

## Material Preparation

### MATERIALS

- sheets of 9" x 12" brown construction paper
- bee model from *Lesson #1: Pollination*
- five paper flowers from *Lesson #1: Pollination*
- water
- plastic spoon
- five 1¼-oz. cups
- jar of honey with honeycomb inside
- masking tape
- paper bowl (6" diameter)
- two standard drinking straws

For each child:

- dropper
- brown paper hexagon shape (use *Hexagon Stencil*)
- 1¼-oz. cup with 2-3 drops of honey
- *Ask Me About Bees* sticker

### TEMPLATES AND PHOTOGRAPHS

- *Beehive* photograph
- *Honeycomb* photograph
- *Honeybee Proboscis* photograph
- *Hexagon Stencil*

### PREPARE IN ADVANCE

- Follow the *Hexagon Stencil* instructions to create paper hexagons.
- Pour about 1-oz. of water into five cups, add two drops of honey to each cup, and stir.
- Measure 1.5" of one of the standard drinking straws and cut it to be used as the proboscis on your bee model.



### SET UP THE LESSON AREA

- Use masking tape to create a hexagon on the floor.
- Place five paper flowers from *Lesson #1: Pollination* around the hexagon.
- Place one cup of honey/water mixture in the center of each flower.
- Place the following materials in the ECHOS lesson area: brown paper hexagons, droppers, cups of honey, the bowl, the standard drinking straw, the 1.5" piece of straw, jar of honey with honeycombs and the bee model.



For each child



## OBJECTIVE

Children will explore how honeybees use their proboscis to collect nectar to make honey.

## EXCITE

Gather the children in the ECHOS lesson area. Give each child a cup containing honey.

**I have put something special in these cups. Let's find out what it is.**

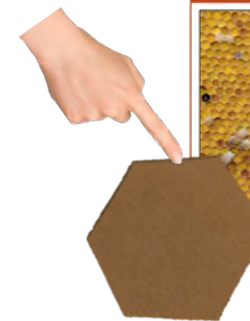
Encourage them to use their sense of taste and touch. **How does it taste?** Prompt children to respond "sweet." **How does it feel?** Prompt children to respond "sticky."

**What is it? Yes, honey.**



## INTRODUCE

1. Show the children the jar of honey with the visible honeycomb. **I bought this honey at the store. Honeybees love honey. I wonder if honeybees can buy honey at the store? No, that's silly.**
2. **Where do you think honeybees get honey? Honeybees make honey by collecting *nectar* from flowers. Nectar is a sweet juice made by plants.**
3. **Honeybees make honey in their nests. Their nests are called beehives. Has anyone ever seen a *beehive*? It looks like this.** Show the children the *Beehive* photograph.
4. **Inside the beehive is the *honeycomb*.** Show the children the *Honeycomb* photograph. **The honeycomb is made up of *hexagon* shapes side by side.** Show children a brown paper hexagon. **Let's say hexagon together [hek-suh-gon]. I wonder how many sides a hexagon has. Let's count them.** Touch each side as you count together. **One, two, three, four, five, six. How many sides does it have? Yes, a hexagon has six sides.**



5. **A honeybee has a special part of its mouth. It's a tongue and it has hair on it. Show me your tongue. A bee's tongue is called a *proboscis* [proh-bos-is]. Let's say that together, proboscis.** Show the children the *Honeybee Proboscis* photograph.
6. Hold up the bee model from the previous lesson. Insert the 1.5" piece of straw into the bee model's mouth. Point to the straw proboscis on the bee model. **A bee uses its proboscis to sip nectar out of the center of flowers. It works like a straw.** Show the children the drinking straw.
7. **Where do honeybees find nectar?** Prompt children to respond "flowers." **After the honeybee gathers nectar from flowers, it takes the nectar back to the beehive to make honey.**



## EXPLORE

1. **Today we are going to pretend to be honeybees. We will gather nectar from flowers and take it to our beehive. The first thing we are going to do is make a beehive.** Give each child a brown paper hexagon. Ask the children to place their hexagons inside the large hexagon on the floor. Place a bowl in the center of the beehive.
2. **Look closely around the room. There are pretend flowers for our pretend honeybees. Each flower has a cup in the center, and the nectar is in the cup.**
3. Hold up a dropper. **Have you ever seen one of these?** Listen to the children's responses. **It is called a dropper. You are going to pretend the dropper is your proboscis. You are going to use your proboscis to collect some of the nectar.** Give each child a dropper and demonstrate how to use the dropper to collect nectar. **Are you ready to fly to a flower and collect some nectar?**



4. Before children begin, remind them to put the nectar they collect inside the bowl located inside the beehive. **Do you remember where the honeybee takes the nectar? Yes, back to their beehive. After you collect your nectar with your dropper, put it in this bowl.** Point to the bowl. Demonstrate how to use the dropper to deposit the nectar in the honeycomb. **Ok, busy bees, start collecting nectar!** Let the children move around the room using their droppers to gather nectar and then go back to the beehive to deposit it inside the bowl. Provide assistance as needed.




## INTERACT

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

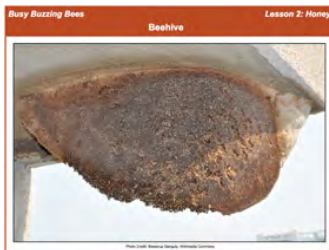
- Guide the children during the **EXPLORE** activity as needed to help them use the droppers. If needed, have each child practice using the droppers.
- Remind the children to move slowly around the classroom during the lesson. Wipe up any spills with a paper towel.

## 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 is the name of a honeybee's home?**
  - **How do honeybees collect nectar?**
  - **How does honey taste?**
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 #2: Honey* with all the children in your classroom, add the ECHOS materials suggested below to your science area to encourage exploration.

## VOCABULARY

- beehive
- hexagon
- honey
- honeycomb
- nectar
- proboscis



**Beehive photograph**



**Honeycomb photograph**



**Honeybee Proboscis photograph**



**paper hexagons**

## Beehive



Photo Credit: Biswarup Ganguly, Wikimedia Commons

# Honeycomb



Photo Credit: User Migco, Wikimedia Commons

## Honeybee Proboscis



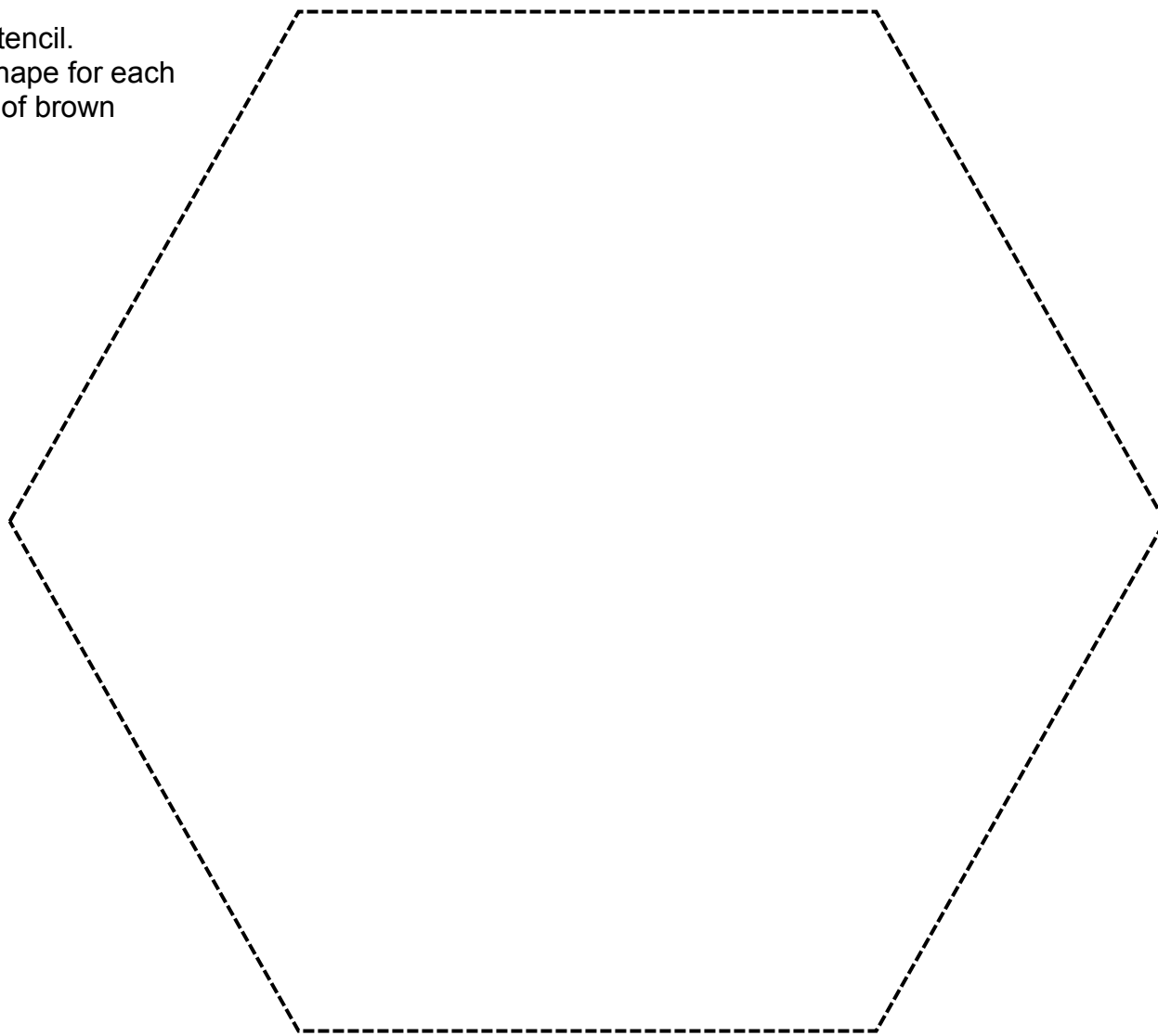
Photo Credit: John Severns, Wikimedia Commons



## Hexagon Stencil

Instructions:

1. Make one photocopy of this page.
2. Cut along the dotted lines to create a stencil.
3. Use the stencil to trace one hexagon shape for each child in the group; use a 9" x 12" sheet of brown construction paper.
4. Cut out the hexagons.



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