

Queen Bee Lesson Plan

Post-Lab Activity 1 - Teacher Guide

Grades K-3

Overview

This lesson plan discusses the importance of the queen bee within a beehive. The worker and drone bees rely on the queen's scent to help them locate the correct beehive. The students will pretend that they are bees trying to find their "hive" by smelling a variety of different scents.

** This lesson will take place after the live videoconference with the Challenger Learning Center. **

Materials

Which Bee is Which sheet

Supplies for warm-up (optional - see below)

Variety of different scents (actual item or the scent represented by a candle, etc..)

Paper bags or non-transparent object to contain the objects/scents

Getting Ready

- Print *Which Bee is Which* (amount of copies depends on how you wish to run the activity)
- Decide which warm-up method the students will use - provide supplies accordingly
- Gather a variety of scents (objects or the scent represented by a candle, etc.)
- Gather brown paper bags or non-transparent objects to contain the objects/scents

Procedure

Students will review information presented in the live videoconference event by completing a warm-up. The warm-up consists of sorting short statements about the different types of bees according to which bee (queen, drone, or worker) makes the statement true. This activity can be completed as a whole class (more appropriate for younger grades), as partners, or independently.

On the *Which Bee is Which* sheet the labels are provided at the top of the page (in red letters). The statements are at the bottom of the page (in black letters). See ideas below on how to conduct this warm-up.

- As a Whole Group - Label each corner of your room as a different type of bee. Cut apart the bee statements and place them in a hat. Have a student (or the teacher) select one statement out of the hat and have the student(s) stand in the corner they think matches the statement.
- In Partners - Have three students work together as a group to sort the statements according to the type of bee. Each student's desk can represent a different type of bee and those statements can be placed on the corresponding desk.
- Independently - Have each student fold a piece of paper into sections and glue the labels at the top of the section with the corresponding statements underneath.

Please review each statement with the class and discuss what the students remember from the e-Lab about the statement/type of bee.

For the next activity remind students that the queen bee emits an odor that the bees in her hive become familiar with. This scent helps the worker bees locate their hive when they head out to collect pollen. The students are going to pretend they are bees and see if they can locate their "hive" by using their sense of smell.

The teacher needs to provide a variety of scents for the students to smell. Think about smells that are obvious (orange, peppermint, lemon) and can be obtained easily (in the grocery store, in your pantry at home, a candle, etc.). Some ideas are: peppermint, lemon, orange, pine tree, flowers, apple pie, and coconut. Divide the students into as many groups as the scents you were able to obtain.

Assign each group one of the scents. Allow them time to smell their scent and become familiar with the odor. Collect each scent and place it in a brown paper bag (or another set of object that fits all of the items without allowing students to see the item). Have all students place their head on the desk and close their eyes. Place the objects randomly around the classroom. Once all objects have been placed allow the students time to roam around the room and smell the different scents. Allow a few minutes for all students to smell all scents before determining which scent represents their hive. Instruct students to go stand at the scent or "hive". Once all students have made their decision they can open the bag and see if they were correct.

Remind students that each type of bee has a special place in the hive. They all have their own jobs to do in order for the hive to survive. A beehive with one type of bee would not be able to function as a healthy happy hive. Feel free to correlate this message with the real world or even your school. For example, the town they live in would not be able to survive without the mayor keeping order, the garbage man picking up the trash, the mailman delivering the mail, etc. Another example, the school they attended would not be a functioning school without the principal, secretary, students, teachers, custodial staff, cafeteria workers, etc.

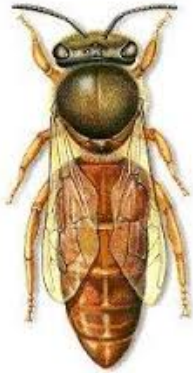
Explanation

The purpose of this lesson is to remind students how important each type of bee is to the hive. The hive would not be productive without each type of bee doing its job. Without the queen emitting an odor the worker bees would not know which hive was theirs upon returning from collecting pollen. This concept of community is a real-world concept that students need to understand.

Assessment

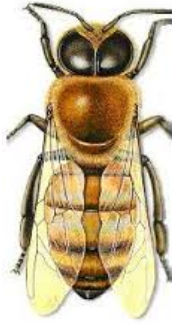
An informal or formal assessment can be obtained from the warm-up activity. Depending on which warm-up method chosen depends on what type of assessment is obtained.

Queen Bee



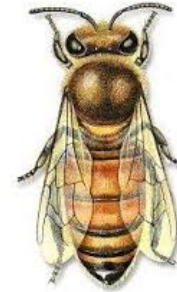
QUEEN

Drone Bee



DRONE

Worker Bee



WORKER

Largest body

Medium body

Smallest body

Biggest eyes

Pollen baskets

Makes a smell

No stinger

Jagged stinger

Smooth stinger

Boy bee

Mom bee

Girl bee