

Photo Description



This image shows a beautiful pink flower with a long, thin part in the middle called the stamen. The stamen has orange powder on it and yellow ball-shaped parts at the top. The pink petals around it help the flower look pretty and attract visitors like bees and butterflies.

Scientific Phenomena

Anchoring Phenomenon: Why do flowers have so many different parts that look different from each other?

Scientific Explanation: Flowers have different parts because each part has a special job to do. The colorful petals attract pollinators (like bees and butterflies) to visit the flower. The stamen (the male part) makes pollen—that yellow powder you see—which needs to travel to other flowers so new plants can grow. The pistil (the female part) receives pollen and helps make seeds. This is an example of structure and function: each body part is shaped the way it is because of the job it does.

Core Science Concepts

1. Flower Parts Have Different Jobs (Structure and Function)
 - Petals attract pollinators with color and often scent
 - The stamen produces pollen (the yellow powder)
 - The pistil receives pollen and helps make seeds
 - The stem supports the flower and moves water and nutrients
2. Flowers Are Made for Reproduction
 - Pollen must travel from one flower to another (pollination)
 - This helps make seeds so new plants can grow
 - Some flowers use wind; others use animals like bees
3. Observation and Describing Living Things
 - First graders can observe and describe flower parts using their senses (sight, touch, smell)
 - Different flowers have different shapes, colors, and sizes
 - Scientists use careful observation to learn about nature
4. Living Things Meet Their Needs
 - Flowers need sunlight, water, and nutrients to grow
 - The flower's job is to make seeds for a new plant

Pedagogical Tip:

When teaching flower parts to first graders, use the "job" language consistently. Instead of saying "the stamen produces pollen," say "the stamen's job is to make yellow powder." This concrete, functional language helps young learners connect structure to purpose, which is developmentally appropriate and builds stronger understanding for later learning.

UDL Suggestions:

Multiple Means of Representation: Provide both real flowers AND labeled diagrams for students to examine. Some learners are visual-spatial and benefit from seeing the actual 3D structure, while others need the simplified diagram. Consider using different flower types (tulips, lilies, daisies) so students can see that while the basic parts are the same, flowers look different.

Multiple Means of Engagement: Allow students to choose between drawing, building with manipulatives, or acting out the pollination process. This honors different learning preferences and keeps all students actively involved.

Discussion Questions

1. What do you think the yellow powder on the stamen does? Why might a bee need to visit lots of flowers?
- Bloom's: Infer | DOK: 2
2. How are the pink petals different from the stamen? Why do you think flowers need both?
- Bloom's: Analyze | DOK: 2
3. If a flower didn't have bright pink petals, what might happen to it? Would bees still visit?
- Bloom's: Evaluate | DOK: 3
4. What would happen if we took the stamen off the flower? Could the flower still make seeds?
- Bloom's: Hypothesize | DOK: 2

Extension Activities

1. Flower Part Hunt
- Take students outside to observe real flowers (in a garden, park, or even weeds in a field). Have them point to the petals, stamen, and other parts. Use a magnifying glass to observe the pollen up close. Students can draw or paint what they see.
2. Pollinator Role-Play
- Assign some students to be "flowers" with pollen (glitter or flour on their hands) and others to be "bees." As bees visit flowers, they pick up pollen and deliver it to other flowers. This kinesthetic activity helps students understand how pollination actually works.
3. Flower Design Challenge
- Give students construction paper, markers, and craft supplies. Ask them to design a flower that would attract a specific pollinator (butterfly, hummingbird, bee). Ask: "What color would your flower be? Would it have a smell? How would you make it pretty?"

NGSS Connections

Performance Expectation:

1-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and animals use their external parts to help them survive, grow, and meet their needs.

Disciplinary Core Ideas:

- 1-LS1.A Structure and Function – The external parts of plants help them grow, survive, and meet their needs (e.g., roots absorb water; leaves capture light; flowers make seeds)
- 1-LS3.A Inheritance of Traits – Many characteristics of organisms are inherited from their parents; some characteristics show variation

Crosscutting Concepts:

- Patterns – Flowers follow patterns in their structure; each type of flower has recognizable features
- Structure and Function – The shape and structure of flower parts are related to what they do

Science Vocabulary

- * Pollen: Tiny yellow powder made by flowers that helps make seeds
- * Stamen: The part of the flower that makes pollen
- * Petals: The colorful leaves around a flower that help attract bees and butterflies
- * Pistil: The part in the center of the flower that catches pollen and makes seeds
- * Pollination: When pollen moves from one flower to another (usually by bees, butterflies, or wind)
- * Bloom: A fully open flower; when a flower is blooming, it is open and ready for visitors

External Resources

Children's Books:

- The Flower by Joy Ang (simple, beautiful illustrations of a flower's life cycle)
- From Seed to Plant by Gail Gibbons (clear diagrams and straightforward text perfect for first graders)
- What Do You See? by Marianne Collins Moore (interactive exploration of plant parts)

YouTube Videos:

- "How Do Flowers Grow? | Kids Learning Videos" – A 4-minute animated video explaining flower growth and pollination with bright, engaging visuals and simple language. https://www.youtube.com/results?search_query=how+do+flowers+grow+kids+learning
- "The Bee and the Flower" – A gentle, story-based explanation (3 minutes) of how bees and flowers work together, ideal for introducing pollination concepts. https://www.youtube.com/results?search_query=bee+and+flower+kids+video

Implementation Note: This lesson works best as a 2-3 day unit, starting with direct observation of real flowers, followed by discussions and activities, and ending with an outdoor exploration or role-play. First graders learn best through hands-on, sensory experiences!