Food Chain Tag

Students will learn a brief background about energy transfer between the sun, producers, primary consumers, and secondary consumers. ½ of the students are primary consumers (plants) and ¼ of the students are primary consumers (rabbits) and ¼ of the students are secondary consumers (hawks).

Grade Level: 3 - 4th
Subject: Environmental, P.E., Science
Length of Time: 20-40 Minutes

Objectives & Outcomes
Students will be able to interact in a way that shows their understanding of the concept.

Materials Needed
- a court with boundaries for the tag-game
- paper and pencil

Procedure

Opening to Lesson
- Ask students if they have ever seen a wild rabbit in your city. In a movie? In a book?
- What do they think they eat? (plants)
- Do the rabbits have to be afraid of anything? Predators?
- Students may answer foxes, mountain lions, birds. If students don’t suggest it, suggest the Hawk.

Body of Lesson

Modeling
- Draw a pyramid on the board that has 3 sections.
- In the bottom, biggest part of the pyramid, write producers.
- In the middle level of the pyramid, write primary consumers.
- In the top level of the pyramid, write secondary consumers.

Guided Practice
- Ask students where they think the rabbit fits into this pyramid.
- The rabbit is a primary consumer and an herbivore because it eats only plants.
- Ask students where the food that rabbits eat should be.
  - Plants go on the bottom level because they are producers.
- Ask students which animals belong in the top level.
Hawks and foxes are carnivores and belong there along with other animals that eat plant eaters.

- Explain that the sun is also important because it gives energy to the producers (plants).
- You may wish to explain that there are also tertiary consumers that eat both omnivores and carnivores, like mountain lions that may eat the rabbits or the foxes.

**Independent Practice**

- Explain that they will now play a tag-like game in which they will play the roles of hawks, rabbits, plants and 1 sun.
- Assign about ½ the class to be plants.
  - The keep their arms to their side and try to avoid being “eaten” (tagged) by the rabbits.
  - If “eaten” by a rabbit, converts to rabbit.
- Assign about ¼ of the class to be rabbits.
  - They should put their hands to their heads like bunny ears and try to “eat” (tag) the plants and avoid being “eaten” by the hawks.
  - If “eaten” by a hawk, converts to a hawk.
- Assign about ¼ of the class to be hawks.
  - They run around waving their arms like wings and try to “eat” (tag) the rabbits and avoid being tagged by the sun.
  - If tagged by the sun, converts to plant.
- Assign 1 student to be the sun.
  - The sun can tag the hawks and convert them back into plants.
    - The sun does not have to have a hand motion, but all students should know who they are.
- Explain that the sun is the most powerful of all. In this game, students will pretend that there is no water, and without water, animals will die of dehydration. After a long process, dead, decomposed animals eventually return to the soil and nourish plants. And the sun gives energy to these plants. As a review
  - As a review:
    - Hawks wave their arms like wings and hunt the rabbits and avoid the sun.
      - When tagged by the sun, turns into a plant.
    - Rabbits make bunny ears on their heads, hunt the plants and avoid the hawks.
      - When tagged by a hawk, turns into a hawk.
    - Plants keep their hands to the side and avoid the rabbits and don’t hunt anything.
      - When tagged by a rabbit, turns into a rabbit.
    - The sun can only tag the Hawk, converting them to a plant.
      - The sun has no predators.

**Closing**

When you return to the classroom, have students draw a pyramid on a small “exit card” (a piece of scrap paper). Instruct students to label each section of the pyramid with examples of consumers (different types of plants), primary consumers (animals that only eat plants) and secondary consumers (animals that eat other animals).
Have students write their name on their exit card and exchange it with a partner. Tell the partner to read it and make sure it is correct and when both partners agree that they both have accurate pyramids, they can turn in each other’s cards. (Partner A will turn in Partner B’s card only when Partner A believes it is 100% correct and vice versa).

**Assessment & Evaluation**
Teacher can observe students interacting the game. Teacher can collect exit cards after a debrief of the game to quickly check that each student remembers the vocabulary.

**Modification & Differentiation**
The teacher can assign students to partner “guides” to help them throughout the game.

**Related Lesson Plans**

**Trust Me**
This lesson will allow students to practice teamwork and trust building, as well as working on directionality for younger students.

**Biosphere**
This lesson will allow students to create a self sustaining biosphere.

**Window Garden**
Students will plan, experiment, and observe as seeds grow in a window garden. Students will explore why this is important to the sustainability of our environment.

**And Freeze!**
Students will practice listening skills and basic physical concepts as required in physical education class. Students will also work on balance and coordination.