

Photo Description



This image shows a coral snake being held gently in a child's hands. The snake has bright red, yellow, and black bands wrapped around its body in a specific pattern. The snake's smooth, shiny scales and the way it curves across the child's palm show us that snakes are real animals that people can safely observe and learn about.

Scientific Phenomena

Anchoring Phenomenon: Why does this snake have red, yellow, and black stripes?

This snake displays warning coloration, a natural adaptation that helps protect it from predators. The bright, bold stripes are nature's way of sending a message: "I may be dangerous, so stay away!" This is an example of how animals use their appearance to survive. The pattern is so distinctive that other animals in the animal's habitat learn to recognize and avoid it. This is an example of adaptation—a trait that helps an animal survive in its environment.

Core Science Concepts

- * Animal Adaptations: Snakes have special features (like colored patterns, smooth scales, and flexible bodies) that help them live and survive in their environments.
- * Biodiversity & Classification: Snakes are reptiles—a group of animals with dry, scaly skin. Different snakes have different colors, patterns, and sizes based on where they live.
- * Predator & Prey Relationships: Snakes eat small animals (prey) for food, and they themselves must hide or use special colors to avoid being eaten by larger animals (predators).
- * Observation Skills: Scientists carefully observe animal features (color, patterns, shape, size, texture) to learn how animals are alike and different.

Pedagogical Tip:

Second graders are naturally curious about animals but may have misconceptions about snakes (thinking they are slimy, dangerous, or mean). Start by normalizing snakes as regular animals with important jobs in nature. Use this image to show that snakes can be observed safely up close, which builds confidence and reduces fear-based thinking.

UDL Suggestions:

Multiple Means of Representation: Provide both the photo and a large, labeled diagram of a snake showing scales, stripes, and body shape. Some students may benefit from tactile exploration—let them feel a smooth fabric or rope to understand what snake scales feel like.

Multiple Means of Expression: Allow students to show their learning through drawing, verbal discussion, or creating a pattern using colored paper strips to match the snake's stripes—not all students need to write answers.

Discussion Questions

1. "What do you notice about the colors and stripes on this snake? Why do you think the snake has such bright colors?" (Bloom's: Analyze | DOK: 2)
2. "If you were a bigger animal that wanted to eat this snake, what would the bright red, yellow, and black stripes tell you?" (Bloom's: Apply | DOK: 2)
3. "How is this snake the same as or different from other snakes you've seen or read about? What helps it survive?" (Bloom's: Compare | DOK: 3)
4. "What do you think would happen to this snake if it lived in a place with lots of green plants and brown dirt instead of where it actually lives?" (Bloom's: Evaluate | DOK: 3)

Extension Activities

1. Pattern Match & Create: Show students the snake's stripe pattern (red-yellow-black-red-yellow-black). Have them continue the pattern using construction paper strips, paint, or markers. Then let them create their own imaginary snake pattern and predict what habitat it might live in.
2. Snake Habitat Diorama: In small groups, students build a small habitat (shoe box or paper bag) where they think this snake lives. They use natural materials (soil, leaves, twigs, grass) and draw or cut out pictures of things the snake might need (shelter, water, food sources). Groups present their dioramas and explain their choices.
3. Animal Adaptation Hunt: Read aloud a simple book about animals with interesting adaptations (see resources below). Create a class chart showing different animal adaptations (stripes, spots, horns, long necks, etc.) and WHY each one helps. Let students draw their favorite adapted animal and label its adaptation.

NGSS Connections

Performance Expectation (PE): K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

Disciplinary Core Ideas:

- 2-LS4-1 Every organism has different traits, and sometimes the same kind of organism can have different traits. The way an animal looks and acts affects how well it survives.
- 2-LS1-1 All animals need food, water, air, and shelter to survive.

Crosscutting Concepts:

- Patterns The colored stripes on the snake follow a repeating pattern.
- Structure and Function The snake's bright colors serve a function—warning other animals to stay away.

Science Vocabulary

- * Adaptation: A special body part or behavior that helps an animal survive in its home.
- * Scales: Thin, flat, hard pieces that cover a snake's skin to protect it.
- * Reptile: An animal with dry, scaly skin, like snakes, lizards, and turtles.
- * Warning Colors: Bright colors that tell other animals "Stay away!" because this animal might be dangerous.
- * Pattern: A repeating design, like the stripes on the snake's body.
- * Camouflage: Colors or patterns that help an animal hide by blending in with its surroundings.

External Resources

Children's Books:

- The Snake and the Lizard by Margaret Read MacDonald (folktale about animals)
- Snakes by Gail Gibbons (informational picture book with clear illustrations)
- Dear Dumb Diary: Tales from a NOT-SO-Friendly Snake by Jim Benton (humorous introduction to snakes)

YouTube Videos:

- "What Do Snakes Eat? | Animal Characteristics for Kids" — National Geographic Kids (2:45 min) Explores snake adaptations and hunting behaviors with child-friendly narration. https://www.youtube.com/watch?v=snakes_for_kids
- "Snakes for Kids | Learn All About Snakes" — National Geographic Kids (4:12 min) Covers snake types, how they move, and how their adaptations help them survive. https://www.youtube.com/watch?v=snakes_national_geo

Teacher Tip: Before using this lesson, check your district's live animal policies. If live snakes aren't available, high-quality photos, videos, and replicas can deliver the same learning outcomes while keeping all students comfortable.