

## Photo Description



A brown lizard sits on a tree branch. The lizard has bumpy skin and a long tail. Its eye is yellow and it blends in with the bark.

## Scientific Phenomena

This image demonstrates camouflage as an anchoring phenomenon. The lizard's brown, mottled coloration and textured skin closely match the tree bark's appearance. This adaptive coloration occurs through evolutionary processes where individuals with better camouflage survive longer, avoid predators more successfully, and reproduce more often. The lizard's ability to remain motionless while blending with its environment is both a behavioral and structural adaptation that increases its survival chances.

## Core Science Concepts

1. Animal body parts help them survive - The lizard's skin color, texture, and ability to grip branches are special features that help it live safely
2. Animals need shelter - Trees provide hiding places and protection from danger
3. Living things have basic needs - The lizard needs food, water, air, and a safe place to live
4. Animals use their senses - The lizard uses its eyes to watch for food and danger

### Pedagogical Tip:

Use "I notice, I wonder, I think" sentence frames to help kindergarteners make observations about the lizard's features before explaining why those features are helpful.

### UDL Suggestions:

Provide tactile experiences by having students feel different textured materials (sandpaper, bark, fabric) to understand how the lizard's bumpy skin helps it blend in with rough tree bark.

## Zoom In / Zoom Out

1. Zoom In: The lizard's skin contains special cells called chromatophores that can change the arrangement of pigments, allowing some lizards to adjust their coloration for better camouflage.
2. Zoom Out: This lizard is part of a forest ecosystem where many animals use camouflage - from insects that look like leaves to birds with speckled feathers that blend with tree bark.

### Discussion Questions

1. What do you notice about how the lizard looks compared to the tree? (Bloom's: Remember | DOK: 1)
2. Why do you think the lizard's brown color helps it stay safe? (Bloom's: Analyze | DOK: 2)
3. What other animals have you seen that blend in with their homes? (Bloom's: Apply | DOK: 2)
4. How do you think this lizard finds food while staying hidden? (Bloom's: Synthesize | DOK: 3)

### Potential Student Misconceptions

1. Misconception: "The lizard chose to be brown to match the tree"  
Clarification: Animals are born with colors that help them survive; they don't choose their colors
2. Misconception: "All lizards look exactly the same"  
Clarification: Different lizards have different colors and patterns depending on where they live
3. Misconception: "The lizard is dirty from the tree"  
Clarification: The brown color is the lizard's natural skin color, not dirt

### Cross-Curricular Ideas

1. ELA - Descriptive Writing: Have students use sensory words to describe the lizard. Create a class book where each student contributes one page with a drawing and sentence like "The lizard is bumpy and brown." This builds vocabulary and writing skills while reinforcing observation skills.
2. Art - Camouflage Collage: Students create their own "hidden animals" by cutting out animal shapes from magazines and pasting them onto backgrounds that match their colors. This hands-on activity helps students understand how animals blend into different environments while developing fine motor skills.
3. Math - Pattern Recognition: The lizard's skin has patterns of spots and scales. Have students create their own lizard patterns using stamps, stickers, or markers on paper. Count the spots together and sort lizards by pattern types (stripes, spots, solid colors).
4. Social Studies - Animal Homes Around the World: Create a classroom display showing different habitats where lizards live (deserts, forests, grasslands). Discuss how animals in different places have different colors to match their homes, building awareness of diverse environments globally.

### STEM Career Connection

1. Wildlife Biologist: A wildlife biologist is a scientist who studies animals in nature to learn how they live, survive, and protect themselves. They watch animals like lizards and learn about their special adaptations. Average Annual Salary: \$65,000 USD
2. Zoo Keeper: A zoo keeper takes care of animals at the zoo, including lizards and other reptiles. They make sure the animals have the right food, water, and homes that look like where they came from in nature. Average Annual Salary: \$28,000 USD
3. Environmental Artist: An environmental artist creates art that teaches people about nature and animals. They might paint pictures of camouflaged lizards or create sculptures showing how animals blend into their homes to help people understand and care about wildlife. Average Annual Salary: \$45,000 USD

### NGSS Connections

- Performance Expectation: K-LS1-1 - Use observations to describe patterns of what plants and animals need to survive
- Disciplinary Core Ideas: K-LS1.C - All animals need food in order to live and grow
- Crosscutting Concepts: Patterns - Patterns in the natural world can be observed and used as evidence

### Science Vocabulary

- \* Camouflage: When an animal's colors help it blend in and hide
- \* Adaptation: Special body parts or behaviors that help animals survive
- \* Habitat: The place where an animal lives and finds everything it needs
- \* Predator: An animal that hunts and eats other animals
- \* Texture: How something feels when you touch it - smooth, bumpy, or rough

### External Resources

Children's Books:

- What Do You Do With a Tail Like This? by Steve Jenkins
- Hiding in Plain Sight by David Schwartz
- Who's Hiding? by Satoru Onishi