



Food Web Interactions

Prep

This activity can be used as a follow up to Lesson 2: The Population Puzzle. In this lesson students learn how different populations of species interact with each other to create complex ecological systems. This activity will give students the opportunity to put that knowledge to use and create their own food webs that will adapt to various real world scenarios. Before the activity begins prepare a bag with cut up pieces of paper that include the scenarios listed below. Feel free to include other potential interactions that you come up with.

Materials

- Laminated animal/habitat cards
- Blank paper
- Markers, crayons, colored pencils, pencils or pens
- Basket, hat or bag

How to

- Provide students with markers and paper and instruct them to create their own food web using the species that have been introduced in the lesson and are common to Rhode Island. You can post the cards up on the board or spread them throughout the room for students to reference.
 - Make sure students include at least two species at each level of the food web (two predators, two primary herbivores, etc.).
 - Students can get creative with the species they use and it is ok for food webs to look different from one another.
 - Have the students draw arrows between the animals in the food web to show the direction that the energy is being transferred.
- After students have completed drawing their food webs, pull out the bag you prepared with different food web events.

- Population events that can be included as scenarios:
 - Drought reduces the abundance of one of your plant species
 - Hunting season begins and there is a decrease in the amount of deer (or other primary consumer)
 - Trapping regulations help improve the predator population in the area
 - A new predator is introduced to your community and acts as competition for the other predators
 - Deforestation causes one of your herbivores to go extinct in the area
 - An invasive plant species colonizes the area and causes one of your native plant species to become reduced in abundance
 - One species of predator is removed from the area and there is no longer competition for the other predator species
- Other events can be brainstormed or included. Each event should have an effect on the abundance of one of the organisms in the food web.
- Have each student draw an event out of the bag and ask them to reflect on how it would impact their food web
 - Make sure they consider each organism in the food web and how its population may be effected in response to the scenario
- Divide students into groups or come back together as a whole class and have them present their scenarios to one another.
- Have the students describe the interactions in the food web both before and after the event took place. To extend the activity students can write out the story of the event they choose.