

POLLINATION LESSON



SUMMARY/BIG IDEA:

Students will learn what pollination is and why it is important. Then they will act out pollination as a honey bee.

MATERIALS & RESOURCES:

- Pollination image printable
- [The Beauty of Pollination video](#)
- Large flower printable
- Cheetos
- Almonds
- [Bees Wax Bars](#)
- [Bee dance including waggle and stop signal](#)
- [Waggle dance, how it works and what it looks like](#)
- [Why do honey bees dance](#)
- [Round Dance and Waggle Dance](#)
- [Do the Waggle Dance: movement for students](#)
- [Video of Pollen Baskets](#)
- [Slow Motion of Bees Collecting Pollen](#)
- [Comic Book Strip template for pollination](#)

STEPS:

PART ONE:

1. Show the “Beauty of Pollination” video. Ask students what they observed (insects and bats visiting flowers and spreading pollen to create new flowers).
2. Explain that every flower has male and female parts. The pollen is the male part and the tall sticky center of the flower is the female part. When the pollen lands on the tall sticky female part, pollination takes place and new seeds are formed. Without pollination we would not have new plants.
3. Bees (and butterflies and bats) help this process by spreading pollen when they go flower to flower drinking nectar.
4. Honey bees are responsible for pollinating 1/3 of all fruits and vegetables that we love to eat. Give each child an almond to eat (check for nut allergies first!) Explain that almond trees depend solely on the honey bee for pollination. Without honey bees we would not have almonds.
5. Invite the entire class over to the observation hive. Ask students to look for bright yellow or orange balls on the bee’s legs. These are the pollen baskets where the honey bees store the pollen before dropping it off in one of the cells (bees eat pollen and honey but in the process of collecting pollen and nectar they end up pollinating millions of flowers). This is also a good time to point out the bee waggle dance that honey bees do to communicate where she collected the pollen. The bees with filled pollen baskets should be doing a dance in the direction of the flowers with the correct angle to the sun to tell the other foragers where to go (different flowers have different colored pollen with different smells).

No Live Bees Required: *Teacher can use links in Materials & Resources to show bees gathering pollen into pollen baskets as well as the waggle and circle dances.*

PART TWO:

1. Today you will all become honey bees and participate in pollinating multiple flowers.
2. Place one large flower printable between each pair of students with a pile of Cheetos in the center each paper flower.
3. Demonstrate how to silently land on a flower, pick up and eat a Cheeto, and fly to a new flower at another table. When you land on the new flower, the “pollen” or male part should rub off on the center of the flower (female part). Pick up another Cheeto and repeat until all of the Cheetos are gone.



ASSESSMENT/REFLECTION:

Ask students what the orange fingerprints on the flower represent? Why is pollination important? Teacher can also have students demonstrate understanding of how pollination is carried out by having students illustrate step-by-step using the comic strip template link provided.



Bee Journal Entry - What would happen if there were no more pollinators? How would our planet be affected? Why do humans need plants?

Cross-pollination

1. Pollen from stamens sticks to a bee as it visits a flower to collect food.



pollen grains



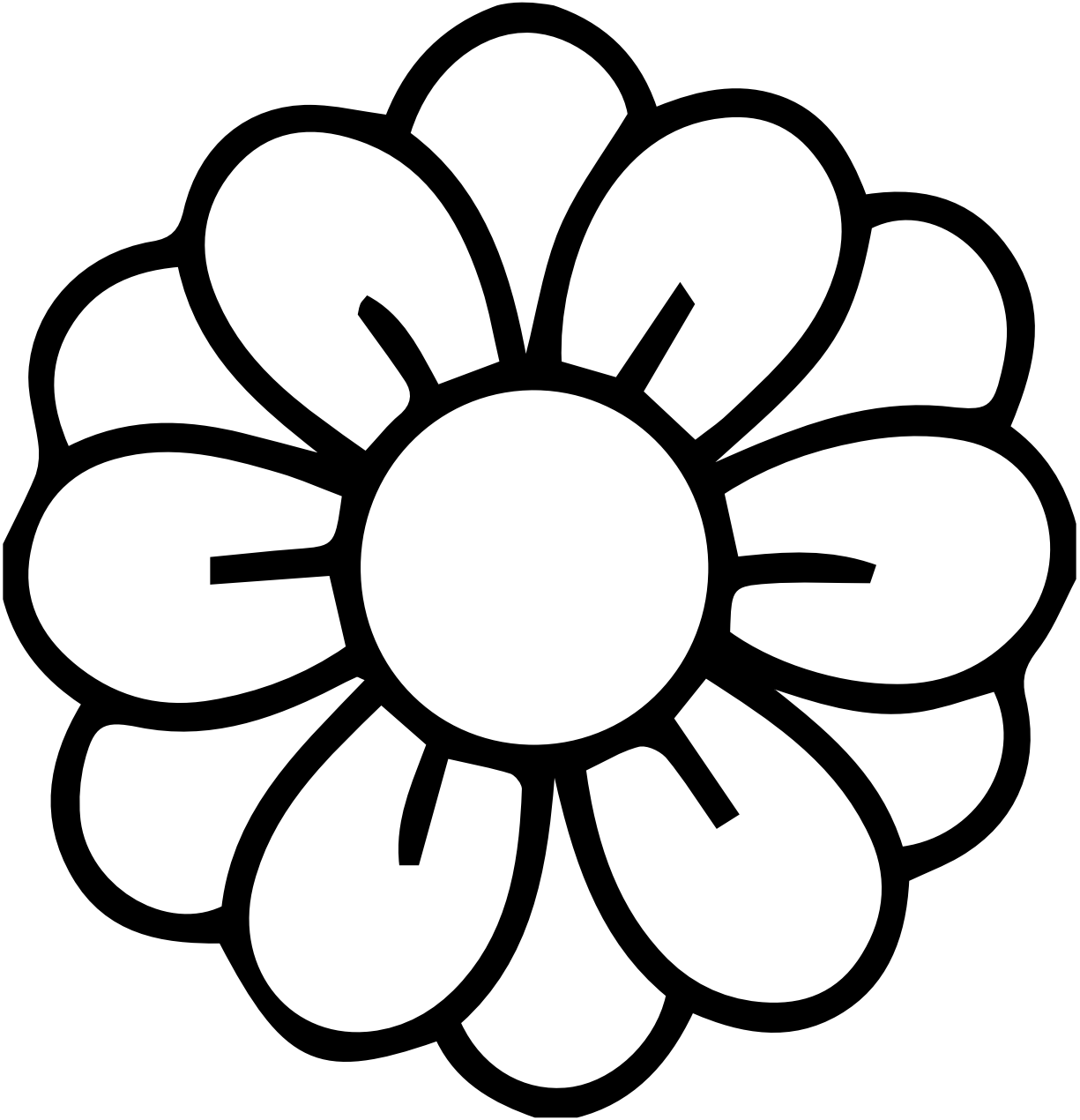
pollen

2. The bee travels to another plant of the same type.

3. Pollen on the bee sticks to a pistil of a flower on the other plant.



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POLLINATION LESSON STANDARDS

NEXT GENERATION SCIENCE

3-LS3-1

4-PS4-2; 4-LS1-2

5-PS3-1; 5-LS2-1

ELA COMMON CORE

W.3.1; RI.3.7

W.4.1; RI.4.7

W.5.1; RI.5.7