

Creepy, Crawly Critters

Objective

Students will identify different insects as well as the body parts of insects.

Background

There are over 1.5 million kinds of insects. They come in all shapes and sizes. Without them, our world would probably end. Insects carry pollen from flower to flower. This helps the plants make the fruits and vegetables we eat. Many bugs help farmers, either by pollinating the plants or by eating the bugs that harm the farmers' crops. These are called beneficial insects. Both Thomas Jefferson and George Washington maintained insectaries where various plants were nurtured to attract beneficial insects for protection of their crops.

The lady beetle, more commonly known as a ladybug, is a beneficial insect. Lady beetles and their young (larva) are welcome in gardens, because they eat many harmful insects. The lady beetle you see in the garden may not be a lady. There are male and female lady beetles.

Some insects will sting you. You should stay away from them. Don't kill them, though, because they might be beneficial, too. Insects do not sting without cause. They only sting when they think you are going to hurt them. One of these insects, the honeybee, is a very beneficial insect. It carries pollen from plant to plant and then carries the pollen to the beehive. There the bees all work together to make wax and delicious honey. If you do get stung, try this home remedy: Mix a small amount of baking soda with water to make a paste. Make sure the bee's stinger has been scraped out, then rub the paste on the sting and let it dry.

Each year people spend millions of dollars trying to control insects that are pests. One of the most common household pests is the cockroach. Both the German cockroach and American cockroach reproduce rapidly and can be very difficult to control. Farmers have trouble with cockroaches, too. Cockroaches like to get into grains the farmer has stored and lay their eggs. In no time at all they will overrun the storage area.

Science

1. Read and discuss background and vocabulary.
2. Lead a discussion in which you compare people with insects. How are people different from insects? Students will use a Venn diagram included to compare and contrast people and insects.
3. Review the body parts of an insect. Students will label the body parts on the diagram included with this lesson. (Answers: 1. head, 2. thorax, 3. abdomen, 4. legs)
4. Students will create a chart titled, "Insects Are, Can, Have." Use the chart to write sentences or paragraphs describing insects.
5. Divide students into small groups. Provide each group with a small bag of materials, including macaroni, spaghetti, beans, pipe cleaners, buttons, black construction paper, glue, small paper cups, etc. Each group should do the following:

Oklahoma Academic Standards

KINDERGARTEN

Life Science: 1-1. Earth Science: 3-1
Speaking and Listening: R.1,2,3,4; W.1,2. Critical Reading and Writing: W.1. Research: R.1,2; W.1,2
Geometry: 1.1

GRADE 1

Life Science: 1-1
Speaking and Listening: R.1,2,3,4; W.1,2. Critical Reading and Writing: W.1,2. Research: R.1,2,3; W.1,2,3
Geometry: 1.2

GRADE 2

Life Science: 4-1
Speaking and Listening: R.1,2,3,4; W.1,2. Critical Reading and Writing: W.1,2. Research: R.1,2,3; W.1,2,3
Geometry: 1.3

GRADE 3

Life Science: 1-1
Speaking and Listening: R.1,2,3; W.1,2. Critical Reading and Writing: W.1,2. Research: R.1,2,3,4; W.1,2,3

Materials

Misc. materials for creating insect models—macaroni, spaghetti, beans, pipe cleaners, buttons, construction paper, glue, small paper cups, etc.

Vocabulary

beneficial insects—Insects considered helpful to the farmer or gardener because they aid pollination (bees, butterflies) or help control harmful insects (lady beetles, dragonflies)

control—to reduce the number of individuals to a level that is not damaging.

insect—any number of small invertebrate animals having an adult stage characterized by three pairs of legs, a segmented body with three major divisions and usually two pairs of wings

larva—the wingless, often worm-like, form of a newly hatched insect before it undergoes metamorphosis.

pollen—the fine powderlike material produced by the anthers of flowering plants or flower in the process of fertilization.

Surprise Critter Treat

Bake new plastic insects in cupcakes for a surprise snack. Students will categorize and discuss the insects after they find them in their cupcakes.

—Create an insect, using the bag of materials and the rubric created above.

—Give the created insect a name.

—Tell why the creation is an insect.

—Is the insect beneficial or a pest? Why?

English Language Arts

1. Students will write sentences describing the insects they have created.
2. Students will write stories about their insects (e.g., a day in the life).
3. Students will research their favorite insects and make presentations.
4. Use the online program “Tagxedo” or “Wordle” to create word art. Students will add vocabulary words, adjectives that describe insects, or key words from background information that state key facts about insects.
5. Students will participate in shared research, using biographies and informational text, to find the contributions of George Washington and Thomas Jefferson’s insectaries.

Math

1. Students will cut out the puzzle insects included with this lesson.
 - Students will name the shapes.
 - Students will predict what shape will be formed by putting the puzzle together.
 - Students will put the shapes together to form pictures of some common insects.
 - Students will name each part of the insect on their completed puzzles.

Physical Education—Gross Motor Skills

1. Students will act out the behavior of a common Oklahoma insect and let the rest of the class guess the insect.

Extra Reading

Hopkinson, Deborah, and Jen Corace, *The Humblebee Hunter*, Hyperion, 2010.

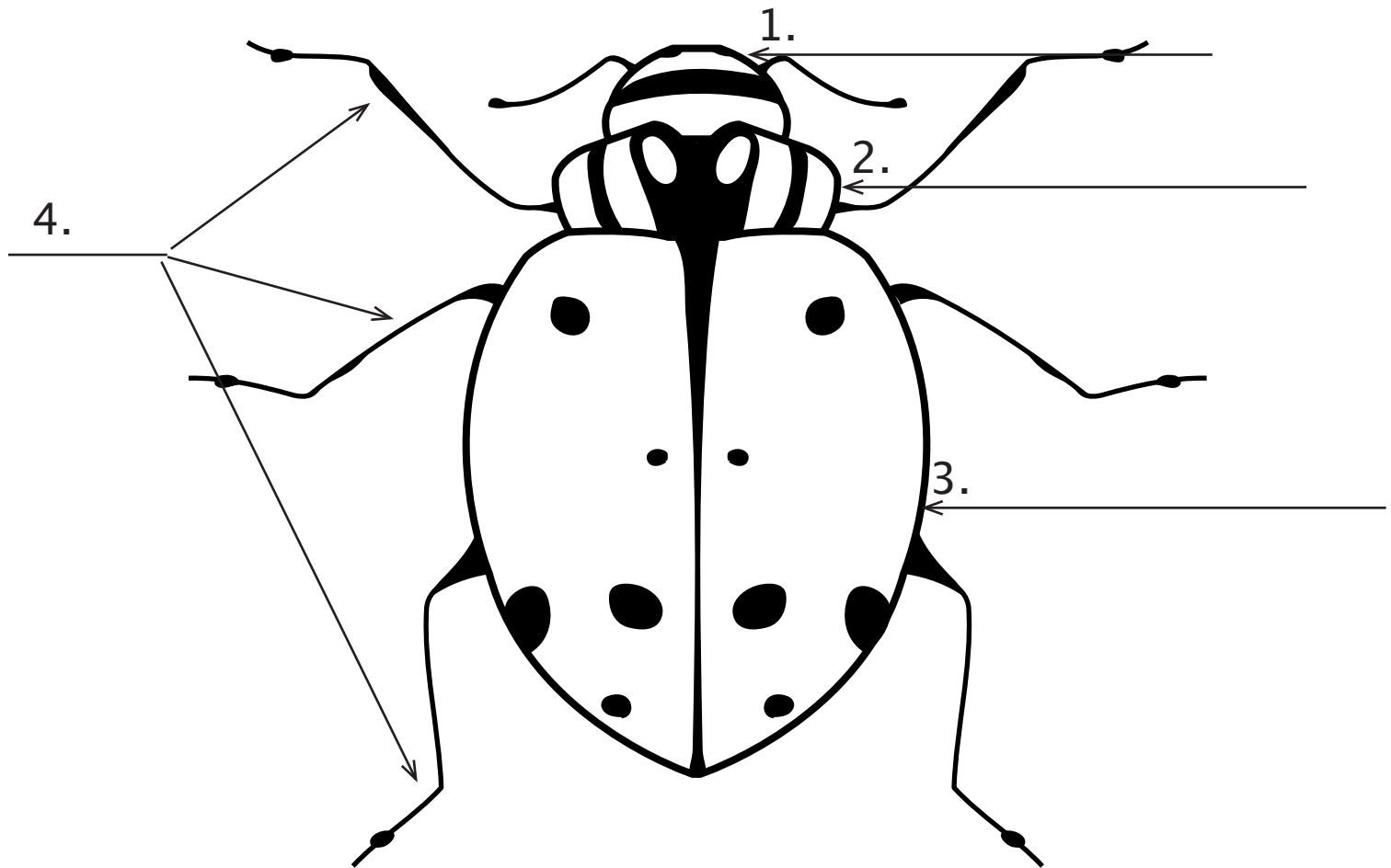
Kelly, Irene, *It’s a Butterfly’s Life*, Holiday House, 2007.

Llewellyn, Claire, *The Best Book of Bugs*, Kingfisher, 2005.

Mound, Laurence, *Insect (DK Eyewitness Books)*, DK Children, 2007.

Name _____

Insect Body Parts



Label the parts of the insect:

head

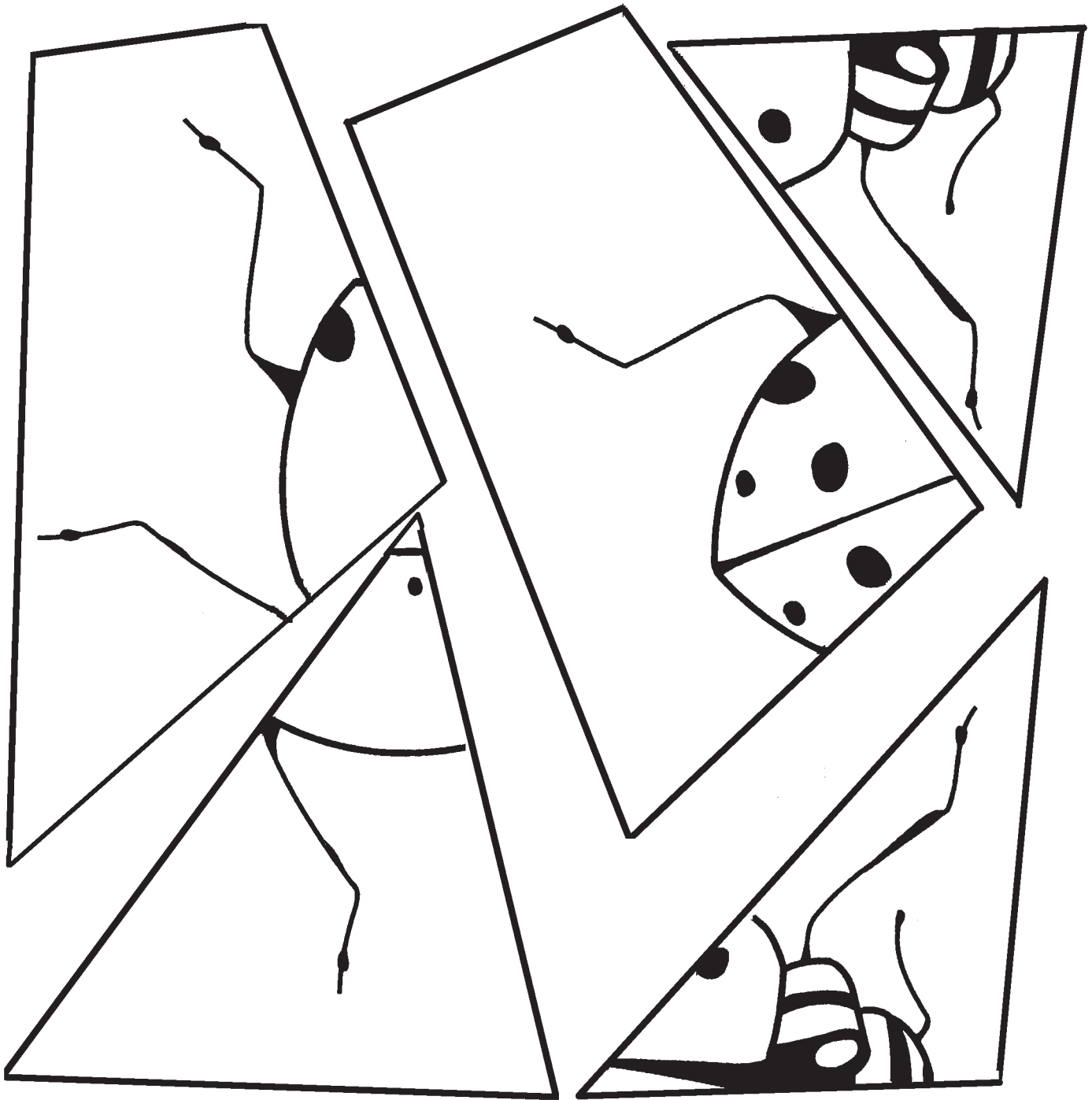
thorax

abdomen

legs

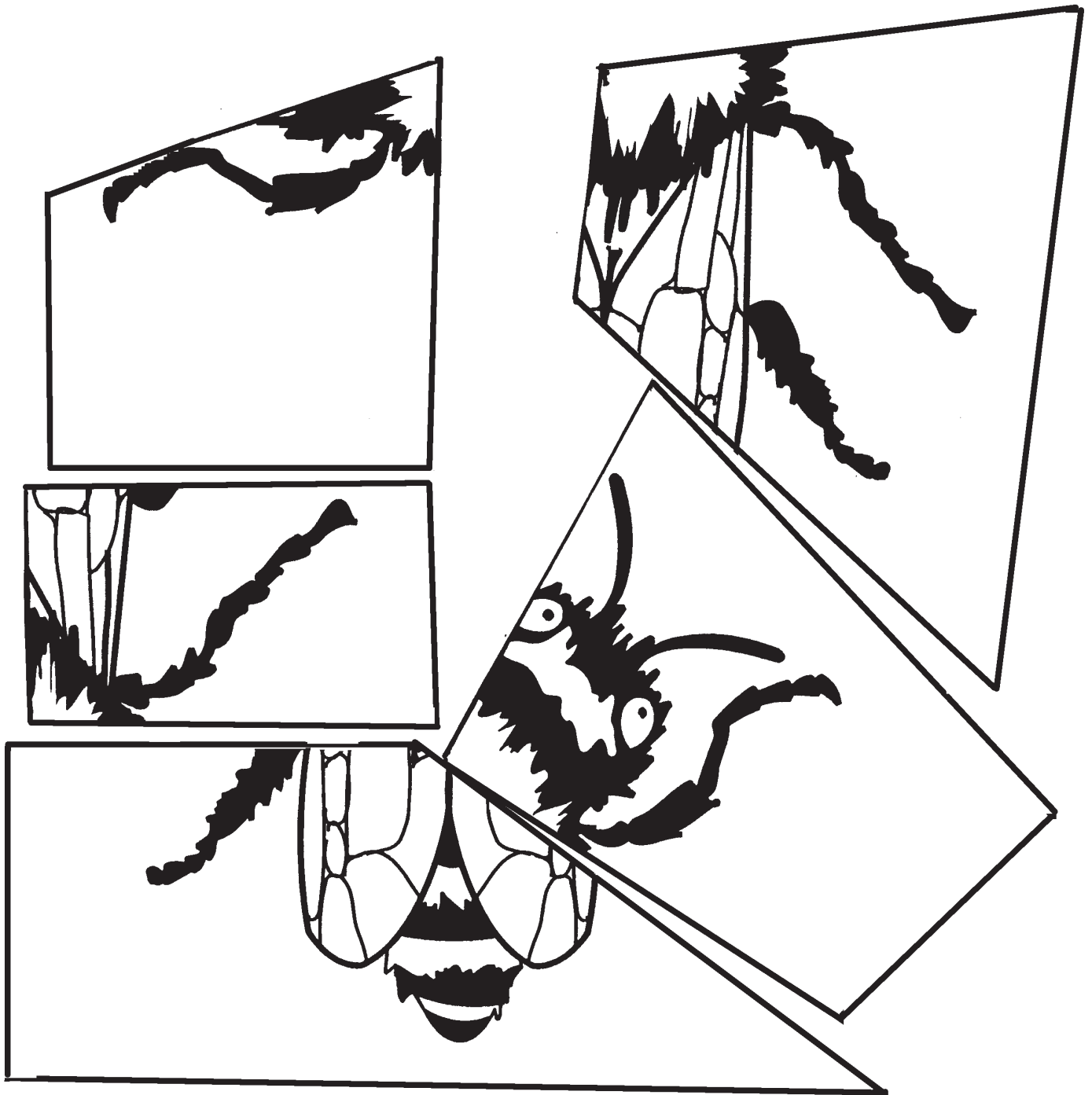
Lady Beetle

Cut out the puzzle pieces below. Put this lady beetle back together and glue it on another piece of paper.



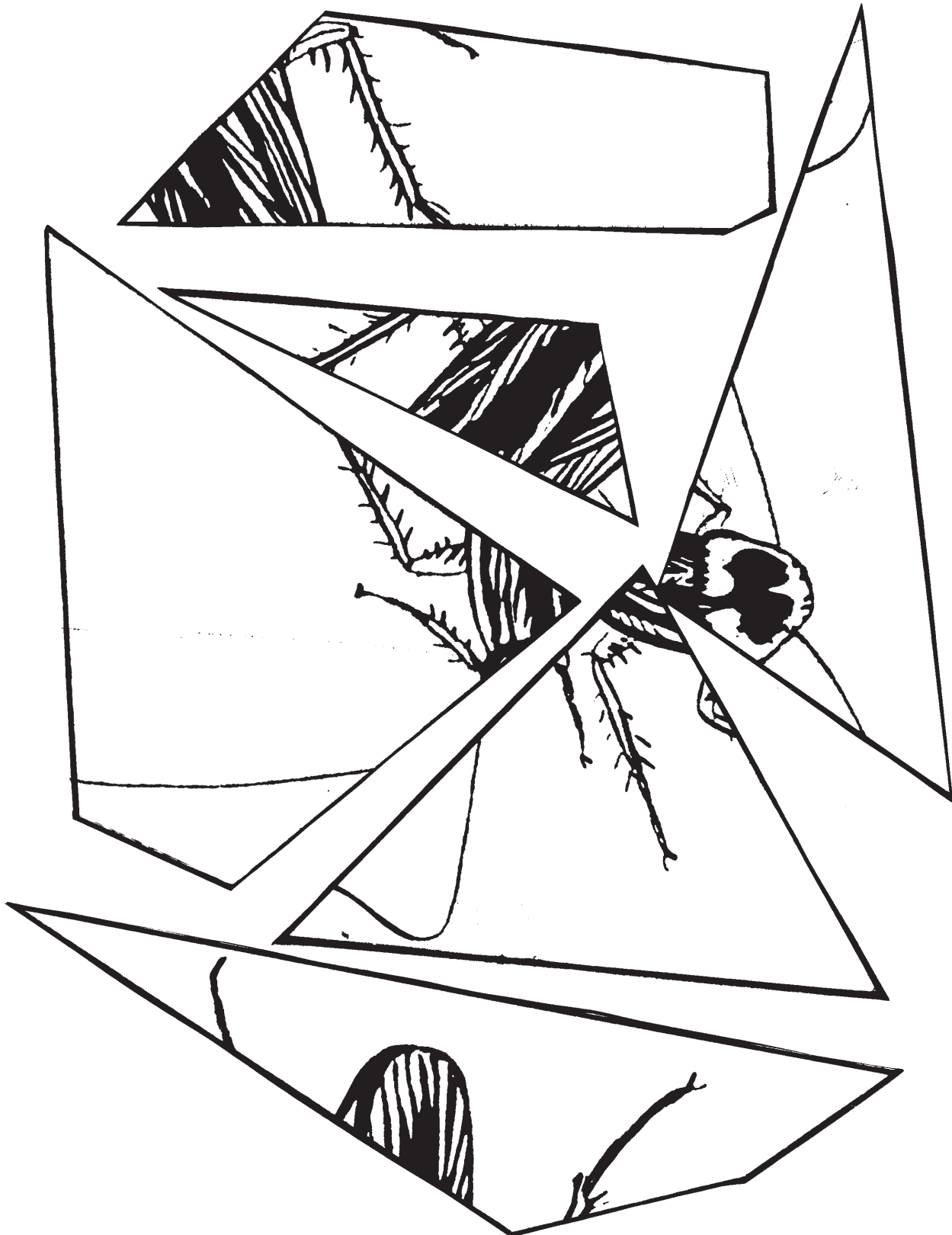
Honeybee

Cut out the puzzle pieces below. Put this honeybee back together and glue it on another piece of paper.



Cockroach

Cut out the puzzle pieces below. Put this cockroach back together and glue it on another piece of paper.



Oklahoma Ag in the Classroom is a program of the Oklahoma Cooperative Extension Service, the Oklahoma Department of Agriculture, Food and Forestry and the Oklahoma State Department of Education.