Fungi04

Life Science | Lesson Guide

1st Grade

Photo Description

This picture shows bright pink, round things growing on old wood and leaves. The pink blobs look like tiny balls stuck together. They are growing in a forest where there are dead sticks and leaves on the ground.

Scientific Phenomena

The anchoring phenomenon is decomposition in action - specifically showing slime molds (likely Tubifera ferruginosa or pink slime mold) breaking down dead organic matter. This occurs because slime molds are special organisms that help recycle nutrients by eating bacteria and tiny bits of rotting wood and leaves. They appear pink/red during their reproductive stage when they form spore-producing structures called sporangia. This is nature's recycling system at work, converting dead material back into nutrients that plants can use.

Core Science Concepts

1. Living vs. Non-living: Slime molds are living organisms that grow, move (very slowly), and reproduce, even though they might look like colorful blobs.

2. Decomposition: Dead plants and wood break down with help from tiny living things, returning nutrients to the soil for new plants to use.

3. Life Cycles: These organisms go through different stages - sometimes looking like slime, other times forming these colorful ball-like structures to make "seeds" (spores).

4. Habitat Requirements: These organisms need moist, shady places with dead plant material to survive and grow.

Pedagogical Tip:

Use the "I Notice, I Wonder, It Reminds Me Of" thinking routine to help first graders make observations without jumping to conclusions. This builds their scientific observation skills.

UDL Suggestions:

Provide magnifying glasses and encourage students to draw what they see with colored pencils. This supports multiple ways of engaging with and expressing scientific observations.

Zoom In / Zoom Out

1. Zoom In: Inside these pink balls are millions of tiny spores (like seeds) that are too small to see. These spores will blow away in the wind to start new slime molds in other places.

2. Zoom Out: This decomposition process happens all over the forest floor, helping create rich soil that feeds trees, flowers, and all forest plants. Without decomposers, dead leaves and wood would pile up everywhere!

Discussion Questions

1. What do you notice about where these pink organisms are growing? (Bloom's: Analyze | DOK: 2)
2. Why do you think these living things might be important for the forest? (Bloom's: Evaluate | DOK: 3)
3. What would happen if nothing ever cleaned up dead leaves and sticks in the forest? (Bloom's: Synthesize | DOK: 3)
4. How are these organisms similar to and different from plants and animals you know? (Bloom's: Compare | DOK: 2)

Potential Student Misconceptions

1. Misconception: "These pink things are just colorful rocks or toys someone dropped."
   Clarification: These are actually living organisms that grow and change, even though they don't move like animals we know.

2. Misconception: "Slime and mold are always bad and yucky."
   Clarification: Many molds and slime-like organisms are helpful because they clean up the forest by eating dead things and making soil healthy.

NGSS Connections

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

Science Vocabulary

* Decomposer: A living thing that breaks down dead plants and animals
* Spore: A tiny seed-like part that can grow into a new organism
* Organism: Any living thing that grows and changes
* Nutrients: Food that living things need to grow and stay healthy
* Habitat: The place where a living thing finds everything it needs to survive

External Resources

Children's Books:
- Mushrooms in the Rain by Mirra Ginsburg
- The Magic School Bus Meets the Rot Squad by Joanna Cole
- Compost Stew: An A to Z Recipe for the Earth by Mary McKenna Siddals

YouTube Videos:
- "What is Decomposition? | Science for Kids" - Simple explanation of how things break down in nature with kid-friendly animations (https://www.youtube.com/watch?v=P_WvL1yB_qY)
- "Slime Molds: The Amazing Protists" by SciShow Kids - Introduction to slime molds with colorful visuals appropriate for young learners (https://www.youtube.com/watch?v=bkVhLJLG7ug)