

LESSON PLAN: Food Web

An Elementary Science Lesson Plan Designed For Group Inquiry Based On The 5E Inquiry Model

GRADE LEVEL: 4th, Level 1 inquiry

SCIENCE CONCEPT (the Main Idea or Enduring Understanding):

2. All organisms need energy and matter to live and grow. As a basis for understanding this concept

RELATIONSHIP TO CALIFORNIA SCIENCE CONTENT STANDARDS:

b. Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem.

LEARNING OBJECTIVES:

Students will identify the characteristics of herbivores, carnivores, and omnivores.

EVALUATION IDEAS:

(A) Summative – Have students pull out the food web. Tell them they have to label each member of their food web as either a herbivore, carnivore or omnivore. Then hand them the worksheet Food Web 1 and/or Food Web 2 and have them fill it out.

(B) Formative – While students are creating their own food webs make sure to go around and verify they can do it successfully. Ask them if they think the animal they are drawing is a herbivore, carnivore, or omnivore.

CONCEPTUAL BACKGROUND:

You should know: a herbivore; an animal that eats plants; a carnivore, an animal that eats meat; an omnivore, an animal that eats both meat and plants; and a decomposer; anything that eats or decomposes dead things (i.e. bacteria, fungus and mushrooms). You should also have examples of each to give to the children in case they ask.

It is also important to understand the food web (not a food chain). Many animals eat other animals. An example of this is that hawks eat snakes, hawks lay eggs which are then eaten by snake, and both are eaten by foxes. Look to the power point EDEL 108B Food Web for an example of how complicated this can be or Google it. You might be surprised by how complicated they can become.

VOCABULARY:

Food Web
Herbivore
Carnivore
Omnivore
Decomposer

LESSON IMPLEMENTATION PLAN:

ENGAGE – What do us as humans eat? Have students discuss and make a list for them all to see. This is a perfect opportunity to get your ELL students involved and participating. What other animals might eat these items? What might these animals eat that we don't? What other animals might eat that? Keep drawing lines between the lists and make a makeshift food web. The more complicated and confusing the food web the better. We just built a food web!

EXPLORE – Explore the power point presentation “Food Chain.” This should help students organize their thoughts. Make sure to do a word wall or other vocabulary technique (i.e. a personal dictionary) with the main vocabulary.

EXPLAIN – Explain to students that everything is connected in an ecosystem. Plants get their energy from absorbing sunlight through a process called photosynthesis. They use nutrients and water from the ground and the energy from the sun to grow. Then other animals called omnivores and herbivores eat these plants to gain energy and nutrients. Carnivores then eat other animals in order to gain nutrients form themselves. Have the students get into groups and create their own food web. They can use examples from the engagement but encourage them to come up with new animals. Make sure they have plants, humans and at least one carnivore, and herbivore. This is a good opportunity to conduct a formative assessment.

ELABORATE –

Once students have finished their food webs introduce the idea of producers and consumers. Lead students in a discussion of what might be a producer and a consumer on their food web. What could a producer be? What could a consumer be? Inform them that a producer is a plant or plant like creature. They gain their energy from the sun. A consumer eats something else. Have students label one of the producers and one of the consumers on their food web. You can also ask whether or not the ocean has any plants in it? (It doesn't just so you know...kelp is technically an algae. plankton are the producers of the ocean.)

EVALUATE –

(a) summative – Have students pull out the food web. Tell them they have to label each member of their food web as either a herbivore, carnivore or omnivore. Then hand them the worksheet Food Web 1 and/or Food Web 2 and have them fill it out.

(b) formative – While students are creating their own food webs make sure to go around and verify they can do it successfully. Ask them if they think the animal they are drawing is a herbivore, carnivore, or omnivore.

DIFFERENTIATION PLANS:

Behavioral for Student A – Students with behavior difficulties should be wrapped up in creating their own food web. If they finish and are causing problems have them create another food web that has him or her at the top and to draw every animal they have eaten. You can also have this student work alone if behavior doesn't improve.

Cognitive for Student B (advanced) – Have this student include an environment in their food web. They can only include plants and animals from that environment in their food web.

Cognitive for Student C (slower) – Allow this student to use fewer examples on their food web (but at least one of each). You can also help them through by giving them ideas of animals they might have eaten. Ask what eats that animal? Then have the student add that to their food web.

Affective for Student D (emotional) – use the same strategy for behavior student A. Have them place themselves on the top as the chief consumer. Then have them draw every type of animal they can remember that they ate. Then ask what that animal eats. Don't have this student work alone if you can help it. Seeing other students enjoying making a food web will bring him in. If not ask the other members of the group to try to include his ideas.

Language Demands for Student E (no English) – Luckily creating your own food web can be done in other languages. This is a great opportunity to have these students participate and share their cultural background with their native languages names for animals. Make gestures and noises when describing the vocabulary (herbivore, moo; carnivore, growl and pretend to eat meat; omnivore, do both). They should understand what the words mean given the examples and gestures.

Language Demands for Student F (little English) – Use a word wall (where you place the vocabulary with visual examples next to it on the board) if you

have any ELL students that might struggle with the vocabulary. Allow them to refer to the board during your assessments

Language Demands for Student G (More English) – Have these students create a personal dictionary. This can be used for multiple lessons. They should add the vocabulary to their personal dictionary and write what the word means in a way they understand it. This can be in English or their native tongue.

LIST OF MATERIALS (PER GROUP):

Pens/Pencils/Crayons

Large sheets of Paper or Sticky notes for their group food web.

Worksheet “Food web worksheet 1” and/or “Food web worksheet 2”

DIRECTIONS OR SPECIAL INSTRUCTIONS; SAFETY CONCERNS, ETC.

Don't get too into being a carnivore and bite your kids...

Recommended Reading: *Slinky Scaly Slithery Snakes* by Dorothy Hinshaw Patent.