# Bumble Bee

Life Science | Lesson Guide

1st Grade

## Photo Description

A big, fuzzy bumble bee with yellow and black stripes is visiting a bright pink flower. You can see yellow pollen dust on the bee's body. The bee is using its long tongue to drink sweet juice from the flower's center, which has pretty red and yellow parts.

## Scientific Phenomena

Anchoring Phenomenon: A bee visiting a flower and collecting pollen.

Why This Happens: Bees need to eat nectar (sweet juice) from flowers to survive and feed their families. As the bee moves from flower to flower drinking nectar, pollen sticks to its fuzzy body. When the bee visits the next flower, some pollen rubs off onto that flower. This helps flowers make seeds and fruit—a process called pollination. It's a win-win: the bee gets food, and the flower gets help to make new flowers!

## Core Science Concepts

* Bees are living things (organisms) that have specific body parts for their jobs. The fuzzy hair traps pollen; the long tongue drinks nectar; the wings help them fly.

* Flowers need help to make seeds. Pollen from one flower must travel to another flower. Bees are one of nature's helpers that does this job.

* Plants and animals depend on each other. Bees need flowers for food, and flowers need bees to spread pollen so they can grow and make seeds.

* Observable features help us identify and understand organisms. Bees have stripes, fuzz, wings, and special body parts that help them do their important job.

**Pedagogical Tip:**

For First Grade, focus on direct observation and concrete examples. Rather than diving deep into reproduction, help students notice: "The bee is getting something from the flower (food), and the flower is getting something from the bee (help)." Use the phrase "helper" repeatedly—it's concrete and relatable for six-year-olds.

**UDL Suggestions:**

Representation: Use the high-contrast, colorful image frequently. Create large visual posters labeling bee body parts (antennae, wings, fuzzy body, tongue). Some students may benefit from tactile exploration—bring in soft materials (cotton balls, yarn) to feel "fuzz" similar to bee hair.

Action & Expression: Offer multiple ways to show learning: students can draw what they see, act out a bee visiting flowers (kinesthetic), or use picture cards to sequence the process. Allow students to dictate observations to a partner or adult if writing is challenging.

Engagement: Connect to students' real experiences: "Have you seen a bee in your garden?" "Why do you think the bee visits flowers?" This relevance increases motivation.

## Discussion Questions

1. What do you see the bee doing in the flower? (Bloom's: Remember | DOK: 1)

2. Why do you think the bee keeps visiting different flowers? (Bloom's: Infer | DOK: 2)

3. What job does the fuzzy yellow stuff (pollen) do for the flower? (Bloom's: Understand | DOK: 2)

4. If there were no bees, what might happen to the flowers in a garden? (Bloom's: Analyze | DOK: 3)

## Extension Activities

1. Bee Body Parts Hunt: Take photos or draw pictures of bee body parts. Create a large poster labeled with: head, wings, legs, fuzzy body, and tongue. Students point to each part as you name it. Use real pictures and close-ups to make body parts obvious.

2. Flower Visiting Role-Play: Set up a "flower garden" with paper flowers around the classroom. Students take turns being the "bee" moving between flowers, while you sprinkle glitter on their arms to represent pollen. Then have them "visit" another flower and see the glitter transfer. Discuss: "Where did the pollen go? How did it get there?"

3. Nectar Tasting (Safe Alternative): Prepare small cups of diluted fruit juice or honey water labeled "nectar." Students use straws to sip like a bee's tongue drinks from flowers. Discuss: "Why do bees like this sweet drink? What job does eating give them energy for?"

## 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 Animals have body parts that help them survive (bees have fuzzy bodies and long tongues).
- 1-LS1.A All organisms have external structures that serve different functions in growth, survival, and reproduction.
- K-ESS3.A Living things need sun, water, and air; plants need these AND the help of pollinators like bees.

Crosscutting Concepts:
- Structure and Function The bee's fuzzy body and tongue have specific jobs.
- Cause and Effect Because bees visit flowers, pollen spreads and new flowers can grow.

## Science Vocabulary

* Bee: An insect with fuzzy hair, wings, and a long tongue that visits flowers and helps them make seeds.

* Pollen: Tiny, yellow powder made by flowers that sticks to a bee's fuzzy body and helps flowers make new flowers.

* Nectar: Sweet juice inside flowers that bees drink for food.

* Pollination: When pollen moves from one flower to another, helping flowers make seeds.

* Insect: A small animal with six legs, wings, and three body parts.

## External Resources

Children's Books:

- The Bee by Patricia Polacco (explores bee life and pollination in an accessible way)
- Bees by Gail Gibbons (nonfiction with clear illustrations of bee anatomy and behavior)
- The Honeybee and the Robber by Eric Carle (simple story about a bee and flowers)

YouTube Videos:
- "How Do Bees Make Honey?" by National Geographic Kids (2:33 minutes; shows bees visiting flowers, collecting pollen, and their role in nature) — https://www.youtube.com/results?search_query=national+geographic+kids+bees+honey

- "Bumblebees for Kids" by Crash Course Kids (4:15 minutes; colorful animation explaining why bees are important and how they help flowers) — https://www.youtube.com/results?search_query=crash+course+kids+bumblebees

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Teacher Note: This lesson emphasizes observation, relationship-building between organisms, and the bee's critical ecological role—all foundational concepts for K-1 life science. The bright, engaging image is perfect for capturing first graders' attention and sparking curiosity about the natural world.