



Predator-Prey Interactions

Research Objective: Data Collection and Analysis

Description

Every organism in an ecosystem is connected to other organisms through feeding relationships. In this two-part activity, you'll create a model of an organism that lives in your class's chosen habitat and explore whether it is a predator or prey. You'll then take your model outside and work with your classmates to build a food web that shows how the organisms in an ecosystem are connected.

As you build your food web, you'll collect information about predator-prey relationships and explore how energy moves through an ecosystem. You'll also consider what might happen to the food web if one organism were to increase, decrease, or disappear.

Procedures

1. As a class, select a habitat (biome).
2. Choose an organism that could live in that environment.
3. Decide if your organism is a predator, prey, or both. Think about what your organism eats and what might eat it.
4. Paint your rock to look like the organism you selected. Add colors, patterns, and features that help identify it.
5. Share your organism. Tell the class what organism your rock represents and whether it is a predator, prey, or both.
6. Let your rock dry completely. Your instructor will apply the acrylic sealer.
7. After 24-hours, take it outside and place it in an area that represents your chosen habitat.
8. Find your connections. Look at your classmates' organisms and identify which ones could interact with your organism as a predator or prey. Think about what your organism might eat and what might eat it.
9. Use chalk to draw lines between your rock and the organisms that could interact with it as a predator or prey.
10. Build your food web. Start with your organism and follow the chalk lines to the organisms it interacts with. Then look at those organisms and identify their predator and prey connections.
11. Go back to your organism and continue adding connections to build a larger food web.

Materials

- Smooth river rocks
- Paint
- Paint brushes
- Water cups
- Paper towels
- Acrylic sealer (instructor use only)
- Chalk
- Animal reference images, if needed

Tips

Stay safe with acrylic sealer. Acrylic sealer should only be applied by the instructor in a well-ventilated area and according to the product's safety instructions. Students should not handle or spray the sealer.

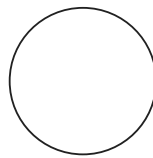


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Building your Food Web

Build your food web. Start with the center circle and write your organism's species name. Follow the chalk lines to the organisms it interacts with, adding each species to your food web and identifying it as a predator or prey.

Continue following the connections and adding predator-prey relationships until you've built a larger food web showing how your organism is connected to the habitat.



1. How is your organism connected to the other organisms in the food web?
2. What do you think would happen if one organism left your food web or disappeared?
3. What did you learn from building the food web that you might not have noticed by studying organisms individually?