

Lesson 1: What Is an Insect?

Insect Facts

- Animal with body made of rings
- 3 parts: head, thorax, and abdomen
- Six legs
- Two or four wings

Reading and Questions

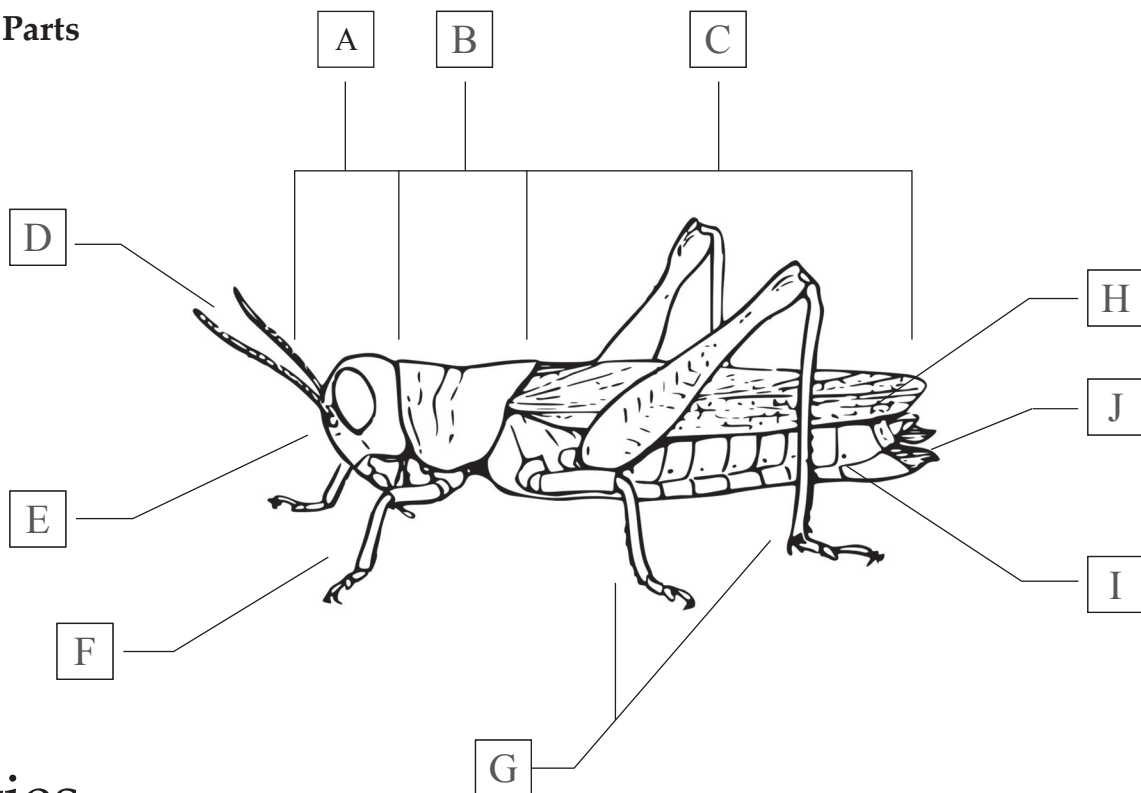
*Insects
Reader
pp. 5-8*

1. How much of the animal kingdom is made up of insects? Three-fourths of the animal kingdom is made up of insects.
2. Name five different kinds of insects from the reading. e.g., cabbage butterfly, red admiral, aphid, lady-bird, rose-beetle, grasshopper, etc.
3. This reading was written by a person from Britain, and the British have a different name for crane flies than Americans. What is this name? daddy-longlegs
4. How many parts make up an insect's body? three
5. What are the body parts called? head, thorax, and abdomen
6. From the tail of the insect to its head, it is divided into what? rings
7. How does an insect breathe air? through breathing holes along the sides of its body
8. Why is a crane fly, or daddy-longlegs, different from other insects like bees, butterflies, and beetles? It has two wings, not four.
9. What do you need to remember about insects? They have six legs; their body is divided into three parts; you can see rings in their hind body or abdomen; their legs and wings grow on the front body or thorax; they never breathe through their mouths; and while bees, butterflies, and beetles have four wings, flies have two wings and two stumps.

Observation and Sketching

- Let's take a common insect, the grasshopper, and study the parts of its body. Look at the picture of the grasshopper below and label its parts as you read. The first part, the head (A), is labeled for you.
- On the head are the antennae (D) and eyes (E). Also on the head is the mouth.
- In the middle of the body is the thorax (B). On the thorax are the forelegs (F), hind legs (G), and forewings (H). The legs have joints that work like your elbow and knee. The forewings usually cover the hind wings when at rest.
- The last part, the abdomen (C), has spiracles (I) and an ovipositor (J). Spiracles are holes on the sides of the body used for breathing. Air enters an insect's body not through a nose, but through spiracles. The ovipositor is used to lay eggs, and for some insects (e.g., wasp, honeybee) it is also a stinger.

Insect Body Parts



Activities

1. Recite from memory the **Insect Facts** at the beginning of this lesson.
2. In your yard or a park, look for insects and try to identify their parts.

Lesson 2: Insects and Other Animals

Arthropod Facts

- Living things are classified in these groups: *Kingdom, Phylum, Class, Order, Family, Genus, Species*.
- Insects belong with other similar animals in the Phylum called *Arthropods*.
- Arthropods have jointed legs, an exoskeleton, and a segmented body.
- Arthropod classes are separated by how many legs they have: *Insects* (6), *Arachnids* (8), *Crustaceans* (10), *centipedes* (a lot), and *millipedes* (a whole lot).

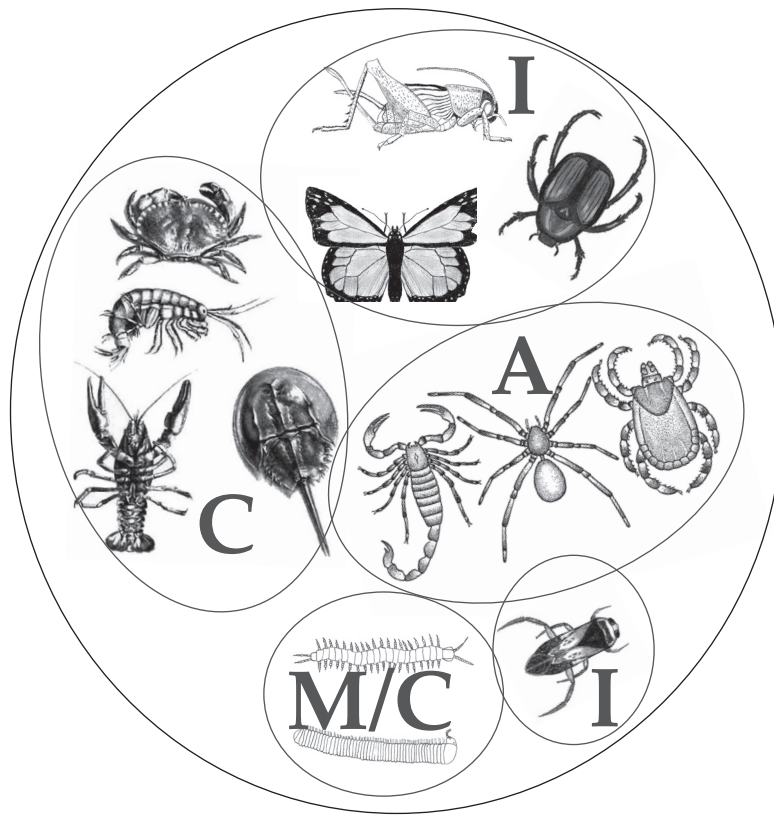
Reading and Questions

*Insects
Reader
pp. 8-11*

1. What are animals made to fit? They are made to fit the place where they live.
2. What does "Arthropod" mean? It means "jointed legs."
3. What is another feature of an Arthropod's body besides jointed legs? They have a hard outer skin, or exoskeleton.
4. What kinds of Arthropods are crabs and lobsters? They are Crustaceans.
5. Give some examples of Arachnids. Arachnids include spiders, scorpions, and ticks.
6. What two classes of Arthropods have many legs running down their long body? These are centipedes and millipedes.
7. How do we tell Arthropods apart? We tell them apart based on how many legs they have.
8. How many legs does each class of Arthropods have? Insects have six legs, Arachnids eight, Crustaceans ten, centipedes a lot, and millipedes a whole lot.

Observation and Sketching

- Below is a circle of Arthropods. Analyze the animals by looking at their body parts. The most important question to ask about each one is, “How many legs does it have?”
- Compare the animals with each other. Which ones are similar, or have the same number of legs? Circle all the Arachnids in blue, the Crustaceans in brown, millipedes and centipedes in yellow, and insects in red.
- Contrast the groups. In what ways—apart from the number of legs—do they differ?



Activities

1. Recite from memory the **Arthropod Facts** at the beginning of this lesson.
2. Review the **Facts** from Lesson 1. Search for Arthropods in your yard, and try to tell which class they belong to.