Exploring Animal Adaptations

Bird Beaks—You Are What You Eat

Now that we've spent some time learning about the characteristics that make the raptor unique, we can ask the question of why these characteristics exist in the first place. We all know birds have beaks—but have you ever noticed how different a woodpecker's drill-like beak looks from a duck's flattened bill? These differences are an example of *adaptations* to different ways of life. In this activity, we will explore how these adaptations account for the different dietary habits of various species of birds.

Material List

This experiment can be performed with a variety of materials, all of them found around the house or classroom. Most of these objects can be easily substituted depending on availability—don't feel confined to these suggestions.

- Tweezers
- Spoon
- Safety Scissors
- Drinking Straw
- Marshmallows
- Gummy worms
- Swedish Fish
- Fruit juice
- Dried Rice
- Water
- 4 bowls (or other containers)

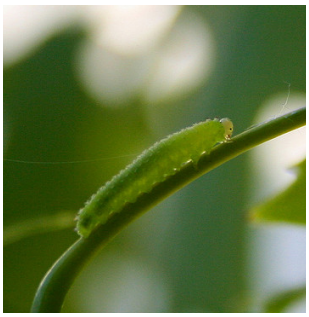
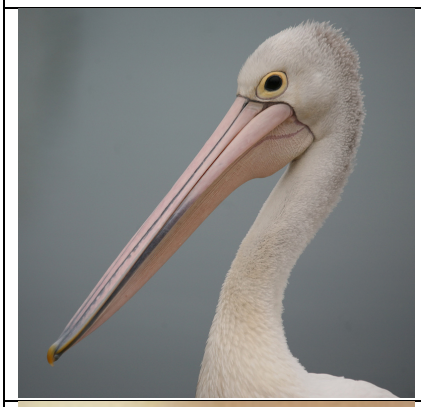
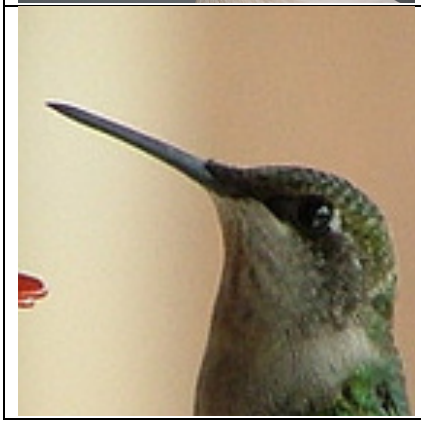
How To Set Up

1. Fill the first bowl halfway with water and then add the Swedish fish. This is meant to represent a lake or ocean.
2. Fill the second bowl halfway with dried rice and then add the gummy worms. The rice is meant to represent soil, so make sure the gummy worms are slightly buried.
3. Fill the third bowl with just the fruit juice. This is meant to represent nectar.
4. To the last bowl add only the marshmallows, to represent small land animals.
5. Lastly, lay out the tweezers, spoon, scissors, and drinking straw. These are the different types of beak with which we will experiment!

The Experiment

Try using the different tools to forage for food in each of our constructed habitats. You'll soon notice that some of the beaks seem to work better than others for certain types of food. See if you can match which tool is most adapted to each environment! Check out the guide on the next page to see an explanation of the answers.

Animal Adaptations—Bird Beaks

	**Eagles, hawks and other raptors** Sharp, curved and talon-like. Used for cutting and tearing soft prey. *(Safety scissors)*	Primary Food Source: Mice and other small rodents *(Marshmallows)*	
	**Robins, Finches and Woodpeckers** Strong and drill-like. Useful when picking out insects from the ground. *(Tweezers)*	Primary Food Source: Worms and insects (*Gummy worms)*	
	**Pelicans** Long bill with a throat pouch, ideal for scooping fish from the water. *(Spoon)*	Primary Food Source: Fish *(Swedish fish)*	
	**Hummingbird** Very long and thin, used for sucking nectar out of flowers. *(Drinking Straw)*	Primary Food Source— Nectar *(Fruit juice)*