Reptile Molting

Life Science | Lesson Guide

Kindergarten

Photo Description

This image shows a small lizard sitting on a green leaf. The lizard has a tan and brown head and body, with a long tail that has red or brown spots. You can see its four legs, its eye, and its long tail. The lizard's skin looks smooth and scaly, and it is gripping the leaf to stay in one spot.

Scientific Phenomena

Anchoring Phenomenon: This image represents how reptiles grow and change as they get bigger.

Lizards, like all animals, need to grow to become adults. As reptiles grow larger, their outer skin (called scales) does not stretch like human skin does. When a lizard becomes too big for its skin, it sheds or molts—meaning the old skin falls off and new, larger skin grows underneath. This is a natural process that happens many times during a lizard's life, similar to how you outgrow your clothes and need bigger sizes.

Core Science Concepts

* Growth and Change: All living things, including reptiles, grow bigger over time. Lizards need to shed their old skin to make room for their bodies to grow.

* Body Coverings: Different animals have different types of skin. Lizards have scales (small, hard plates) that protect their bodies and help them stay dry.

* Adaptation: Molting (shedding skin) is a special behavior that helps reptiles survive and grow. It is a way their bodies are designed to work.

* Life Cycles: All living things go through different stages. Shedding is one stage in a reptile's life that happens over and over again.

Pedagogical Tip:

For Kindergarteners, avoid using the word "molt" or "shed" as the primary focus. Instead, emphasize the observable change: "This lizard's skin helps it grow." Use comparative language: "Just like you need bigger clothes, this lizard needs bigger skin!" This makes the concept relatable to their own experiences.

UDL Suggestions:

Multiple Means of Representation: Show the image on a large screen and use a pointer or your hand to trace the lizard's body parts as you name them. Some students may benefit from feeling textured materials (sandpaper, fabric scales) to understand "scaly skin" tactilely. Multiple Means of Engagement: Connect to students' prior knowledge by asking if they've ever outgrown their clothes, making the concept personal and relevant.

Discussion Questions

1. "What do you notice about this lizard's skin? What does it look like?" (Bloom's: Remember | DOK: 1)

2. "Why do you think a lizard needs to get a new, bigger skin as it grows? What happens to your clothes when you grow?" (Bloom's: Understand | DOK: 2)

3. "If this lizard sheds its old skin, what do you think happens to the old skin? Where does it go?" (Bloom's: Analyze | DOK: 2)

4. "What other animals do you know that might need to change their skin or outer covering to grow bigger?" (Bloom's: Apply | DOK: 3)

Extension Activities

1. Texture Exploration Station: Create a sensory table with different textured materials (sandpaper, scales made from craft paper, fabric, smooth stones). Let students explore and discuss which textures feel like "scaly skin" and why a lizard might need bumpy scales instead of smooth skin.

2. Outgrowing Clothes Sorting: Bring in stuffed animals and different-sized clothing or wraps (scarves, blankets). Have students match animals to appropriately sized "clothes" and discuss why the animals need different sizes as they grow.

3. Lizard Movement and Observation: Use toy lizards or model reptiles on a sensory path (sandbox, grass area, leaves). Have students observe and move like lizards, discussing how their four legs and long tail help them balance and move through different environments.

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 Students observe that animals have different body structures and body coverings (like scales on reptiles).
- K-LS1.C Students recognize that animals grow and change over time.

Crosscutting Concepts:
- Patterns Patterns in how animals grow and change their outer covering
- Structure and Function The lizard's scales protect and help it grow

Science Vocabulary

* Lizard: A small reptile with four legs, a long tail, and scaly skin that lives in warm places.

* Scales: Tiny, hard, flat pieces that cover a reptile's body like a coat of armor to keep it safe.

* Skin: The outer covering that protects an animal's body.

* Grow: To get bigger and taller over time.

* Reptile: A cold-blooded animal with scales and a backbone, like a lizard, snake, or turtle.

External Resources

Children's Books:

The Tiny Seed* by Eric Carle (demonstrates growth and change)

From Tadpole to Frog* by Wendy Pfeffer (shows life cycles and metamorphosis)

Lizards* by Gail Gibbons (factual picture book about different lizard types)

YouTube Videos:

* "Lizard Life Cycle" (National Geographic Kids) — A short, animated explanation of how lizards grow and shed their skin. https://www.youtube.com/watch?v=KPy7yyw626s

* "Reptile Body Coverings" (Crash Course Kids) — A colorful, fast-paced video about why reptiles have scales and how they help animals survive. https://www.youtube.com/watch?v=G7e-8yXlvAc