

Photo Description



A deer is lying still on the ground in a natural outdoor area. The deer's body is not moving, and it appears to have died. We can see its tan-colored fur and legs stretched out on the dirt and dried grass.

Scientific Phenomena

This image represents the Anchoring Phenomenon of animal death and decomposition in nature. The deer has died, which is a natural part of all living things' life cycles. When animals die, their bodies begin to break down through a process called decomposition, where bacteria and other small organisms help return the nutrients from the deer's body back to the soil. This process is essential for ecosystems because it recycles materials that other living things need to grow and survive.

Core Science Concepts

1. Life Cycles: All living things, including deer, go through stages of life including birth, growth, reproduction, and death.
2. Decomposition: When organisms die, their bodies break down and return nutrients to the environment through the work of decomposers like bacteria and fungi.
3. Ecosystem Relationships: Dead animals provide food and nutrients for scavengers, decomposers, and eventually plants, showing how all living things are connected.
4. Matter Cycling: The materials that made up the deer's body will be recycled back into the ecosystem to support new life.

Pedagogical Tip:

When discussing animal death with third graders, focus on the natural and necessary role it plays in ecosystems rather than dwelling on emotional aspects. Emphasize how this process helps other living things survive and grow.

UDL Suggestions:

Provide multiple ways for students to express their understanding, such as drawing the decomposition process, acting out the role of different decomposers, or creating a concept map showing how nutrients move through an ecosystem.

Zoom In / Zoom Out

1. Zoom In: At the microscopic level, billions of bacteria and other tiny decomposer organisms are beginning to break down the deer's tissues, converting complex molecules into simpler nutrients that can be absorbed by plants.

2. Zoom Out: This deer's death contributes to the larger forest ecosystem by providing nutrients that will eventually help trees, grass, and other plants grow, which in turn will feed other animals, maintaining the balance of the entire woodland community.

Discussion Questions

1. What do you think will happen to this deer's body over the next few months? (Bloom's: Predict | DOK: 2)
2. How might this deer's death actually help other living things in the forest? (Bloom's: Analyze | DOK: 3)
3. What other animals or organisms might benefit from finding this deer? (Bloom's: Apply | DOK: 2)
4. Why is it important for dead plants and animals to decompose instead of lasting forever? (Bloom's: Evaluate | DOK: 3)

Potential Student Misconceptions

1. Misconception: "Dead animals are gross and don't help anything."
Clarification: Dead animals play an important role in nature by providing nutrients that help plants and other living things grow healthy and strong.
2. Misconception: "Only bad things happen when animals die."
Clarification: Animal death is a natural part of life cycles that actually helps ecosystems stay healthy by recycling nutrients and providing food for other organisms.
3. Misconception: "The deer will just stay there forever."
Clarification: Over time, decomposer organisms will break down the deer's body, and it will become part of the soil that helps plants grow.

Cross-Curricular Ideas

1. ELA - Narrative Writing: Have students write a short story from the perspective of a decomposer organism (like a bacteria or fungus) describing what it does to help break down the deer and return nutrients to the soil. This helps students practice narrative writing while reinforcing science concepts.
2. Math - Data Collection and Graphing: Students can research and create a bar graph showing how long it takes different animals (deer, squirrels, insects) to decompose in nature. This builds graphing skills while exploring real decomposition timelines.
3. Art - Nature Cycles Illustration: Students create a circular diagram or comic strip showing the stages of a deer's life cycle (birth, growth, reproduction, death, decomposition, and how nutrients help new life grow). This visual representation helps cement understanding of cyclical processes.
4. Social Studies - Respecting Nature: Discuss how different cultures and communities honor animals and understand death as a natural part of life. Students can share family or cultural traditions related to respecting nature and living things.

STEM Career Connection

1. Ecologist - An ecologist is a scientist who studies how plants and animals live together in nature and how they depend on each other. Ecologists might observe deer and other animals in forests to understand how ecosystems stay healthy and balanced. They help protect nature so all living things can thrive. Average Annual Salary: \$65,000 - \$75,000 USD

2. Forensic Scientist - A forensic scientist uses science to solve mysteries about living things in nature. Some forensic scientists study decomposition to understand how long animals have been dead, which helps them solve cases and learn more about nature. Average Annual Salary: \$61,000 - \$72,000 USD

3. Veterinarian or Wildlife Biologist - A wildlife biologist studies wild animals like deer to learn how they live, what they eat, and how they stay healthy. They also learn what happens when animals get sick or die to help protect entire animal populations and keep forests healthy. Average Annual Salary: \$68,000 - \$85,000 USD

NGSS Connections

- Performance Expectation: 3-LS1-1: Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
- Disciplinary Core Ideas: 3-LS1.B (Growth and Development of Organisms), 5-LS2.A (Interdependent Relationships in Ecosystems)
- Crosscutting Concepts: Patterns, Systems and System Models

Science Vocabulary

- * Decomposition: The process where dead plants and animals break down into smaller parts that go back into the soil.
- * Decomposer: Living things like bacteria and fungi that break down dead organisms.
- * Life cycle: The stages that all living things go through from birth to death.
- * Ecosystem: A community of living and non-living things that work together in an environment.
- * Nutrients: Important materials that living things need to grow and stay healthy.
- * Scavenger: An animal that feeds on dead animals or plants.

External Resources

Children's Books:

- The Dead Bird by Margaret Wise Brown
- Life and Death by Bobbie Kalman
- What Happens When Animals Die? by Isaac Asimov