

## Buzzing Bee's Wardrobe



**LEVEL:** Grades K-3

**SUBJECTS:** Science, Language Arts, Art

**AZ ACA DEMIC STANDARDS :** LS-R2, LS-R5, LS-F1, LS-F2, 1AV-R2, 1AV- F-1, 1AV-F2, 1AV-F4, SC00-S1C1, SC00-S1C3

### **MATERIALS**

Class copies and overhead transparency of Buzzing Bee's Wardrobe, egg cartons, pipe cleaners, brownish-orange and black paint, construction paper, glue, and scissors.

### **VOCABULARY**

anatomy, antennae, head, honey stomach, legs, wax glands, glossa, wings, stinger, eyes, thorax.

### **RELATED LESSONS**

How Busy Are Bees?  
Do the Honeybee Dance!  
To Bee or not to Bee  
Those Busy Buzz'n  
Worker Bees

### **SUPPORTING INFORMATION**

All animals are classified by how they look, how they behave, and how their bodies work in comparison with the bodies of other animals. Honeybees are insects because they have insect characteristics: six legs, three body sections, antennae, and wings. Honeybees are hairy insects that are brownish-orange and black. They have two pairs of wings that can flap 250 times per second, or 11,000 times per minute. Pollen baskets on their legs are used to carry pollen. Venomous

stingers are used only if the bee feels threatened. Honeybees are one of about 20,000 different kinds of bees including bumblebees, carpenter bees, and leafcutter bees. Although most other bees live alone, (solitary bees) honeybees live in colonies. Honeybees are important to humans because they pollinate crops and produce honey and beeswax. Honey is the only food people eat that is made by insects. By pollinating fruits and vegetables, a worker bee makes  $\frac{1}{2}$  teaspoon of honey in its 45 day life. A beekeeper places wax foundations in frames and stacks them near a crop to help bees build their honeycombs faster. There are several different honey flavors that provide quick energy to athletes, supply vitamins to people, and honey fights certain types of diseases.

### **GETTING STARTED**

Copy of Buzzing Bee's Wardrobe for each student, one overhead transparency of illustration/or enlarged premade poster, one egg carton per four students, two pipe cleaners per student, brownish-orange and black paint, construction paper, glue, and scissors.

### **PROCEDURES**

1. Begin this lesson by analyzing the importance of parts of the human body and their functions. For example, how would humans eat apples if they had no teeth?

### **BRIEF DESCRIPTION**

Explore the physical characteristic functions of honeybees through whole class instruction. Individual students will create egg carton bee craft.

### **OBJECTIVES**

The students will:

- characterize and summarize the functions of the primary anatomical characteristics of a honeybee.
- build a model representing the basic anatomy of a honeybee.

### **ESTIMATED TEACHING TIME**

1 - 2 class periods (45 minutes each)

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## PROCEDURES (cont'd)

2. Discuss the anatomy of a bee. Just as humans have the tools to eat apples...that are teeth...bees have the tools they need to go about their business in collecting nectar and pollen.
3. Explore the anatomy of a bee by asking students to name the familiar parts of the honeybee Buzzing Bee's Wardrobe. Encourage students to tell what they think that particular part could be used for when the bee is working.
4. Explain the **Label** section: In this section you will read the words aloud and discuss the terms.
5. The teacher will read the clues below, one at a time in order for the students to locate and label the part that matches the description.

### CLUES

- ⇒All six of us are connected to the thorax. Two of us carry pollen in special pockets and two of us help to clean pollen from the body. (legs)
- ⇒In the abdomen, we produce the wax that our bee uses to make the honeycomb. (wax glands)
- ⇒The bee uses me like a straw to suck up water, nectar, and honey into its mouth. (glossa)
- ⇒A bee does not have a nose so we do all of the smelling instead. (antennae)
- ⇒As the bee collects nectar from each flower it visits, I store the nectar. (honey stomach)
- ⇒We work together to help the bee to move up, down, backward, and forward or hover like a helicopter. (wings)
- ⇒The bee dies after it uses me to inject venom into its enemies. (stinger)
- ⇒The bee has five of us altogether. Three of us are in a triangle on top of the head. The other two, found on each side of the head, are much

- larger and have thousands of lenses to help the bee find food and spot enemies. (eyes)
6. Have students construct a worker bee model using various classroom/household materials and art supplies. Use egg carton sections for the body, paint sections with brownish-orange and black stripes, pipe cleaner antennae, and construction paper wings.

### EVALUATION OPTIONS

1. Evaluate the completeness of students' Buzzing Bee's Wardrobe.
  - Did the student label the correct part?
2. Ask student volunteers to repeat the various characteristics and functions of a honeybee.
3. Upon completion of the model, students should have included the basic anatomy of a honeybee in their model: six legs, stinger, antennae, thorax, abdomen, head, and wings.

### EXTENSIONS AND VARIATIONS

This activity may need to be modified for kindergarten or first grade. The teacher may choose to enlarge Buzzing Bee's Wardrobe on a large poster board or make an overhead transparency. Students will participate in the same discussion however the teacher will do the writing.

### RESOURCES

- Insects: Mailbox Grades 1 - 3*, Published by The Education Center, Inc., NC, 2000.  
National Honey Board. 390 Lashley Street, Longmont, CO 80501-6045;  
[www.honey.com](http://www.honey.com)  
*The Honey Makers*, by Gail Gibbons, Published by Morrow Junior Books, NY, 1997.  
*The Honey Files: A Bee's Life, A Teaching Guide*,

Produced by the National Honey Board, 2001.

### CREDITS

*Insects: Mailbox Grades 1 - 3*, Published by The Education Center, Inc., NC, 2000.  
*The Honey Files: A Bee's Life, A Teaching Guide*, Produced by the National Honey Board, 2001.

### EDUCATORS' NOTES

#### CURRICULUM DESIGN

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Name \_\_\_\_\_

*Bee anatomy*

# BUZZING BEE'S WARDROBE

legs  
eyes

wings  
honey stomach

glossa  
stinger

wax glands  
antennae



Name Answer Key

*Bee anatomy*

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