

## **Close Up Observation**

### ***Scientific Background***

Scientists collect data as one way to record their observations. Scientists must strive to be objective, so that the data reflects what they actually observed and not what they *want* to or *hope* to observe. Careful observation increases students' understanding of the world around them.

Close-up pictures for each of the Level 1 bugs and a Science Journal page can be used to provide opportunities for students to practice their observation skills. Students will make, describe, and record observations using words and pictures. By looking closely at the bugs, students gain an understanding of the characteristics of organisms and the relationship between form and function.

### ***Vocabulary***

- antennae
- fore legs
- hind legs
- mouthparts
- prolegs
- eye
- fore wings
- hind wings
- observation
- wing

*Vocabulary definitions can be found in the **Backyard Bugs** Glossary.*

### ***Thinking Question***

Think about one feature, such as wings, eyes, or mouthparts, of the bug you have observed. Why is that feature an important part of the bug's body?

### ***Exploratory and Extension Activities***

***Additional Exploratory and Extension activities are available in the Backyard Bugs Teacher's Guide.***

### **Descriptive Words**

Have students describe the patterns of color, texture, shape and size of the bugs they studied, such as: leathery, transparent, oval, elongated, round, rectangular, triangular, square, funnel, long, narrow, or slender.

Name: \_\_\_\_\_

Close Up Observation of \_\_\_\_\_

**Draw a picture of the bug you observed.**



**What is it?**

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**What did you find out about the \_\_\_\_\_?**

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## Answer Key

### Close Up Observation of \_\_\_\_\_

**Draw a picture of the bug you observed.**

*Students should draw the bug they are investigating. Use the table below to assess how students have represented the bug's features.*

<i>Bug</i>	<i>Possible Features to Show in Drawing</i>
<i>Antlion larva</i>	<i>Larva has three pairs of legs; jaws; a digging comb on abdomen.</i>
<i>American Cockroach</i>	<i>Adult has flattened oval-shaped body; two pairs of wings, one folded over the other; three pairs of legs that are adapted for running; adult mouth organs have jaws to chew food; adult has cerci on tip of abdomen to detect air movement so that it can escape predators.</i>
<i>Dragonfly</i>	<i>Adult has: two pairs of long, narrow wings; front wings look different from hind wings; wings have veins; large compound eyes.</i>
<i>Hickory Horned Devil</i>	<i>Caterpillar has green, orange, black features; horns; spikes; prolegs; true legs.</i>
<i>Luna Moth</i>	<i>Luna moth has white body; light green wings with long, curving tails on hind wings; feathery antennae; scales and eyespots on all four wings; has no mouth parts.</i>
<i>Monarch Butterfly</i>	<i>Monarch butterfly has two knobbed antennae; scales on wings; proboscis for sipping nectar; orange, black and white pattern on wings.</i>
<i>Monarch Caterpillar</i>	<i>Caterpillar has three pairs of true legs; prolegs, black, yellow and white stripes; chewing mouth parts.</i>
<i>Spider</i>	<i>Spider has four pairs of legs; its head and thorax form cephalothorax; does not have wings or antennae; eight small eyes; fangs to inject venom into prey; tip of its leg has claws and feeling hairs; bristles on body.</i>
<i>Whirligig Beetle</i>	<i>Adult is oval shaped with flattened body; has shiny black or bronze color; has compound eyes, in two parts; has paddle-like back legs, long, thin front legs; well-developed wings.</i>

### **What is it?**

*Students should describe their drawing. Use the table above to assess student's descriptions of their bug drawing.*

### **What did you find out about the \_\_\_\_\_?**

*Students should describe what they learned about the bug. Use the table above to assess student's descriptions of their bug.*