

7th Grade: Interdependence: Producers, Consumers & Decomposers

UNIT LESSON: Interdependence: Producers, Consumers & Decomposers

ESSENTIAL QUESTION(S):

1. Using the list of producers, consumers and decomposers on your Data Sheet, draw a small food web (you can use words or drawings) and indicate the direction of energy flow.
2. Select one limiting factor you determined exists in the ONA and explain how that limiting factor could be improved upon.
3. Describe one example of "Competition" you observed on the ONA and offer possible solutions to reduce that competition.
4. List or draw one of each of the following ecological relationships that **could** be on the ONA:
Commensalism – Mutualism – Parasitism – Predation

ART STANDARD(S): (C-Palms)

VA.68.C.3.4: Compare the uses for artwork and utilitarian objects to determine their significance in society.

VA.68.O.1.3: Combine creative and technical knowledge to produce visually strong works of art.

VA.68.H.1.1: Describe social, ecological, economic, religious, and/or political conditions reflected in works of art

FLORIDA STANDARD(S) & NGSSS: (C-Palms)

SC.7.L.17.1: Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.

SC.7.L.17.2: Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.

SC.7.L.17.3: Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.

ART CONTENT LEARNING GOAL:

Create drawing documentation of observations to describe ecological relationships in an ecosystem.

CORE CONTENT LEARNING GOAL:

Observe, identify and record ecological relationships in an ecosystem.

I CAN:

1. Identify, describe and draw a producer, consumer and decomposer in a specific ecosystem.
2. I can describe at least one example of Competition within an ecosystem.
3. I can identify Limiting Factors in an ecosystem.

VOCABULARY: Commensalism – Competition – Consumer - Decomposer - Ecology - Ecosystem - Energy transfer - Food Chain - Food Web – Inference - Limiting factor - Mutualism - Parasitism - Predation - Producer - Symbiosis

TECHNOLOGY & MATERIALS:

Paper, Pencil, Data sheet, Magnifying lens, binoculars, GPS/Mapping program (Google Earth).

LESSON: *(Bullet Points)*

- Prior to the site visit, Students will **define the Vocabulary** and have some knowledge of ecological processes and relationships.
- Working in pairs, students will make observations (or inferences) to identify producers, consumers and decomposers in the ONA.
- Students will record their findings on a data sheet.
- Students will observe, identify and describe examples of four ecological relationships among organisms on the ONA.
- Students will identify the limiting factors for organisms of the ONA ecosystem.

ASSESSMENT:

Student data sheets will be reviewed for completeness and accuracy.

Essential questions will be answered and reviewed.

Student drawings of organisms and relationships will be reviewed.

ESOL STRATEGIES:

Using visuals, collected specimens and role playing facilitate the following:

SC.7.L.17.Su.1: Identify different types of consumers in a food chain, including animals that eat plants, animals that eat other animals, and animals that eat plants and animals.

SC.7.L.17.Su.2: Recognize how living things affect each other in their habitat (ecosystem).

SC.7.L.17.Su.3: Identify how a lack of food, water, or shelter affects plants and animals in their habitats.