

Ecosystems

4th-5th grades

Overview

In this build series, students will think critically about an ecosystem. They will express their understanding of the ecosystem and reflect on their personal interaction with that environment. They will also consider how life in the ecosystem would be different without certain organisms or factors and describe the importance of this kind of place.

Connect to Curriculum

This build series can be part of classroom activities that involve:

Life Sciences:

- Understanding that populations of organisms living together and the physical factors with which they interact compose an ecosystem.
- Identifying ways that changes in an organism's environment affect an organism's behavior and ability to survive.
- Understanding that humans obtain living and nonliving resources from their environments.
- Developing an understanding of populations and ecosystems.
- Understanding that populations or organisms can be categorized by the function they serve in an ecosystem.

Before You Begin

Assess and encourage prior learning by:

- Introducing and defining key vocabulary: *ecosystem*, *habitat*, *organism*, and *population*.
- Having students list populations and organisms in their own ecosystem such as their home, classroom, or neighborhood.
- Reading about, researching, or watching videos about different types of ecosystems, such as ponds, forests, estuaries, or grasslands, and the populations of which they are composed.

Build and Share

Have students build and share their models by following the steps outlined in the Challenge Cards provided with this activity.



Tip:

Consult the Quick Start Guide of this activity pack for ideas on classroom management and organization.



Vocabulary:

- **ecosystem:** a system formed by the interaction of a community of organisms within their environment
- **habitat:** the natural environment of an organism; the place where an organism is usually found
- **organism:** an individual living thing
- **population:** the total number of people living in an area



Reflect on the Experience

Encourage students to record and reflect on their models and ideas.

Extensions

After completing the build series, encourage further learning by:

- Writing a letter to a local representative in charge of community planning or development, persuading them to preserve a local ecosystem that is being modified or affected by humans (positively or negatively). (Language Arts)
- Conducting research to find out how this type of ecosystem has been understood or exploited by people throughout history, such as industrial, recreational, economic, or residential use. (Social Studies)
- Visiting a local ecosystem and studying a map of its features, population, and geography. (Social Studies, Science)

Facilitating Questions:

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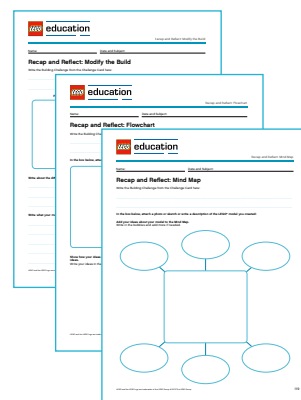
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Notes:

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Tip:

Use one of the Recap and Reflect Worksheets available in the Support Materials section of this activity pack to document the build experience.



Topic: Ecosystems

1 Think about



These four building tasks will help you express your thoughts and ideas about a local ecosystem and its value.

Topic: Ecosystems

2 Remember



Now that you've thought about a local ecosystem, it is useful to recall ways in which you have interacted with it.

Topic: Ecosystems

3 Imagine



Now you will use your imagination and creativity to think about how the parts of this ecosystem affect one another.

Topic: Ecosystems

4 Conclude



Now you will build a model that sums up what you have learned so far.

Build: Build a model that represents a local ecosystem.

Building Time: 3-4 minutes

Share: When the building time is up, take turns telling each other about what you have built.

Keep your model on your own building plate.

Build: Build a model that represents how you affect the ecosystem.

Building Time: 3-4 minutes

Share: When the building time is up, take turns telling each other about what you have built.

Keep your model on your own building plate.

Build: Build a model that represents how this ecosystem would be different if one of the populations or organisms were removed.

Building Time: 3-4 minutes

Share: When the building time is up, take turns telling each other about what you have built.

Keep your model on your own building plate.

Build: Build a model that represents the importance of this ecosystem to future generations.

Building Time: 3-4 minutes

Share: When the building time is up, take turns telling each other about what you have built.

Keep your model on your own building plate.



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