

Material Preparation

MATERIALS

- scissors
- two droppers
- clear tape
- roll of aluminum foil
- six 1¼-oz. cups
- four small cotton balls
- banana extract (or other scent)
- orange extract (or other scent)
- masking tape
- ECHOS Book: *Bizzy Bee's Adventure*

For each child:

- piece of aluminum paper 4" x 24"
- 12" black pipe cleaner
- 1¼-oz. cup
- small cotton ball
- *Ask Me About Bees* sticker

PREPARE IN ADVANCE

- For each child, prepare a scent cup:
 - Place a cotton ball inside each 1¼-oz. cup.
 - Place five drops of banana extract inside half of the cups, and five drops of orange extract inside the other half of the cups.
- For each child, make a bee antennas headband:
 - Tear off one piece of aluminum foil approximately 4" x 24" for each child.
 - Fold each individual sheet lengthwise.
 - Attach both ends to create a headband.
 - To make the antennas, fold the 12" pipe cleaner to make a V shape and wrap around the center of the headband.
 - Tape the ends together to make the headband fit each child's head.
- Prepare six extra scent cups, three with orange extract and three with banana extract, for the hives.



SET UP THE LESSON AREA

- Use masking tape to make two hexagon-shaped beehives on the floor; each should be large enough for three children to sit inside (about 2' per side)
- Place three cups of the same scent inside each hive.
- Place the children's scent cups, ECHOS book and the bee antennas headbands in the ECHOS lesson area.



PHOTOGRAPH

Honeybee Antennas photograph

OBJECTIVE

Children will learn that honeybees use their antennas to smell, and that honeybees living in the same hive have the same scent.

EXCITE

1. Gather the children in the ECHOS lesson area. Reveal a small 1¼-oz. cup with orange extract in it. **I have something in this little cup that *smells* yummy. It smells just like a fruit that is orange and round. Can you try to figure the name of the fruit?** Listen to the children's responses. **Yes, an orange!**
2. **How can we tell that this cup smells like an orange?** Listen to the children's responses. **Yes, we use our nose to *smell*. I'll pass the cup around for you to smell.** Allow each child in the group to smell the contents of the cup.

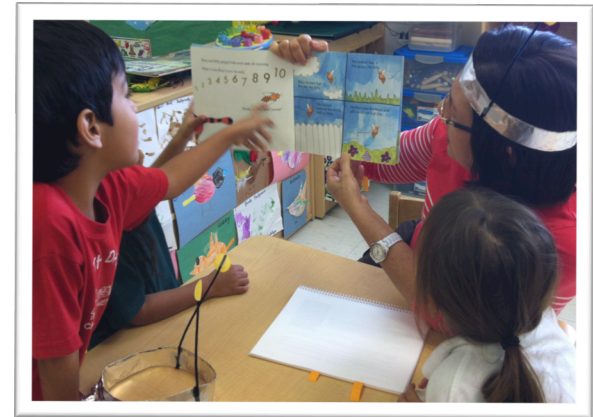


INTRODUCE

1. **Smelling is one of our five *senses*. What are our other senses?** Point to your eyes. **Yes, seeing.** Point to your ears. **Hearing.** Stick out your tongue. **Tasting.** Point to your fingers. **Touching.**
2. **Does a bee have a nose? I wonder how they smell things?** Show the children a bee antennas headband. Point to the two antennas. **A bee uses its two antennas [an-ten-naz] to smell. Let's say the word antennas together, antennas.**
3. Display the *Honeybee Antennas* photograph. **Here is a photo of a bee.** Point to the two antennas. **Do you see the bee's antennas?**
4. **A bee uses its antennas to smell a lot of things. Can you think of something that bees smell? Yes, flowers!**



5. Bees can also smell other bees in their home, called a beehive. Bees that live in the same beehive have the same **scent**. They smell the same!
6. I'm going to read you a story about how antennas help a bee named **Bizzy**. Hold up the ECHOS book: *Bizzy Bee's Adventure* to show the cover. **The title of this book is *Bizzy Bee's Adventure***. Read the story to the children.



EXPLORE

1. Place the book to the side. **Today we are going to be busy bees and use pretend antennas to explore. We'll start our investigation when everyone is wearing a bee antennas headband.** Give each child a bee antennas headband.
2. Hold up an orange-scented cup. **I want each of you to smell this cup. What does it smell like? Yes, it's the orange scent that you smelled earlier.** Pass around the orange-scented cup.
3. Pass around the banana-scented cup. **What scent is in this cup? Yes, banana.**
4. Give each child a scented cup. **Your beehive smells like your cup.** Have the children smell their cups and tell the group what they smell. **What scent is in your cup?**
5. **Your job, as a bee, is to find your own beehive. Here are two models of beehives.** Point to the two masking tape beehives. **There are three scented cups in each beehive.**



6. **How are you going to find your hive? Yes, that's right, you're going to have to smell the cups in the beehives and match your cup's smell with the beehive's smell. When you find your beehive, I want you to sit inside of it.** Use a child volunteer to model first if needed.
7. **Ready to find your beehive? OK, bees, start flying!** Provide time for the children to find which beehive has their matching scent.
8. After the children have found their beehive, have them check their scent with the other bees in their hive to confirm they all have the same scent. **Does your cup have the same scent as the cup of the other bees inside your beehive?** Accept responses. **That means they are your brother and sister bees. You are all from the same beehive family!**




INTERACT

Interact to accommodate children's individual needs and strengths. Use these suggested strategies as needed:

- If children are having difficulty identifying the five senses, ask them to provide examples of things they see, hear, taste, touch and smell. For example, provide small samples of real orange sections and sliced bananas for tasting and smelling
- While children are looking for their beehive, remind them to take turns smelling the cup inside the beehive. Three cups are provided per beehive, but you may add more cups of the same scent as needed.
- To make the **EXPLORE** easier for the children, draw orange dots on the outside of the orange scented cups and yellow dots on the outside of the banana scented cups.
- Make sure there are no more than three children in a beehive. For larger groups, use masking tape to create an additional beehive on the floor.

OUTCOMES

1. Regroup the children in the ECHOS lesson area. **What did we discover today?**
Listen to the children's responses. If needed, use suggested prompts to elicit key concepts and vocabulary. Encourage responses from everyone.
 - **What do bees use to smell?**
 - **How do bees know how to find their own beehive?**
2. Give each child an *Ask Me About Bees* sticker. 

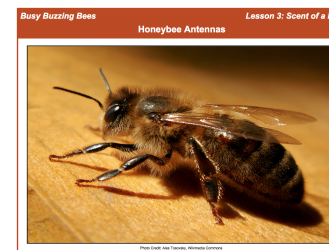
Remind the children to tell their family something they have learned about bees.
3. After you have completed *Lesson #3: Scent of a Bee* with all the children in your classroom, add the ECHOS materials suggested below to your science area to encourage exploration.

VOCABULARY

- scent
- senses
- smell(s)



ECHOS Book: Bizzy Bee's Adventure



Honeybee Antennas photograph



Honeybee Antennas



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