chains consisting of different plants and animals, including humans.
- **2.3** Use scientific inquiry/research skills to investigate ways in which plants and animals in a community depend on features of their habitat to meet important needs.
- **2.4** Use scientific inquiry/research skills to create a living habitat containing a community, and describe and record changes in the community over time.
- **3.1** Demonstrate an understanding of habitats as areas that provide plants and animals with the necessities of life.
- **3.3** Identify factors (e.g., availability of water or food, amount of light, type of weather) that affect the ability of plants and animals to survive in a specific habitat.
- **3.10** Describe ways in which humans are dependent on natural habitats and communities.

Description

In this lesson, students will investigate the essentials for an animal habitat and in a small group, create an ideal habitat for a snail. Students will also create a possible food chain for their habitat and consider who and what might be included in a community where a snail may live.

Materials

- Chart paper
- Sticky notes
- Student Observation Sheet
- Materials for creating a habitat - dependent on student needs

Safety Notes

Students will be working with snails and/or other live materials. Gloves need to be worn when interacting with soils and/or live animals.

Introduction

On a piece of paper, ask students to write down what they ate for their last meal. You may get a variety of answers and this can serve as the beginning of a conversation on where our food comes from and food chains. Based on what they ate, have students try to map out the flow of energy from the sun to their own bodies. (i.e. sun → wheat → chicken → humans). Once students have come up with a relatively simple food chain, they may realize the interconnectedness of the food chains and that some of the plants and animals within may live within a habitat or community. Have them consider ways in which we are dependent on habitats such as farms in order to be able to live.

Action

Ask students to consider the factors that are essential for a habitat. Have them jot down their ideas on chart paper in groups or on sticky notes individually and take them up with the larger group. Let students know that they will be designing their own habitat for a snail. The habitat should be one that is sustainable and mimic a true snail habitat without much human involvement. Offer students some time to research what might be necessary for their environment. Here are guiding questions from the curriculum document you may wish to discuss before they set up their habitats:

- What factors need to be considered when setting up your habitat (e.g., location for container; creating the right climate, light, and humidity)?
- What equipment and materials (e.g., a container of the correct size, appropriate plant material and/or animals) will you need to create a habitat that meets the needs of the community it supports?

Once students have designed their habitats, they should begin to create them.

Consolidation/Extension

Give students the opportunity to determine the effectiveness of their habitats by allowing some time to pass. Have students record observations they are making about their habitats and compare them with other groups to see what differences exist. Here are guiding questions from the curriculum document that you may wish to discuss with students:

- What did you learn from your initial observations about meeting the needs of living things?
- What modifications, based on your observations, need to be made to keep the habitat healthy?

As a possible extension, you may wish to have students change some of the variables that they identified as necessary or important for their habitats and determine the results of those changes. Students should communicate their learning in small groups or to the larger class.

Resources

Information on Food Chains for Students and the Food Chain Game:

<http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain2.htm>

Khan Academy - Food Chains -

<https://www.khanacademy.org/science/biology/ecology/intro-to-ecosystems/a/food-chains-food-webs>

Build A Prairie - <http://games.bellmuseum.umn.edu/prairie/build/index.html>

Snail Facts - <https://kids.kiddle.co/Snail>

BBC Nature - Snails and Slugs - <http://www.bbc.co.uk/nature/life/Gastropoda>

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