

Wethersfield Public Schools
NGSS Unit Overview
Interdependent Relationships in Ecosystems
Revised 2021-2022

Grade: K	Topic: Interdependent Relationships In Ecosystems	Time Frame/Duration: 4-6 Weeks
Brief Unit Description: In this unit, students figure out what animals and plants need to survive through a variety of different activities.		
Primary Performance Expectation(s) - Students who demonstrate understanding can: K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive. [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.] K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. [Clarification Statement: Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.] K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live. [Clarification Statement: Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.] K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.* [Clarification Statement: Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.]		
Looking Forward: 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. 2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow. [Assessment Boundary: Assessment is limited to testing one variable at a time.] 2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.*		

Learning Outcomes/ Hinge Ideas:

Animals and plants need things to survive including food, a safe habitat, and the ability to adapt their environment to meet those needs.

Science & Engineering Practices:

1. Asking questions
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations (for science)
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

Disciplinary Core Ideas:

LS1.C: Organization for Matter and Energy Flow in Organisms

- All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)

ESS2.E: Biogeology

- Plants and animals can change their environment. (K-ESS2-2)

ESS3.A: Natural Resources

- Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1)

ESS3.C: Human Impacts on Earth Systems

- Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (K-ESS3-3)

ETS1.B: Developing Possible Solutions

- Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (*secondary to K-ESS3-3*)

Crosscutting Concepts: Patterns

- Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1)

Cause and Effect

- Events have causes that generate observable patterns. (K-ESS3-3)

Systems and System Models

- Systems in the natural and designed world have parts that work tog

Suggested Resources/Lessons

NGSS Resources

Vocabulary List

This unit uses the Mystery Science Unit *Plants & Animal Secrets*, *Science A-Z resources*, and multiple read alouds. *It should be taught alongside your 'Writing All About Books.'*

Plant & Animal Secrets

Animals Science A-Z

Plants Science A-Z

Common Core State Standards Connections

ELA/Literacy -

- R.K.1** With prompting and support, ask and answer questions about key details in a text. (K-ESS2-2)
- W.K.1** Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book. (K-ESS2-2)
- W.K.2** Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. (K-ESS2-2),(K-ESS3-3)
- W.K.7** Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-LS1-1)
- SL.K.5** Add drawings or other visual displays to descriptions as desired to provide additional detail. (K-ESS3-1)

Mathematics

- MP.2** Reason abstractly and quantitatively. (K-ESS3-1)
- MP.4** Model with mathematics. (K-ESS3-1)
- K.CC** Counting and Cardinality (K-ESS3-1)
- K.MD.A.** Directly compare two objects with a measurable attribute in common, to see which object has “more of”/”less of” the attribute, and describe the difference. (K-LS1-1)