



25 min Pollination Patrol Grade 1 Facilitator Notes

Objective: To learn about the importance of bees in the food system, looking specifically at pollinating pepper flowers. To build respect and awareness of the imperative role that bees have in growing our food.



Recipe Category: Food: “Outside the Box”

✓ **Level of Difficulty:** Grade 1



Cooking Time: 25 min



Recipe Ingredients:

Introduction to Pollination:

- Picture of Pollinators Hard at Work
- Picture of bee anatomy

Activity: Pollen Pick-up Relay Race

- 4 Flower cut-outs for obstacles (2 each)
- 2 baskets with 8 pollen pellets each
- 2 sets of antennae (headband)

Introduction to Pepper flowers:

- Picture of pepper tree in bloom and dissected flower



Curriculum Links:

| Grade | Subject Area | Ontario Curriculum Links |
|-------|------------------------|--|
| I | Science and Technology | <p><i>Understanding Life Systems:</i> Investigate needs and characteristics of plants and animals, including humans (O)</p> <ul style="list-style-type: none"> • 2.3 Investigate and compare the physical characteristics of a variety of plants and animals, including humans (S) <p>Demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans (O)</p> <ul style="list-style-type: none"> • 3.6 Identify what living things provide for other living things (S) |

Introduction to Pollination: (3 mins)

- Today we're going to be learning about some of the reasons why bees are so important for helping to grow our food.
- Who here has ever seen a bee? What do they look like? Are they friendly?
 - Sometimes bees can seem unfriendly, like when they sting, but really they're just very busy with a very important job!
- So, what is it that you think bees are busy doing?
 - Making honey - honeybees have to visit LOTS of flowers to make honey
 - *For teachers, this is 80,000 flower trips to produce enough honey to fill one jar!*
 - Collecting pollen
 - Feeding on nectar from flowers
 - Pollinating flowers to make food
 - A lot of our food depends on the pollination from bees.
 - *For teachers, one third of the human food supply*
- "Poll-in-a-tion" (practice saying together) – what's that?
 - The carrying of pollen (the yellow powdery stuff in flowers) from flower to flower or within the same flower (Show flower picture)
 - To fertilize (practice saying together) the flower, creating a fruit

- A “Poll-in-a-tor” is an insect that transports pollen – like a bee!

**Show the picture of Pollinators Hard At Work*

So, without bees, the flowers wouldn't be pollinated and our food wouldn't grow!

Introduction of Pepper flowers: (2 mins)

Who here ever tasted a pepper before? *(With the exception of the first group, they should all have tasted peppers at the Cooking & Tasting station)*

There are sweet peppers and also very spicy or hot peppers. *Has anyone ever eaten a hot pepper before?*

So most of you have eaten some kind of pepper before, but who here has ever seen a pepper plant? Peppers can only grow outside in Ontario during the summer months. Did you know that all peppers actually start out as flowers?

**Show picture of pepper flower and pepper varieties*

For a flower to become a pepper, the pollen that is produced by the flowers on one pepper plant must be carried to the flowers on another plant. The pollen is moved between trees by bees and other pollinators like butterflies and birds, that visit the flowers to collect nectar (sweet liquid) and pollen.

What do we call the transfer of pollen from flower to flower again?

- *Pollination!*

So, even if you're scared of getting stung by a bee, they are sooo important to us, we can't live without them!

Activity: Pollen Pick-up relay race (20 mins)

1. Using the space provided (i.e. *under the tent if it's raining, or some outside space if available and sunny*), set up a relay race that has the pollen and baskets at one end, the students at the other and “pepper flowers” they must race around or touch in between.
2. Divide students into two teams, giving each team a pair of antennae. One at a time, students will put on the antennae and follow the bee path and race to collect the pollen at the end of the course.
3. When they get the pollen, they must put the pollen between their legs (just like the bee does!) and race back (or hop) to the group.
4. On return to the ‘hive’ (their team), students have to do a quick Waggle Dance before handing over the costume to the next player (i.e. wiggling their butt).
5. The next student puts the antennae on before taking their turn.

If there is time after the first run, ask students what they might do differently (hold the pollen a different way, skip instead of run) and have a second race.

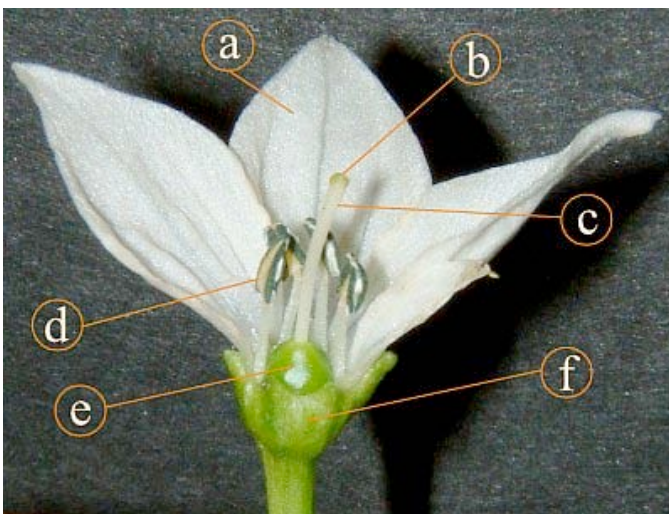
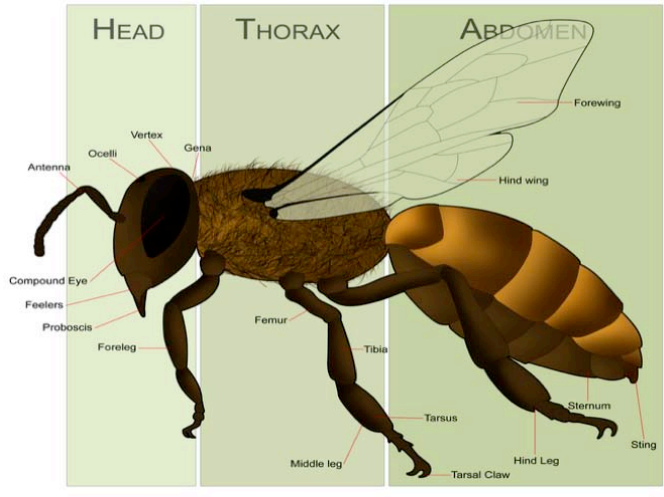
Recap (If time):

Recap on key terms such as

- Pollination
- The roles that bees play in our food system
- Parts of the bee



Serving Suggestions:



- a. petals
- b. stigma
- c. pistil
- d. stamens
- e. blossom end
- f. calyx

picture from www.fatalii.net



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