



Virtual Academy Animal Adaptations

Goal: Students will learn that animals have physical features and behaviors that influence their survival.

Standards and Correlations:

- *Cognition and General Knowledge Domains*
 - Science Inquiry and Application-Inquiry- C39 to C46
 - Earth and Space Science- Explorations of the Natural World- C49
 - Life Science- Explorations of Living Things- C52 to C53 and C55
- *NAEYC Accreditation Criteria* (2A.2, 2B.4, 2C.1, 2D.1, 2D.2, 2E.2, 2E.3, 2E.6, 2E.15, 2E.17, 2F.5, 2F.7, 2F.8, 2F.9, 2F.13, 2F.16, 2G.3, 2G.4, 2G.9, 2G.10, 2G.11, 2H.1, 2L.2, 2L.3, 2L.9, 3B.1, 3D.3, 3D.7, 3F.1, 3G.3, 3G.5, 3G.6, 3G.8, 3B.1)

Overview: Adaptation is the process by which animals change and become better suited to their environment. This process takes place over time as animals develop traits that help them survive. Adaptations help animals meet their basic needs of food, water, shelter, and space as well as giving birth and caring for their young.

There are two types of adaptation: physical and behavioral. Physical adaptations are features of the body that help an animal survive in its environment. These features include body shape, size, coverings, color more. Behavioral adaptations are changes in how an animal does activities in its daily life.

Vocabulary:

- **Adaptation** – a physical feature or behavior that helps an animal survive in its environment
- **Physical** – relating to body features (shape, size, color, etc.)
- **Behavior** – the way an animal does activities in its daily life
- **Camouflage** – the ability to hide or blend in with the surroundings

Materials: video lesson and lending kit (Potato Head, cups, beaver skull, bobcat skull, raccoon skull, model of human teeth, pipettes, clothespins, and tweezers, bird food, magnifiers, bird pictures, mammal pictures, 'Can you see me?' game, tarp)

Warm Up: Have the students sit in a circle. Use Potato Head to talk about some of the students' adaptations that they use every day. Go through each of the body parts that they use for their senses. Ask the students how they use those body parts to know about the world around them

(sight, hearing, touch, smell, and taste). Ask students how these adaptations help them survive in their environment.

Next, ask students to focus on their hands and talk about their thumbs. Not all animals have opposable thumbs, so this is an adaptation for humans. Have students try the thumb challenge by using the cups provided in the kit. Discuss what happens. Ask students to name an animal whose paws are like our hands. If they answered raccoon, they are correct. Explain to the students that they are going to learn more about animal adaptations.

Main Activities: Show students the video lesson. After viewing, have students participate in adaptations activities using items from kit.

- Bird Beak
 - Method:
 - Allow students time to explore the different tools (“beaks”) and “bird food” items.
 - Discuss the utensils that people eat with. Do we eat soup with a fork? Hamburger with a spoon? Explain that birds have beaks shaped certain ways to help them eat their preferred foods.
 - Have the students compare which “beak” worked best with the several types of foods.
 - Game:
 - Organize students into small groups to act as nests of birds, arrange “foods” in an area away from the “nest.”
 - One student will act as the parent bird. Taking turns, they choose a “beak” and “fly” to the foods. The goal is to carry food in their beak and place it in the cups (representing a nest). Spread out tarp for easy cleanup of dropped food.
 - After everyone has had a turn as parent bird and experimented with a variety of “beaks,” ask:
 - Which type of food was easiest to carry?
 - Did certain beaks work best with certain foods? Why?
 - Which bird picture matches up with the tool (“beak”)?
- Mammal Teeth
 - Method:
 - Allow students to explore model human teeth.
 - Discuss the types of teeth and their functions.
 - Incisors- used to cut food.
 - Canines- used to tear food.
 - Molars- used to grind food.

- Explain to students that the types of teeth found in animals' mouths will tell us what kinds of food they eat: plants (herbivores), meat (carnivores), or both (omnivores).
 - Game:
 - Set up three mammal skull stations: beaver, bobcat, and raccoon. Each station will have two magnifiers and one skull. Split students into three groups.
 - Assign each group a station. Give the students 2-3 minutes to examine the skulls and try to determine if the animal ate plants, meat, or both. Rotate skulls to a different group until everyone has had a turn to see each skull.
 - After every student has examined the skulls asks:
 - Which mammal ate plants/meat/both? Why?
 - Which mammal picture belongs to what skull?

Wrap Up: Review what adaptations are and give examples.

Extended Activities:

- 'Can you see me?' game (lending kit)
- Sing the adaptation song to bring it all back together:

"Look at that animal" (to the tune of "Frere Jacques or Brother John")

Look at that animal, look at that animal.

What do you see? What do you see?

*Ooh, it has a stripey tail, climbing claws and little hands,
It's a raccoon, it's a raccoon.*

Look at that animal, look at that animal.

What do you see? What do you see?

*Ooh, it has some scaly skin, a hard shell and digging claws,
It's a turtle, it's a turtle.*

Look at that animal, look at that animal.

What do you see? What do you see?

*Ooh, it has a swimming tail, fins, and covered all in scales,
It's a fish, it's a fish.*

Look at that animal, look at that animal.

What do you see? What do you see?

*Ooh, it has 2 wings, a beak, feathered body, and it tweets,
It's a bird, it's a bird.*

