



# PREREADING ACTIVITIES

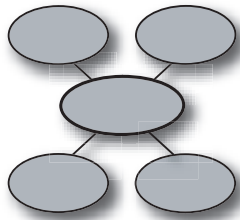
**Before distributing KIDS DISCOVER *Bees*, activate students' prior knowledge with these activities.**

## Discussion

To get students thinking about how this topic relates to their interests and lives, ask:

- ✓ *Have you ever watched bees move from flower to flower?*
- ✓ *Do you enjoy the taste of honey?*
- ✓ *Where have you seen honeycomb shapes?*

## Concept Map



Explain to students that they will be reading *Bees*. Ask: *What are some words related to bees?* List students' responses on the board. (See box below for some terms they may suggest.) After creating a list, ask students to

group the words into categories, such as **Bees' Structure**, **Bees' Life Cycle**, **Bees' Activities**, and **Bees' Products**. Create a concept map by writing *Bees* on the board and circling it. Write the categories around the circle and draw lines between the ideas to show the connections. Then list examples and write the words from the list around the appropriate categories. Encourage students to add more words to the concept map as they read *Bees*.

### KEY TERMS

- |              |                 |                 |
|--------------|-----------------|-----------------|
| ✓ honey      | ✓ queen         | ✓ fertilization |
| ✓ beeswax    | ✓ larva         | ✓ dances        |
| ✓ stinger    | ✓ pupa          | ✓ honeycomb     |
| ✓ proboscis  | ✓ metamorphosis | ✓ hive          |
| ✓ nectar     | ✓ worker        | ✓ beekeeper     |
| ✓ pollen sac | ✓ drone         | ✓ royal jelly   |
| ✓ pollen     | ✓ antennae      |                 |

## Get Set to Read (Anticipation Guide)



Copy and distribute the **Get Set to Read** blackline master (page 3 of this Teacher's Guide). Explain to students that this **Anticipation Guide** will help them find out what they know and what misconceptions they have about the topic. **Get Set to Read** is a list of statements—some true, some false. Ask students to write whether they think each statement is true or false in the **Before Reading** column. Be sure to tell students that it is not a test and they will not be graded on their answers. The activity can be completed in a variety of ways for differentiated instruction:

- ◆ **Have students** work on their own or in small groups to complete the entire page.
- ◆ **Assign pairs** of students to focus on two statements and to become "experts" on these topics.
- ◆ **Ask students** to complete the **Before Reading** column on their own, and then tabulate the class's answers on the chalkboard, on an overhead transparency, or on your classroom computer.
- ◆ **Review the statements** orally with the entire class.

If you predict that students will need assistance finding the answers, complete the **Page Number** column before copying **Get Set to Read**.

## Preview

Distribute *Bees* and model how to preview it. Examine **titles, headings, words in boldface, pictures, charts, and captions**. Then have students add new information to the **Concept Map**. If students will only be reading a few pages at one sitting, preview only the selected pages.

## BE WORD WISE WITH POWER VOCABULARY!

You have exclusive access to additional resources including Power Vocabulary blackline masters for every available KIDS DISCOVER title! These activities introduce students to 15 specialized and general-use vocabulary words from each KIDS DISCOVER title. Working with both types of words helps students develop vocabulary, improve comprehension, and read fluently. Follow the links from your Teacher's Toolbox CD-ROM and find your title to access these valuable resources:

- ◆ Vocabulary cards
- ◆ Crossword puzzle
- ◆ Word find
- ◆ Matching
- ◆ Cloze sentences
- ◆ Dictionary list



Name \_\_\_\_\_ Date \_\_\_\_\_

## Get Set to Read

What do you know about bees and making honey? In *Before Reading*, write *true* if you think the statement is true. Write *false* if you think the statement is not true. Then read *KIDS DISCOVER Bees*. Check back to find out if you were correct. Write the correct answer and its page number.

**CHALLENGE:** Rewrite each false sentence in a way that makes it true.

Before Reading		After Reading	Page Number
_____	1. Bees belong to an order of arachnids.	_____	_____
_____	2. Bees like butterflies develop through the process of metamorphosis.	_____	_____
_____	3. A killer bee's sting is more dangerous than other bee stings.	_____	_____
_____	4. Bees pollinate only red flowers.	_____	_____
_____	5. All honeycombs have seven-sided wax cells.	_____	_____
_____	6. Drones are male bees.	_____	_____
_____	7. Honey hunters use smoke to get bees to leave their nests.	_____	_____
_____	8. Bees of all ages eat honey.	_____	_____
_____	9. Beekeepers work year-round to keep hives productive.	_____	_____
_____	10. Babies less than a year old should be given honey.	_____	_____



Name \_\_\_\_\_ Date \_\_\_\_\_

## It's in the Reading

After reading **KIDS DISCOVER Bees**, choose the best answer for each question.  
Fill in the circle.



Find your answers on the pages shown in the book icon next to each question.

### 1. What is the most important job of bees?

- A. caring for bee eggs
- B. pollinating flowers
- C. making honey
- D. producing beeswax



### 2. Why couldn't you be stung by a bee at the top of Mount Everest?

- A. Bees there do not have stingers.
- B. Bees there are not aggressive.
- C. Bees do not live at such high altitudes.
- D. Bees cannot sting in cold weather.



### 3. Which two senses do bees use to find flowers?

- A. sight and hearing
- B. hearing and smell
- C. smell and sight
- D. smell and taste



### 4. Why does a bumblebee bite a hole into the base of a deep flower?

- A. to make royal jelly
- B. to reach pollen
- C. to pollinate the flower so that it will be able to produce seeds
- D. to reach nectar that's too deep for its tongue to reach



### 5. What do worker bees have in common with the queen bee?

- A. They are females.
- B. They make honey.
- C. They feed larvae.
- D. They build new wax cells.



**6. What is a job of a house bee?**

- A. collect pollen
- B. guard the colony
- C. forage for nectar
- D. dance to direct other bees to food sources



**7. What does a Himalayan honey hunter do first?**

- A. smokes bees out of their nests
- B. collects the honey
- C. is lowered on a ladder
- D. makes a ritual offering



**8. Why are queen bees larger than other bees?**

- A. Their larvae are fed royal jelly.
- B. Their larvae are fed bee milk.
- C. Their larvae are fed beebread.
- D. Their larvae are fed protein-rich pollen.



**9. What do the movable wooden frames in hive bodies hold?**

- A. supers
- B. sheets of wax
- C. nectar
- D. extractors



**10. Who were probably the earliest beekeepers?**

- A. the ancient Romans
- B. the ancient Greeks
- C. the ancient Egyptians
- D. Spanish cave artists



**11. Why do you think bees are valuable to people?**

---

---

---

---

---

---

---

---



Name \_\_\_\_\_ Date \_\_\_\_\_

## Everything Visual

Diagrams with labels can show structure and sequence. The diagrams on page 9 show the structure of bees and their life cycles. Study the diagrams. Then answer the questions.

**1. How are bees structured like other insects?**

---

---

---

**2. Describe the bee's proboscis. What is its function? What does it look like?**

---

---

**3. For what do bees use their antennae?**

---

**4. How do you think the bee's hair helps it collect pollen?**

---

---

**5. What are the four stages of a bee's metamorphosis?**

---

---

---

**6. What role do worker bees play in the metamorphosis of the bee?**

---

---



# CROSS-CURRICULAR EXTENSIONS

**H**ave students try these activities to expand their knowledge and interest in bees.

## Social Studies

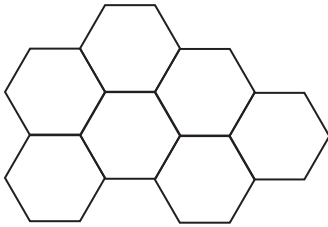
- ◆ Every state in the United States produces honey. Which states produce the most honey? Ask students to find out the largest producers of honey and to prepare a graph to illustrate the information. Suggest that students make a bar graph so that production amounts can easily be compared.

## Language Arts

- ◆ English has idioms that refer to bees. Talk with students about idioms. Explain that an idiom is an expression with a meaning that differs from the meaning of the individual words in the expression. Have students make a Buzzing Bees Book in which they record expressions about bees and their meanings, poems, and any other bee literature. Idioms include *busy as a bee*, *the bee's knees*, *make a beeline for*, *none of your beeswax*, and *a bee in one's bonnet*.

## Mathematics/Art

- ◆ Have students use a pattern for a regular hexagon to draw hexagons. Have students cut out the hexagons and arrange them on a large area to verify the statement on page 8 of *Bees* that hexagons fill the space without gaps.



## Social Studies

- ◆ Have students research information about how honey is processed for the market. As well as consulting reference texts, students might find information on the Internet. Suggest that they do a search using the words “honey production.” Have students write and illustrate a brief report on honey processing. Remind them to cite their sources in their report.

## Science/Art

- ◆ Bees and butterflies are examples of insects that go through a complete metamorphosis. Complete metamorphosis takes place in four stages—egg, larva, pupa, and imago. Grasshoppers are examples of insects that go through incomplete metamorphosis. Incomplete metamorphosis takes place in three stages—egg, nymph, and adult. Have students make a Metamorphosis booklet. They can discuss the differences between complete and incomplete metamorphosis. Suggest that they illustrate the booklet with colorful drawings or photographs.

## Language Arts

- ◆ Students can have a great time with word plays using bee-related terms such as *cell*, *bee*, and *honey*. For example, they could draw a spelling bee—a bumblebee with a speech bubble over its head with the letters b–e–e in it. Have students check out the word plays throughout DISCOVER KIDS *Bees*. Then challenge them to play with the words themselves.

## Music/Dance

- ◆ Play a recording of “Flight of the Bumblebee” by Nikolai Rimsky-Korsakov for students. Ask them to close their eyes as they listen. Remind students that bees use dances to direct other bees to sources of food. Encourage volunteers to choreograph a bee dance set to the “Flight of the Bumblebee.” Have them perform their dance for the class.







Name **ANSWER KEY** \_\_\_\_\_ Date \_\_\_\_\_

## Get Set to Read

What do you know about bees and making honey? In Before Reading, write *true* if you think the statement is true. Write *false* if you think the statement is not true. Then read KIDS DISCOVER *Bees*. Check back to find out if you were correct. Write the correct answer and its page number.

**CHALLENGE:** Rewrite each false sentence in a way that makes it true.

Before Reading		After Reading	Page Number
_____	1. Bees belong to an order of <del>arachnids</del> <b>insects</b> .	<i>False</i>	<i>p. 2</i>
_____	2. Bees like butterflies develop through the process of metamorphosis.	<i>True</i>	<i>p. 3</i>
_____	3. A killer bee's sting is <b>no</b> more dangerous than other bee stings.	<i>False</i>	<i>p. 4</i>
_____	4. Bees <b>do not</b> pollinate <del>only</del> red flowers.	<i>False</i>	<i>p. 9</i>
_____	5. All honeycombs have <del>seven-sided</del> <b>six-sided</b> wax cells.	<i>False</i>	<i>p. 9</i>
_____	6. Drones are male bees.	<i>True</i>	<i>p. 9</i>
_____	7. Honey hunters use smoke to get bees to leave their nests.	<i>True</i>	<i>p. 10</i>
_____	8. <del>Bees of all ages</del> <b>Adult bees</b> eat honey.	<i>False</i>	<i>p. 12</i>
_____	9. Beekeepers work year-round to keep hives productive.	<i>True</i>	<i>p. 14</i>
_____	10. Babies less than a year old should <b>not</b> be given honey.	<i>False</i>	<i>p. 17</i>

Name **ANSWER KEY** \_\_\_\_\_ Date \_\_\_\_\_

## It's in the Reading

After reading KIDS DISCOVER *Bees*, choose the best answer for each question.  
Fill in the circle



Find your answers on the pages shown in the book icon next to each question.

### 1. What is the most important job of bees?

- A. caring for bee eggs
- B. pollinating flowers (*details*)
- C. making honey
- D. producing beeswax



### 2. Why couldn't you be stung by a bee at the top of Mount Everest?

- A. Bees there do not have stingers.
- B. Bees there are not aggressive.
- C. Bees do not live at such high altitudes. (*draw conclusions*)
- D. Bees cannot sting in cold weather.



### 3. Which two senses do bees use to find flowers?

- A. sight and hearing
- B. hearing and smell
- C. smell and sight (*inference*)
- D. smell and taste



### 4. Why does a bumblebee bite a hole into the base of a deep flower?

- A. to make royal jelly
- B. to reach pollen
- C. to pollinate the flower so that it will be able to produce seeds
- D. to reach nectar that's too deep for its tongue to reach (*cause and effect*)



### 5. What do worker bees have in common with the queen bee?

- A. They are females. (*comparison and contrast*)
- B. They make honey.
- C. They feed larvae.
- D. They build new wax cells.



6. What is a job of a house bee?

- A. collect pollen
- B. guard the colony (*details*)
- C. forage for nectar
- D. dance to direct other bees to food sources



7. What does a Himalayan honey hunter do first?

- A. smokes bees out of their nests
- B. collects the honey
- C. is lowered on a ladder
- D. makes a ritual offering (*sequence*)



8. Why are queen bees larger than other bees?

- A. Their larvae are fed royal jelly. (*cause and effect*)
- B. Their larvae are fed bee milk.
- C. Their larvae are fed beebread.
- D. Their larvae are fed protein-rich pollen.



9. What do the movable wooden frames in hive bodies hold?

- A. supers
- B. sheets of wax (*details*)
- C. nectar
- D. extractors



10. Who were probably the earliest beekeepers?

- A. the ancient Romans
- B. the ancient Greeks
- C. the ancient Egyptians (*details*)
- D. Spanish cave artists



11. Why do you think bees are valuable to people?

*Essay: Answers will vary. Students may cite bees' role in plant fertilization or in honey making.*



Name **ANSWER KEY** \_\_\_\_\_ Date \_\_\_\_\_

## Everything Visual

Diagrams with labels can show structure and sequence. The diagrams on page 9 show the structure of bees and their life cycles. Study the diagrams. Then answer the questions.

**1. How are bees structured like other insects?**

*All insects including bees have six legs and three body parts—head, thorax, and abdomen. Like many other insects, bees have antennae and wings.*

**2. Describe the bee's proboscis. What is its function? What does it look like?**

*The proboscis is a long tongue, which a bee uses to suck up nectar. It looks like a slender tube.*

**3. For what do bees use their antennae?**

*Bees use the antennae for smelling and touching.*

**4. How do you think the bee's hair helps it collect pollen?**

*The hair brushes against the pollen, which sticks to it.*

**5. What are the four stages of a bee's metamorphosis?**

*The four stages are egg, which is laid by a queen; larva, which grows quickly and spins a cocoon; pupa, which develops adult structures inside the cocoon, and adult bee.*

**6. What role do worker bees play in the metamorphosis of the bee?**

*Workers feed the developing larva and cap the cell in which the larva spins its cocoon.*