



Animal Adaptations & Biomimicry

Research Objective: Analyze & Draw Conclusions

Description

Have you ever noticed how an animal's colors, patterns, and body parts help it survive? A tiger's stripes can help it blend into tall grass, while an alligator's coloring helps it hide in the water and mud. These traits are examples of adaptations, features that help an animal survive in its environment.

In this activity, you'll explore biomimicry, which means using ideas from nature to inspire designs and solve problems. You'll choose one of three animal designs and use building blocks to create your own animal model. As you build, think about how your animal's traits match the environment where it lives.

Procedures

1. Pick 2–3 colors of LEGO or building blocks. These will be the only colors you can use to build all three of your animals.
2. Pick three different animals to build. You can choose animals from your local environment, animals you have studied, or animals from a list provided by your instructor.
3. Use only the 2–3 colors you chose to create your first animal. Think about its colors, patterns, body shape, and other features.
4. Build your second and third animals. Use the same colors and building pieces to create two more animals. See how you can use the same materials to create animals with different shapes and features.

Think like a Scientist!

- For each animal, think about where it lives. How might its colors, patterns, body shape, or other features help it survive in its environment?
- Look at all three animals. How are they different even though you used the same colors and materials? Why might each animal need different traits to survive?
- Change the environment. Choose one of your animals and imagine moving it to a different habitat. Would its colors and features still help it survive? What could you change to help it fit into its new environment?
- Discuss: Would it be helpful for a cat to have the same colors as an alligator? Why or why not? How does an animal's environment influence the traits that help it survive?

Materials

- Legos or interlocking blocks

Tips

- Think about the habitat. Before building, consider where your animal lives and what colors and features might help it survive there.
- Stick to your colors! Remember, you can only use the 2–3 colors you chose for all three animals.
- Get creative with the same pieces. Try using the same LEGO pieces in different ways to create different animal shapes and features.
- Think like an animal! Ask yourself: Would my animal's colors and features help it hide, find food, or stay safe in its environment?