



# Adaptations

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[LS1-1 & LS1-2]

[4<sup>th</sup> & 5<sup>th</sup> Grade]

## Overview

Animals have a lot of variation in their traits. These traits are called **adaptations**, or characteristics an animal has that enhances its ability to survive. These characteristics can be influenced by their environment and are inherited from their parents. Yet, why do the animals have the adaptations they have?

## Concept Questions

- Where does an animal get its energy from?
- What does an animal use its energy for?
- What does an animal use its adaptations for?
- How does the animal sense danger? How does it respond to danger?

## Background Information

Adaptations can be grouped in three categories. Physical (horns, claws, wings, etc), Physiological (goosebumps, venom glands, etc), and Behavioral (migration of birds, reptiles moving to regulate temperature, etc). These adaptations can change based on their environment. For example, if there is limited food, an improper diet may cause stunted growth. Even a seasonal change may cause an animal's camouflage pattern to change.

**Adaptations Activity:** Students will design their own animals, with an emphasis on what adaptations they believe their animal might need to survive.

1. Students will need to pick a biome or habitat for their animal. These include Arctic, Desert, Savannah, Rainforest, Ocean, Deciduous Forest, Grasslands, Mountains, and more
2. Once they know WHERE the animal is going to live, students should consider what problems their animal may face and make a list (Snowfall, extreme hot or cold, wind, steep cliff edges, etc)
3. Now students should consider what other animals live in that area. How does their animal interact with the other animals? Is it a predator or prey? Where does the animal fall in the food web? How does it get its food?
4. With these questions in mind, students can start to design their animal. Using clay, model magic, or paper and marker they can create their creature.  
(Alternatively, you can print a picture of an animal and draw the adaptations on the image. If the image already has the adaptations students can highlight and label them)
5. Once the animal is finished, students can make fact cards for the animal. It can include things like habitat, lifespan, diet, weight, size, etc.  
(Students are encouraged to make creative and interesting creatures, but they should have some reasoning why the animal has its various adaptations)

## Post Activity

6. Go over what adaptations they have chosen and how those help the animal survive
7. If students make multiple animals, discuss how they might interact in an ecosystem.
8. Discuss how those animals and their traits might function in an alternative biome

## Materials

- Model Magic or Clay
- (Alternatively)  
Paper and Markers
- (Optional)  
Printer

## Science Practices

- Use a model to test interactions concerning the functioning of a natural systems
- Construct an argument with evidence, data, and/or a model.

## Crosscutting Concepts

- Systems and System Models