

Photo Description



This image shows a snake moving through dried corn stalks and wood chips on the ground. You can see the snake's body with its special patterned skin that helps it blend in with brown and tan colors around it. The snake's scales shine a little in the sunlight, and the bumpy texture helps the snake move smoothly across the ground.

Scientific Phenomena

Anchoring Phenomenon: How does a snake's special skin help it survive in its habitat?

Snakes have scales—tiny, overlapping pieces of skin—that protect their bodies and help them move. The bumpy texture and coloring of snake skin serve two important purposes: protection (the tough scales keep the snake safe from injury) and camouflage (the tan and brown colors help the snake hide from predators and sneak up on food). Snakes shed their skin as they grow, which allows their bodies to get bigger. This is a natural process that happens several times a year.

Core Science Concepts

- * Animal Adaptations: Snakes have special features like scales and coloring that help them survive in their environment.
- * Body Coverings: Different animals have different types of skin or coverings (fur, feathers, scales) that serve specific purposes like protection and movement.
- * Camouflage (Blending In): The snake's brown and tan coloring helps it blend with leaves, dirt, and wood so other animals cannot easily see it.
- * Growth and Change: Snakes grow bigger over time and must shed their old skin to make room for new, larger skin.

Pedagogical Tip:

For First Grade, emphasize the observable and tactile aspects: the bumpy texture, the pattern colors, and the idea that "skin helps animals survive." Avoid overly technical terms like "thermoregulation" or "ecdysis." Instead, use simple comparisons: "Your skin keeps you safe—the snake's skin keeps it safe too!"

UDL Suggestions:

Multiple Means of Representation: Provide real snake images, a safe shed snake skin (if available), and textured materials (sandpaper, fabric) so students can see, touch, and compare different textures. Multiple Means of Engagement: Allow students to move like a snake to understand how scales help animals glide, making the learning kinesthetic and fun.

Discussion Questions

1. Why do you think the snake's skin is brown and tan instead of bright red or yellow?
(Bloom's: Analyze | DOK: 2)

2. What would happen to a snake if it couldn't shed its old skin as it grew?
(Bloom's: Evaluate | DOK: 3)
3. How is a snake's skin different from your skin? How is it the same?
(Bloom's: Compare | DOK: 2)
4. If you could have one body part from an animal to help you survive better, what would it be and why?
(Bloom's: Create | DOK: 3)

Extension Activities

1. Texture Exploration Station: Set up a sensory table with different textured materials (sandpaper, smooth fabric, bumpy foam, silk) and let students touch and compare. Ask: "Which texture feels most like a snake's scales?" Then show a picture or shed snake skin and discuss.
2. Snake Movement Activity: Have students move across the classroom like a snake—slithering, crawling, and bending. Discuss how the bumpy scales on the snake's belly help it grip the ground and move smoothly, just like cleats on a shoe help runners grip the ground.
3. Camouflage Hunt: Create a simple "habitat" in the classroom using brown, tan, and green colored paper and objects. Hide small toy snakes or snake cutouts for students to find. Discuss: "Was it hard to find the snakes? Why? What colors helped the snakes hide?"

NGSS Connections

Performance Expectation:

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

Disciplinary Core Ideas:

- K-LS1.A Animals have body parts that help them sense the world and meet their needs (e.g., eyes, ears, mouth, feathers, fur, scales).

Crosscutting Concepts:

- Patterns The snake's coloring follows a pattern that helps it hide.
- Structure and Function The snake's scales (structure) help it move and stay safe (function).

Science Vocabulary

- * Scales: Tiny, flat pieces that cover a snake's body like shingles on a roof; they protect the snake and help it move.
- * Camouflage: Colors or patterns on an animal's body that help it blend in with its surroundings so it's hard to see.
- * Shed (or Shedding): When a snake leaves its old skin behind so a new, bigger skin can grow.
- * Adaptation: A special body part or behavior that helps an animal survive in its home.
- * Habitat: The place where an animal lives, like a forest, field, or garden.

External Resources

Children's Books:

- Snake by Sam Godwin (National Geographic Little Kids First Big Book of Animals)

- Hiss! A Snake is Here! by Kate Banks (illustrated version with simple text)
- Dear Dumb Diary: Tales from a Not-So-Imaginary Friend series (contains age-appropriate animal facts)

YouTube Videos:

- "Snake Facts for Kids" by National Geographic Kids

A short, animated video showing different snakes and their adaptations. Duration: ~3 minutes.

URL: https://www.youtube.com/results?search_query=national+geographic+kids+snake+facts (Search National Geographic Kids for age-appropriate content)

- "How Do Snakes Move?" by Crash Course Kids

Simple explanation of how snake scales help movement, with clear visuals. Duration: ~4 minutes.

URL: <https://www.youtube.com/channel/UCX6OQ9DkcsbYNE6H8uQQuVA> (Search "Crash Course Kids Snake" on their channel)

Teacher Note: This lesson works best when paired with live observation (class visit to nature center or video of a real snake) and safe, hands-on experiences like touching shed snake skin or textured materials. Always prioritize student safety and comfort—some children may have fear or anxiety around snakes, so provide reassurance and emphasize that most snakes are helpful creatures that eat bugs and rodents.