Anole

Life Science | Lesson Guide

Kindergarten

Photo Description

This lizard has a bright orange and red throat flap called a dewlap. The lizard is sitting on brown sticks and leaves. Its body is gray and brown with spots and patterns.

Scientific Phenomena

The Anchoring Phenomenon is animal communication through visual displays. This lizard is displaying its colorful dewlap (throat fan) as a form of communication. Male anoles extend their dewlaps to establish territory, attract mates, or warn other lizards. The bright colors and patterns serve as visual signals that other lizards can see and understand, similar to how humans use hand gestures or facial expressions to communicate without words.

Core Science Concepts

1. Animal Communication: Animals use different body parts to "talk" to each other without making sounds
2. Animal Body Parts: Different animals have special body parts that help them survive and communicate
3. Patterns in Nature: The lizard's spots, stripes, and colors follow patterns that help it blend in or stand out when needed
4. Living vs. Non-living: The lizard is a living thing that moves, grows, and responds to its environment

> **Pedagogical Tip:**
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> Use dramatic play to help kindergarteners understand animal communication. Have students practice "showing" emotions or messages using only their bodies and facial expressions, just like the lizard uses its dewlap.

> **UDL Suggestions:**
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> Provide multiple ways for students to demonstrate understanding by allowing them to draw, act out, or use simple words to show how animals communicate. Offer hands-on models or toys of lizards with moveable parts.

Zoom In / Zoom Out

1. Zoom In: The dewlap contains tiny blood vessels that fill with blood to make it expand and show bright colors. Special cells called chromatophores contain the colorful pigments.

2. Zoom Out: This lizard is part of a larger ecosystem where many animals use visual signals to communicate. The forest habitat provides the perfect backdrop for the lizard's camouflage and display behaviors.

Discussion Questions

1. What do you notice about this lizard's throat? (Bloom's: Remember | DOK: 1)
2. Why do you think the lizard shows its colorful throat to other lizards? (Bloom's: Analyze | DOK: 2)
3. How else do animals talk to each other without using words? (Bloom's: Apply | DOK: 2)
4. What would happen if all lizards looked exactly the same? (Bloom's: Evaluate | DOK: 3)

Potential Student Misconceptions

1. Misconception: "The lizard is angry or hurt because it's red."
   Clarification: The red color is normal and healthy - it's how the lizard talks to other lizards.

2. Misconception: "All lizards look exactly the same."
   Clarification: Different types of lizards have different colors, sizes, and special features like dewlaps.

3. Misconception: "The lizard's throat is always that color."
   Clarification: The lizard can make its dewlap bigger and smaller, and the colors can change.

Cross-Curricular Ideas

1. ELA - Storytelling: Read "The Lizard and the Sun" or similar folktales, then have students create their own simple stories about why the lizard shows its colorful throat. Students can dictate stories to you while you write them down, building narrative skills.

2. Art - Color Mixing: Set up a painting station where students explore mixing red, yellow, and orange paint to create their own "dewlap" colors on paper. Discuss how the lizard's colors are bright and eye-catching, just like their paintings.

3. Math - Patterns: Have students identify and extend the spots and stripe patterns on the lizard's body using manipulatives or drawing. Create pattern cards (spots, stripes, spots, stripes) and have students continue the sequence or clap along with the pattern.

4. Social Studies - Animal Homes: Explore where anole lizards live (warm, tropical places). Look at maps together and discuss how different animals live in different environments. Compare the lizard's home to where your students live.

STEM Career Connection

1. Zoo Keeper or Wildlife Caretaker: These people take care of animals like lizards in zoos and animal sanctuaries. They feed the animals, clean their homes, and watch them to make sure they stay healthy and happy. They also help teach visitors about animals! Average Salary: $28,000-$32,000/year

2. Animal Scientist or Biologist: These scientists study how animals live, what they eat, and how they behave and communicate with each other. They observe animals like lizards in nature or in laboratories to learn cool facts that help protect them. Average Salary: $65,000-$75,000/year

3. Veterinarian: Veterinarians are animal doctors who help keep pets and wild animals healthy. They might examine a lizard, give it medicine if it's sick, and make sure it has everything it needs to live a good life. Average Salary: $95,000-$115,000/year

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 (Organization for Matter and Energy Flow in Organisms)
- Crosscutting Concepts: Patterns

Science Vocabulary

* Dewlap: A flap of skin under an animal's throat that can change size and color
* Communicate: To share information or feelings with others
* Pattern: Something that repeats in a regular way
* Display: To show something clearly so others can see it
* Camouflage: Colors and patterns that help animals blend in with their surroundings

External Resources

Children's Books:

- Can You See Me? by Ted Lewin
- Chameleon, Chameleon by Joy Cowley
- Lizards by Gail Gibbons