

Photo Description



This image shows a tree frog clinging to a light-colored surface with its strong legs and sticky toe pads spread wide. You can see the bumpy, textured skin that helps the frog blend in with trees and rocks. The frog's large eyes and positioned legs help it see and move quickly to catch insects and stay safe from predators.

Scientific Phenomena

Anchoring Phenomenon: Why can frogs stick to walls and ceilings without falling?

Scientific Explanation: Tree frogs have specially adapted toe pads with tiny suction cups (called adhesive discs) that create sticky contact with smooth surfaces. This is a structural adaptation—the frog's body has evolved over time to grip different environments. The bumpy skin also serves multiple purposes: it helps the frog absorb water through its skin and provides camouflage by matching tree bark and lichen colors. This is an excellent example of how an organism's physical features help it survive in its habitat.

Core Science Concepts

- * **Adaptation:** Body parts and behaviors that help animals survive in their environment. Frogs have sticky toe pads and bumpy skin.
- * **Life Cycles & Habitats:** Frogs live in wet places like ponds, forests, and trees. They breathe through their skin and lungs and must stay moist.
- * **Classification & Characteristics:** Frogs are amphibians—animals that live part of their life in water and part on land. They have four legs, smooth or bumpy skin, and large eyes.
- * **Camouflage & Protection:** The frog's gray-brown coloring helps it hide on tree bark and rocks so predators cannot easily spot it.

Pedagogical Tip:

For Kindergarteners, use tactile comparisons when teaching about frog skin. Let students feel tree bark, sandpaper, or a textured sponge to understand "bumpy skin." This concrete, multi-sensory approach helps young learners connect abstract concepts to their own experiences.

UDL Suggestions:

Provide multiple means of engagement by offering a choice of activities: some students might draw frogs, others might act out frog movements, and others might sort pictures of amphibians versus other animals. Include visual supports (photos, illustrations) alongside verbal descriptions, and offer a hands-on exploration station with safe items that have different textures (bark, rocks, leaves) to examine.

Discussion Questions

1. What special body parts does this frog have that help it live in trees? (Bloom's: Understand | DOK: 1)
2. Why might the frog's bumpy, gray-brown skin be helpful when it sits on a tree? (Bloom's: Analyze | DOK: 2)
3. If a frog lost its sticky toe pads, what problems might it have? (Bloom's: Evaluate | DOK: 3)
4. Where do you think this frog came from before it was on this white surface, and why might it need to move to a different place? (Bloom's: Create | DOK: 3)

Extension Activities

1. Frog Movement Exploration: Clear a safe classroom space and have students move like frogs—jumping, crouching, and stretching their legs. Discuss how strong frog legs help them escape danger and catch food.
2. Texture Hunt & Matching: Set up a sensory station with pictures of different habitats (tree bark, rocks, leaves). Provide safe tactile items (sandpaper, tree bark, fabric) for students to match to pictures, then discuss which textures a frog might hide on.
3. Life Cycle Sequencing: Use large photo cards showing a frog's life cycle (egg, tadpole, tadpole with legs, young frog, adult frog). Have students arrange the cards in order and retell the story of how a frog grows and changes.

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 Structure and Function
- K-LS1.B Growth and Development of Organisms

Crosscutting Concepts:

- Structure and Function
- Patterns

Science Vocabulary

- * Amphibian: An animal that lives part of its life in water and part on land, like frogs and salamanders.
- * Adaptation: A special body part or behavior that helps an animal survive and do what it needs to do.
- * Camouflage: Colors or patterns on an animal's skin that help it hide in its environment.
- * Habitat: The place where an animal lives that has everything it needs to survive.
- * Sticky Toe Pads: Tiny, bumpy discs on a frog's feet that help it hold onto smooth surfaces without slipping.

External Resources

Children's Books:

- From Tadpole to Frog by Wendy Pfeffer (beginner science facts)
- National Geographic Little Kids First Big Book of Animals by National Geographic Kids (diverse animal photos)
- Frog by Ruth Heller (illustrated information text)

YouTube Videos:

- "Life Cycle of a Frog for Kids" — Simple animated journey from eggs to adult frogs with clear visuals. https://www.youtube.com/results?search_query=life+cycle+of+frog+for+kids
- "Amazing Frog Facts for Kids" — Short, engaging video about frog adaptations, jumping abilities, and habitats with real footage. https://www.youtube.com/results?search_query=frog+facts+for+kindergarten