



BETHANY

LUTHERAN COLLEGE

Instructor's Name: Trevor Larson

Subject : Science

Grade: 5th

Title of Lesson: Energy flow in ecosystems

Standard(s) the Lesson will Address: Type out the source, number, and the text of the [standard \(s\)](#) addressed in this lesson

Science- 5.4.2.1.1- Describe a natural system in Minnesota, such as a wetland, prairie, or garden, in terms of the relationship among its living and nonliving parts, as well as inputs and outputs.

Objective: explain ecosystems, communities, and populations. Describe how food chains, food webs, and energy pyramids work

DIFFERENTIATION (if applicable) and ACCOMMODATIONS:

Differentiating **FOR:** readiness

Differentiating **IN:** content

Materials Needed:

- Science books

Vocabulary:

Content: ecosystem-all living and nonliving things in an environment

Biotic factors- living things of the environment

Abiotic- non living things of an environment

Population- all members of a single species

Community- all living things in an ecosystem

Food chain- the path that energy and nutrients follow in an ecosystem

Producers- organisms that use the sun's energy to make sugar and oxygen

Consumer- any animal that eats plants or other animals

Carnivores- animals that eat animals

Omnivores- animals that eat both plants and animals

Herbivores- animals that eat strictly plants

Scavengers- consumers that eat leftover bodies after they have started to rot

Decomposers- break down dead or decaying plant and animal material

Food web- a network of food chains that have some links in common

Predator- an animal that hunts other animals for food

Prey- organisms that are eaten by other animals

Energy pyramid- a diagram that shows the amount of energy available at each level of an ecosystem

Anticipatory Set:

Look and wonder, page 140. How do animals depend on one another for energy?

How do plants get energy to make food?

Input: (SCRIPTED)

Open to page 142

Before you read ,What is an ecosystem?

Read page 142, after ask students what are biotic factors, and what are abiotic factors of the forest ecosystem?

Are they both important? Why or why not?

Read 143, what is the difference between a population and a community?

population= all the members of single species

community= all the living things in an ecosystem

Refer to the fallen log on 143, what biotic, and abiotic factors do you see?

Turn to page 144

Before reading can anyone tell me what the difference is between consumers and producers?

Before reading can anyone tell me what herbivores, carnivores, and omnivores have in common and how they are different?

Read page 144-145

Be sure to note that almost every food chain starts with the sun and goes directly to a producer

Give students time to work on the Forest Food Web worksheet

Stop here for the day

Yesterday we talked about food chains, today we are going to talk about food webs. Can someone tell me the difference between the two?

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Guided Practice (Formative Assessment):

5-10 minutes

Not every plant or animal will have the same adaptations as the other. At each table I will assign an ecosystem. With that ecosystem, each table must list at the minimum of three plants, and two animals and their adaptations. At the end of the class each table will present their findings to the class of how these adaptations help the animals and plants survive in their ecosystem.

Ecosystems- Tropical forest, desert, tundra, great plains

Closure: (SCRIPTED)

Group presentation of their findings. Bring it all together to talk about how each ecosystem is different so therefor each adaptation will most likely be different.

<http://www.slideshare.net/mrimbiology/adaptations-in-different-biomes-notes>

Independent Practice/Summative Assessment: (How will students extend or apply their learning OR demonstrate mastery? If demonstrating mastery, include criteria for evaluation (checklist, rubric, sample, etc).

Reflection

- 1. As I reflect on the lesson, to what extent were students productively engaged?**
- 2. To what extent did the students learn what I intended? Were instructional objectives met?**
- 3. To what extent did I alter my objectives or instructional plan as I taught the lesson? Why?**
- 4. To what extent did I practice effective classroom management strategies? What issues do I need to address when I teach again?**

5. To what extent did I provide closure to the lesson?

6. If I had the opportunity to teach this lesson again to the same group of students, what would I do differently? Why? How would this affect the outcome of this and future instruction?