

## Animal Adaptations Pre Visit Guide: Pre K – 1<sup>st</sup> Grade

*Webbed feet, wings, camouflage and quills are all unique features. We will learn how animals utilize them to live and thrive.*

These resources will help you and your students prepare to make the most of your zoo experience!

### In-Classroom Activities

Explain that an **adaptation** is a feature or behavior that helps an animal survive in its habitat. A habitat is the animal's home, and animals often have characteristics that match a specific type of natural environment.

**Think:** if you were to bring a fish out of the pond and in to the classroom, would it be able to survive for very long? Why not? Similarly, would you be able to go underwater in the pond to live with the fish?

There are many types of adaptations; explore a few with these activities:

#### BEAKS & TEETH

**The Right Tools:** Create a bucket of "bird food", including a wide variety of shapes, sizes, and textures (beans, pasta, cereal, gummy worms, marshmallows, etc). Provide each student with a household tool to use as a 'beak' (toothpicks, tweezers, clothespins, spoons, forks, pipette, etc). Explain that they will have a set amount of time to forage for food using only their beak and to put the food in a paper bag or cup, which represents their 'stomach'. When time is up, have the students share what they were able to collect with their tool. Did certain tools/beaks work better for certain food items? Are birds the only ones with specialized tools for eating?

**Animal connection:** Even animals that eat the same kinds of foods may have different adaptations! Eagles have sharp talons on their feet used to catch fish, and a hooked beak to rip and tear. Pelicans also eat fish, but have a large pouch to scoop up their dinner.

#### INSULATION

**Blubber Glove:** Fill a one or two gallon bucket half full with cold water and add ice. Fill a quart Ziplock bag with 3 or 4 heaping spoonfuls of vegetable shortening, then push a bag of the same size as the first into the shortening-filled zipper lock bag. Spread the shortening around the zipper lock bags until the inner bag is mostly covered. Fold the top of the inner zipper lock bag over the top of the outer zipper lock bag, keeping the shortening between the two. Duct tape the fold in place so that the shortening does not come out of the bag. Have students test the "Arctic water" with their bare hand, and

then with their hand in the “blubber glove”. Which hand was able to stay in the cold water longer?

**Animal connection:** The animals of the Arctic and Antarctic circles spend their lives surviving subfreezing air temperatures and frigid water. Their secret is blubber, a thick layer of body fat that comprises up to 50% of some marine mammals. Fat keeps heat in and cold out!

### FEET & MOVEMENT

**Grip Like a Gecko:** Blow up a few balloons, and demonstrate to the students how to rub the balloon on their hair and then stick the balloon to another surface; explain that the balloon rubbing on hair creates static electricity, and makes it attracted (want to stick) to other surfaces. Allow students to test this themselves, and have them experiment with time frames; does the balloon stick longer if you rub it on your head longer?

**Animal connection:** Scientists found that geckos use electrostatic forces in order to keep a firm grip when climbing on smooth walls and across ceilings. Each gecko toe has tiny hairs that branch out into hundreds of tiny endings. These create electrostatic attraction and support the gecko!

### CAMOUFLAGE

**Hide N’ Seek:** Print and cut out the colored bugs on page 3, then hide them around the classroom (or outside if possible). Try to match them with similar colors in the surrounding area. Explain to the students that they are going to go bug hunting! Give them the search area boundaries and show them an example of what they are looking for, then see how many bugs they can find! After all the bugs have been found, allow students to take turns hiding them in groups.

**Animal connection:** Species of insects known as phasmids, or stick bugs, have green or brown elongated bodies with thin legs that imitate the branches of the plants they hide on. They also produce eggs that look like seeds, making them harder to identify by predators.

## Recommended Reading

- [What If You Had Animal Feet?](#) by Sandra Markel
- [What Do You Do With A Tail Like This?](#) by Steve Jenkins
- [Creature Features](#) by Steve Jenkins
- [How to Hide An Octopus](#) by Ruth Heller

## Discussion/Research Topics

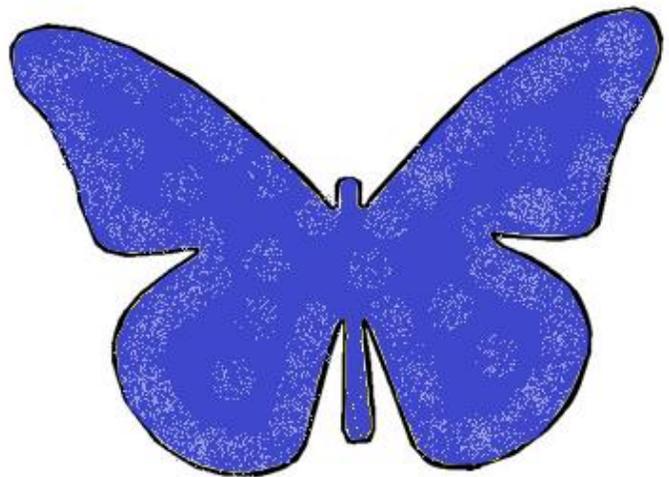
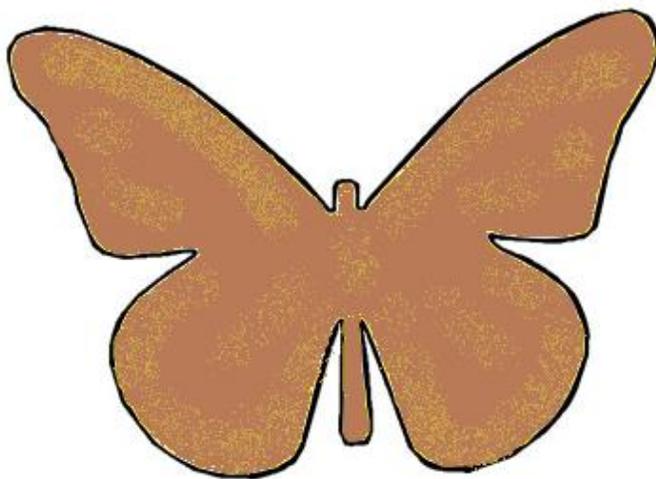
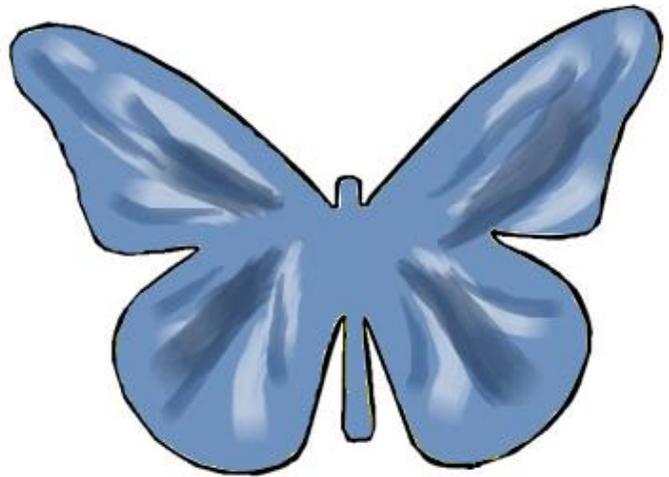
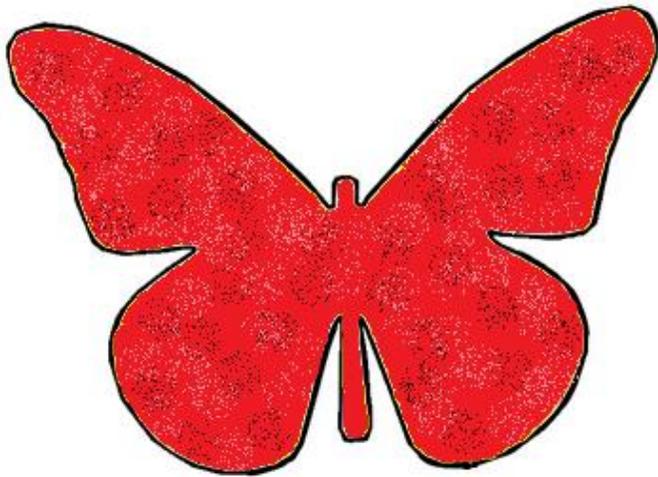
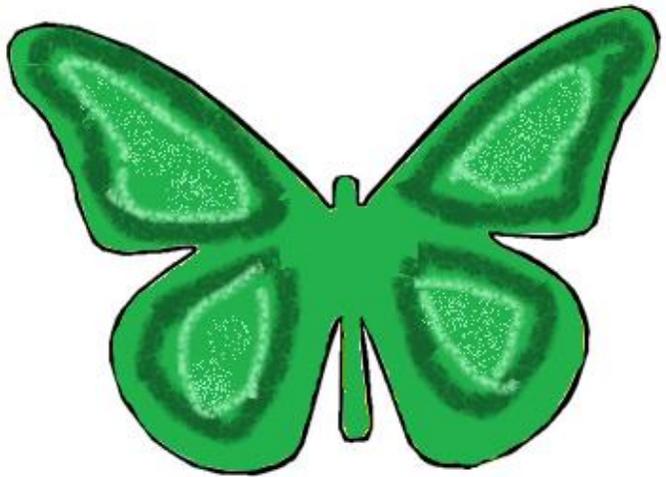
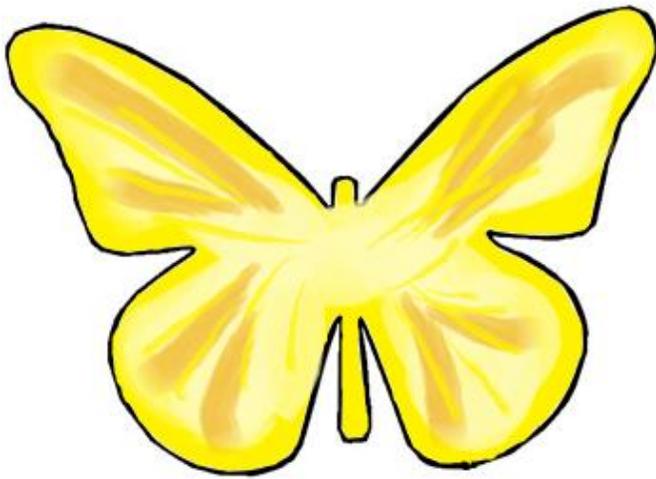
*If you could have any animal adaptation, what would it be? Why?*

*How have some species changed over time to adapt to new environments?*

*Are animals still adapting to our changing world?*

**Hint:** Lizards in the Caribbean have developed longer toes to survive hurricane weather; Tawny owls are showing more brown than gray coloration in a warmer climate.

### Hide N Seek Bugs



### Student Worksheet

Color the animal so that it will blend in with its habitat!

