Grade 5 Structures & Functions of Living Organisms

Focus on: Dependent and Interdependent Relationships

This lesson is meant to support the unit on Structures & Functions of Living Organisms.

Clarifying Objectives:

5.L.2.1 Compare the characteristics of several common ecosystems, including estuaries and salt marshes, oceans, lakes and ponds, forests, and grasslands.

5.L.2.2 Classify the organisms within an ecosystem according to the function they serve: producers, consumers, or decomposers (biotic factors)

5.L.2.3 Infer the effects that may result from the interconnected relationship of plants and animals to their ecosystem.

Focus Question(s):

How is a community of living and nonliving things dependent/interdependent in an ecosystem?
What evidence do you have that this dependent/interdependent relationship exists?

Key Vocabulary:

Definitions can be found at http://learnersdictionary.com

-Compare
-Characteristic
-Organism
-Ecosystem
-Function
-Producer
-Consumer
-Decomposer
-Biotic Factor
-Infer
-Interconnected Relationship

Materials:

School Garden
Science Notebooks
Garden Gloves to wear while exploring the garden especially if touching plants, lifting pots, etc.

Activities:

1. Visit the school garden and have students explore to find living and nonliving things found in the school garden.
2. Call students back to discuss their findings. Direct students to use their science notebooks that will be used to create a web to record things they found in the garden.

Examples of components in a Garden Ecosystem:

Living (biotic):

- Plants
- Worms
- Beetles

3. Direct students to write the word “Garden” in the center of their page. Have students then write living things they found branching off to one side and nonliving things branching off to the other side. Students may need to explore the garden further to add more items to their web. They may also think of animals they know have visited the garden even if they are not currently there to be seen (birds, snakes, voles, deer, moles, bats, owls, etc.) 4. Once many elements are included in the web, review the concepts of dependence and interdependence. Use a single arrow to indicate dependent relationships. For example, light ---> plants. Use a double arrow to indicate interdependent relationships. For example, garden snails <---> plants. 5. It is not necessary to complete the arrow for all relationships if you or the students are not sure. It would be a great follow-up activity to have students research the creatures they are unsure of so that it could be completed at a later time. 6. Prompt students to look at all the relationships and discuss the meaning of dependent and interdependent. 7. Cover or erase one of the items, such as the snail, and ask students to name those things in the ecosystem affected by the loss of the snail. Use this example to demonstrate the importance of interdependent relationships.	- Caterpillars - Slugs - Garden snails - Birds - Bats - Snakes - Voles - Raccoons - Deer - Bees - Butterflies - Owls - Frogs - Variety of Insects **Non Living (abiotic):** - Air - Water - Sun - Soil