

Details



Completion Time: About one period

Permission: Download, Share, and Remix

Arctic Marine Life: Zooplankton and the Bowhead Whale Migration Simulation

Overview

Students are designated as the water or ocean currents, zooplankton, and bowhead whales. The zooplankton are informed that they are at the mercy of the currents. The currents are given instructions as to where to go during different times of the year (map). The whale pod is told that they need to breathe (raise hands above head to indicate surfacing) and eat (stay close to zooplankton to obtain small pieces of food paper) in order to survive. Students map their migration.

Objective

Students will see that whales must follow their food (zooplankton) and the food follows the currents to understand the importance of abiotic elements on biotic components of ecosystems.

Preparation

Make instruction sheets for each group, cut pieces of colored paper to be "food", arrange desks to represent landforms (Alaska/Canada + Russia), get map.

Description

- Students tell teacher what whales eat. Teacher elaborates and shows pictures of krill/copepods and full whale stomach, watch videos of whales feeding.
- Separate students into 3 groups, give instructions to each group
 - ~ 3 students are designated as the water or ocean currents
 - remaining $\frac{3}{4}$ of the students are designated as zooplankton
 - remaining $\frac{1}{4}$ as whales (at least 3 because pods are 3+)
- Explain that the desks are land and everyone has to go around the land
- Teacher tells the students which season they are in and the currents direct the other students where to go.

Materials

- "food" paper
- instruction sheets
- map

Teacher redirects if necessary

- Teacher keeps activity going by saying the months and the currents keep everyone moving.
 - Whales must make sure they eat and breathe – teacher takes away “food” paper every month so they must keep eating in order to survive
 - As the months progress, teacher changes out the “food” cards to match where the whales are: Copepods-Canada, krill-Alaska
 - Students go through 1-2 years for the activity, depending on time.
- Students return to desks and teacher asks the whales why they moved where they did, where & during which season – currents help answer if whales don’t remember
- Teacher shows bowhead whale migration and relates it to what the students just did
 - Points out currents (maybe juxtapose map), location of food during parts of year
 - Students fill in on map: migration route, what bowheads eat, and months/seasons
- Extra Activity: discuss other migrations – Serengeti/Masai Mara, monarchs, whale sharks, arctic tern
- Homework: students draw 2 food chains – must include sun!

Resources

n/a

Credits

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