

Darwin's Finches Lesson

Question: How do animals adapt to different environmental pressures? How are adaptations exhibited in animal diversity?

Kentucky Core Content:

SC-M-3.4.1 Biological change over time accounts for the diversity of species developed through gradual processes over many generations. Biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.

Objectives: Students will be able to

1. Explain animals have adaptations for certain food sources.
2. Describe niches and the cohabitation of similar organisms within an ecosystem with multiple food sources.

Materials: see attached

Procedure/Time: see attached

Assessment: Class discussion of the results and questions will assess students learning.

Teacher Notes: Reduce number of food sources for smaller class sizes. Prepare food containers with "beaks" in advance of class if time is limited. An appropriate follow-up or beginning activity would be a discussion of Darwin's actual discoveries concerning finches.

Darwin's Finches Activity

Materials:

30 Beakers (one per student)--"Crops"--the organ before the stomach that helps digest food

15 Food containers (one per group)

30 Calculators (one per student)

"beak" bag with slips of paper and tool types

Food—Insects

Worms

Sunflower seeds

Cranberries

Barley (grain)

Dried beans

"Beaks"—Clothespins

Skewers

Scoop/spoon

Chopsticks

Procedures:

Students work in groups of two.

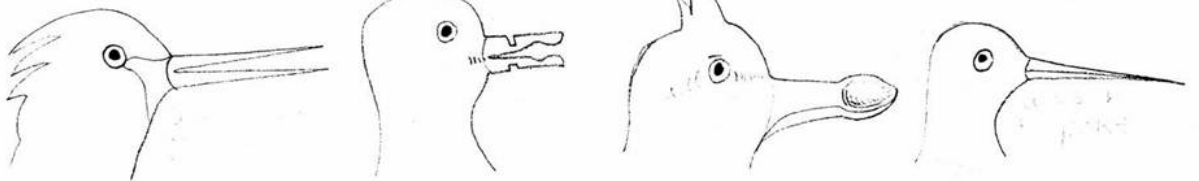
1. Make predictions about which type of beak is best suited for which type of food:

Chop-stick beak

Clothespin beak

Scoop beak

Skewer beak



I predict that birds with _____ beaks will be best at eating insects.

I predict that birds with _____ beaks will be best at eating worms.

I predict that birds with _____ beaks will be best at eating sunflower seeds.

I predict that birds with _____ beaks will be best at eating cranberries.

I predict that birds with _____ beaks will be best at eating barley (grain).

I predict that birds with _____ beaks will be best at eating dried beans.

2. Draw a slip of paper out of the "beak, island and food" bag.
3. Get your group's two "beak" tools.
4. Get one container of food from your island
5. Practice using your tools to pick up the food and put it in your "crop"