

## BEE PHEROMONES LESSON



### SUMMARY/BIG IDEA:

Bees use smells to communicate.

### MATERIALS & RESOURCES:

- [Bee Phermones](#)
- [The Nasonov Gland](#)
- [The Alarm Pheromone](#)
- [Bee Landing Pad, live cam](#)
- [16 Clear film containers](#)
- 16 Cotton balls
- Baking flavoring (vanilla, orange, peppermint, strawberry) or essential oils

## STEPS:

### PART ONE:

1. Explain that bees use the nasonov pheromone to help orient the bees to the hive. Each hive has its own scent, or pheromone, and they release it into the air so the foragers know which hive to come back to.
2. Show both videos of honey bees releasing the nasonov pheromone at the hive entrance. Point out the gland in the second video, which is the white spot at the base of the bee abdomen.
3. The guard bees will only let bees with the same scent inside the hive (unless the stranger bee has a lot of pollen to give to the hive).
4. Tell the students that today they will all be honey bees looking to find their sister bees with the same pheromone.
5. Give each student a container with a scented cotton ball. Demonstrate how to silently fly to another student, smell their container and either shake your head yes (if it smells the same) or no (if it smells different).
6. If it smells the same, the students link arms and fly together to a new student forming a bee chain. Once all four bees have made a chain they sit down on the floor and wait for the other hives to find each other.
7. Once every bee family is sitting together the teacher checks to make sure the scent (pheromone) is the same for each one.



### ASSESSMENT/REFLECTION:

Ask students how humans use smell (smell is a large factor in tasting food; smell triggers memories; human families have different smells, etc.).



**Bee Journal Entry-** Close your eyes and imagine the smell of a banana. Write about the first memory that comes to mind when you imagine that smell.

## BEE PHEROMONES LESSON STANDARDS

### NEXT GENERATION SCIENCE

3-LS3-1

4-LS1-2

### ELA COMMON CORE

W.3.3; W.4.3; W.5.3