

## Section 28–3 Insects (pages 726–733)

*This section identifies the distinguishing features of insects. It also describes two types of development insects can undergo and explains what types of insects form societies.*

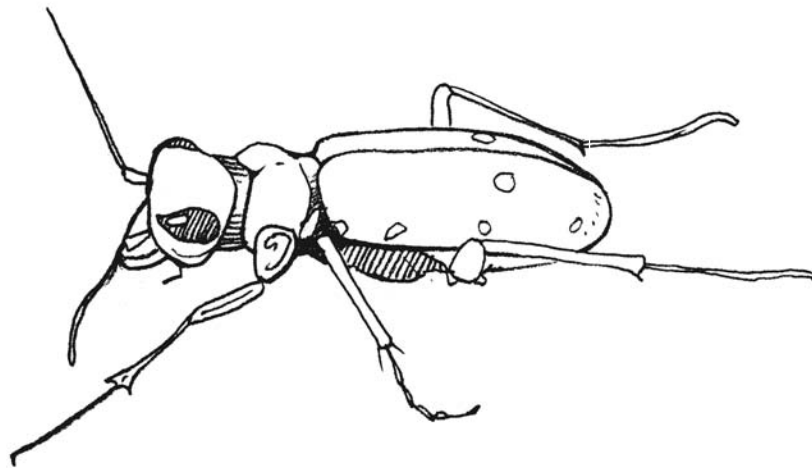
### Introduction (page 726)

1. What are three characteristics of insects that have contributed to their evolutionary success?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

### What Is an Insect? (pages 727–729)

2. Label the three body parts of an insect.



3. How many pairs of legs does an insect have, and where are they attached?

\_\_\_\_\_

4. Circle the letter of each sentence that is true about a typical insect.

- a. It has tracheal tubes used for respiration.
- b. It has a pair of compound eyes on the head.
- c. It has two pairs of wings on the abdomen.
- d. It has a pair of antennae on the head.

5. What is the multiple-lens structure of the compound eye better at detecting than the human eye? \_\_\_\_\_

6. Where do insects have chemical receptors for taste and smell? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

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7. Is the following sentence true or false? Many insects have well-developed ears.  
\_\_\_\_\_
8. Why do insect mouthparts take on a variety of shapes? \_\_\_\_\_  
\_\_\_\_\_
9. How many pairs of wings does a flying insect typically have, and what are they made of? \_\_\_\_\_  
\_\_\_\_\_
10. What has the evolution of flight allowed insects to do? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. What is metamorphosis? \_\_\_\_\_  
\_\_\_\_\_
12. What is the main difference between complete metamorphosis and incomplete metamorphosis? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
13. The immature forms of an insect that undergo incomplete metamorphosis are called \_\_\_\_\_.
14. Circle the letter of each type of insect that undergoes complete metamorphosis.  
a. moths      b. bees      c. chinch bugs      d. beetles
15. What do the insects that undergo complete metamorphosis hatch into?  
\_\_\_\_\_
16. The stage in which an insect changes from larva to adult is called a(an)  
\_\_\_\_\_.
17. Circle the letter of each sentence that is true about complete metamorphosis.
  - a. The nymphs gradually acquire adult structures.
  - b. During the pupal stage, the body is completely remodeled inside and out.
  - c. The larva molt a few times but change little in appearance.
  - d. The adult that emerges seems like a completely different animal from the larva.

### **Insects and Humans** (page 730)

18. Is the following sentence true or false? Only male mosquitoes bite humans and other animals to get a blood meal. \_\_\_\_\_

19. How do insects contribute beneficially to agriculture? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **Insect Communication** (page 731)

20. Circle the letter of each sentence that is true about insect communication.
- a. To attract females, male crickets chirp.
  - b. Much of an insect's communication involves finding a mate.
  - c. Insects communicate using visual signals.
  - d. Fireflies use sound cues to communicate with potential mates.
21. What are pheromones? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **Insect Societies** (pages 732–733)

22. What is a society? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
23. Circle the letter of each sentence that is true about castes.
- a. Each caste has a body form specialized for its role.
  - b. Most insect societies have multiple queens.
  - c. Groups of individuals in a society are specialized to perform particular tasks.
  - d. The queen is typically the largest individual in the colony.
24. What does a honeybee's round dance tell the other bees? \_\_\_\_\_  
\_\_\_\_\_
25. What does a honeybee's waggle dance tell the other bees? \_\_\_\_\_  
\_\_\_\_\_

### **Reading Skill Practice**

By looking carefully at illustrations in textbooks, you can help yourself understand better what you have read. Look carefully at Figure 28–16 on page 728. What important idea do these illustrations communicate? Do your work on a separate sheet of paper.