

# Teaching Notes

## Insects and Spiders Unit Overview

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The Learning Page Insects Unit is divided into several sections:

[Lesson Plans](#)

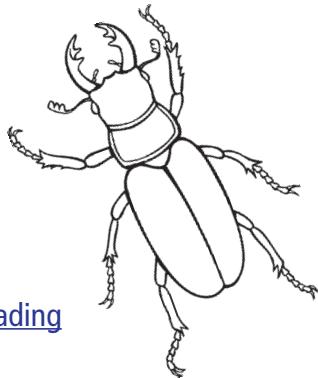
[Fact Files](#)

[Fun Sheets](#)

[Cut Outs](#)

[Murals](#)

... and [Recommended Reading](#)



The Lesson Plans provide ten or more comprehensive and detailed lesson ideas for each of two levels: Preschool through Kindergarten, and First and Second Grades. Each Lesson is a structured activity incorporating fine arts, science, reading, and writing activities, and stressing many skills and objectives. Each Lesson Plan gives the teacher suggestions for preparing the lesson, materials lists, an introduction, questioning strategies, procedures, and ideas to bring the lesson to a conclusion and further activities.

Each lesson has direct links to other Learning Pages resources, so the teacher can easily locate related books, Funsheets, Fact Files, and Cut Outs.

The Lesson Plans are divided into grade levels. Each teacher, knowing the abilities and developmental levels of each of his or her students, can review all of the Lesson Plans and use the ones best suited to their classroom. For instance, some of the second grade Fun Sheets are linked to Kindergarten Lesson Plans, because the content of that Fun Sheet might fit into the teaching of that Lesson. Many of the Lessons and Fun Sheets can be adapted and used in higher or lower levels. Don't let our classifications fence you in. Use them as you see fit, in the order and time frame that works best for you.

The Fact Files give you vital statistics, description, pertinent information, and a visual of twenty insects and spiders. Each Fact File is simply presented and readable, with the Order it belongs to. The Fact Files provide students with many pieces of information that can be used in the Lesson Plans to compare, contrast, list, graph, plot, draw, arrange, and talk about.

### Fun Sheets

Preschool: fundamental and general skills

Kindergarten: math, language, and science

First Grade: math, language, and science

Second Grade: math, language, and science

The Learning Page Insect/Spiders Cut Outs are beautiful and accurately rendered illustrations of ten different insects and spiders. Drawn in proportion to one another and to the Mural (see below), these insect drawings are set up in a convenient and easy to use format: simply download, print, copy and distribute to students to cut out and use for a variety of applications: to color and paste onto the mural, or to use as patterns for several of the activities (links provided). Cut Outs can be copied same-size or enlarged and used to decorate the classroom and bulletin boards. Use your imagination with the patterns provided with the lessons: the leaves and caterpillar pattern (camouflage lesson) makes a wonderful border when repeated around any display.

The Learning Page Mural is a wonderful and creative teaching tool! Putting it together can be a lesson in itself (objectives: following directions and working cooperatively). Follow the directions given with the pages. Work as a group to develop a color scheme if desired, let each student color one sheet, and then working as a group again, fit the pieces together. The mural is used in several of the Lesson Plans, and can be used with the Learning Page Cut Outs. It can also serve as a background for a diorama or bulletin board display.



## Teaching Notes

### Tips for Using the Learning Page Insects and Spiders Unit

The study of insects and spiders is a fascinating and amazing topic for young children. The world of insects is a mysterious and wonderful microcosm of new concepts to be taught, and big ideas to be presented. The Learning Page provides you with Lesson Plans, Fact Files, Fun Sheets, Cut Outs and Murals to make teaching an Insect Unit productive and fun for the whole class!

Be prepared with a good background of insects and spiders, including some fascinating facts to stimulate students' imaginations as you introduce lessons. Questions such as did you know that a dragonfly (a prehistoric animal) flies as fast as a helicopter? that monarch butterflies migrate thousands of miles each year to move to warmer climates in the winter? or that spiders' thread is as strong as a steel thread of the same weight?

Some points to keep in mind when introducing the Unit:

The word "bug" is often used to refer to any insect. But while all bugs are insects, all insects are not true bugs. A true bug is a particular group of insects, called *hemiptera* (half-wing). Like insects, bugs have three pairs of legs, three divisions of the body, and usually two pairs of wings. They differ from other insects in the way they eat. Bugs have mouthparts (rostrum) shaped like a long pointed beak, through which they suck food.

There are more kinds of insects on the Earth than any other species put together. There are over 1 million known kinds of insects, and of these, 67,500 are bugs.

Insects are small, but are extremely tough. They have been around for more than 300 million years. They can be found in almost every habitat (physical places where plants or animals live). They breed in huge numbers and have clever ways of tricking and avoiding their enemies.

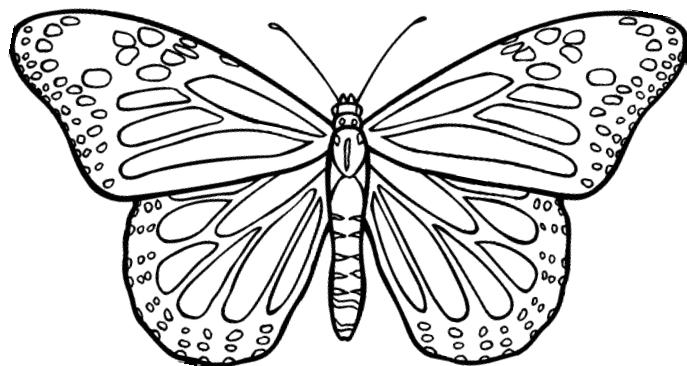
Entomologists are scientists with a special interest in insects. They observe the insect world and try to find out how it works. They investigate where insects live, what different species look like, and how insects behave.

The Reading Recommendations on the Learning Page offer many jumping off points for studying various aspects of insects and spiders. Use picture books generously, as literature is always a favorite for younger children: the strong visuals can stimulate students' imaginations and prepare them for learning new things. Use books to initiate art projects, creative writing, journaling, book arts, math, and science activities. There is at least one book cited for each Lesson Plan to assist you in engaging the students' interests at the beginning of the Lesson.

#### A Note About Book Making and Journal Writing:

Handmade children's books is an ideal way to incorporate language arts into every area of the curriculum. Making and writing books capitalize on the rich language opportunities of each of the Learning Page Units. Children easily formulate ideas and are eager to record and share with others the wonderful things they are learning; they also will be able to read the books they write. By making their own books, from designing the cover and pages, to writing down their thoughts, ideas, poems, and responses, children will value both their craftsmanship and their work.

Along with daily reading, have a time set aside for daily journal writing. As a conclusion to each Lesson Plan that follows, give the students the topic and a little stimulation: how does it feel to be that monarch butterfly we saw this morning, flitting from flower to flower? You have five minutes, starting right now. Write!



# LESSON PLAN

## 1

**Skills:** learn the number three, ordering by size

**Preparation:** Copy the Insect Anatomy Worksheet on the next page for students to look at while you review the information in the introduction.

**Materials:** poster paper, writing materials, construction paper

**Books:** For detailed instructions on how to make a journal see [Dinosaurs, Grade Preschool-K, Lesson 2](#), and [Dinosaurs, Grade 1-2 Lesson 2](#); in this case the shape could be a butterfly (see [Symmetry Lesson 7](#)) and the journal could be used for recording observations in the field and in the classroom.

### Resources:

[Insects Around the House](#), and [Insects in the Garden](#) by Dorothy M. Souza

### Words with Special Meanings:

**Arthropod**-an animal with jointed legs and a hard exoskeleton. They make up the largest group of animals on Earth and include insects, spiders, crustaceans, centipedes and millipedes.

**Funsheets:** [Fundamentals 8-10, 17, 19-21, 23, 24, 35](#); Grade K, [Math 3, Science 2, 4](#); Grade 2, [Science 1](#)

# Introduction to Bugs

## What Is an Insect?

Grade PreSchool-K

**Objective:** To find out what students already know or think they know about insects.

The word bug is often used to refer to any insect or creepy crawly. But while all bugs are insects, all insects are not true bugs. What is a true bug?

**Introduction:** How many of you have ever seen an insect? Outside in the garden or park? How about inside? What is an insect? Children call out ideas as to what an insect looks like. Does it have a head? What shape? Draw this on your poster paper or the board as students name a characteristic, exaggerating features and colors to make a point. What does the body look like? Does it have a tail? Legs? How many? Nose, ears, mouth, eyes? What color? After the drawing is done, stand back and look at it. Does it look like any insect you have ever seen?

What else do we know about insects? Record student's responses on the board on an idea web next to the drawing you have just made.

insects are alive	insects have three body segments	insects have wings
insects are small	insects have (3 pairs of) legs	insects eat plants
insects jump	insects swim	insects sing
		insects are pests

### Procedure:

1. Pass out the worksheets and review the information in the Introduction paragraph prompting for the correct information. Students may then cut out the three main shapes and paste them down in the correct order.
2. As a further alternative, have students cut out three parts from colored construction paper. Review the concept of three; remind them about the head, thorax, and abdomen. Again, students will order head, thorax, and abdomen correctly on a piece of dark paper and paste them down.

**Follow-up Activity:** Using any drawing materials available, have students draw an imaginary insect using the elements they have learned so far.

**Independent Reading:** The classroom routine may include a time for silent independent reading, even at the pre-school level. Plan regular time slots of 15 or 20 minutes for students to read a book or article about insects taken from the [Insects/Spiders Learning Center](#).

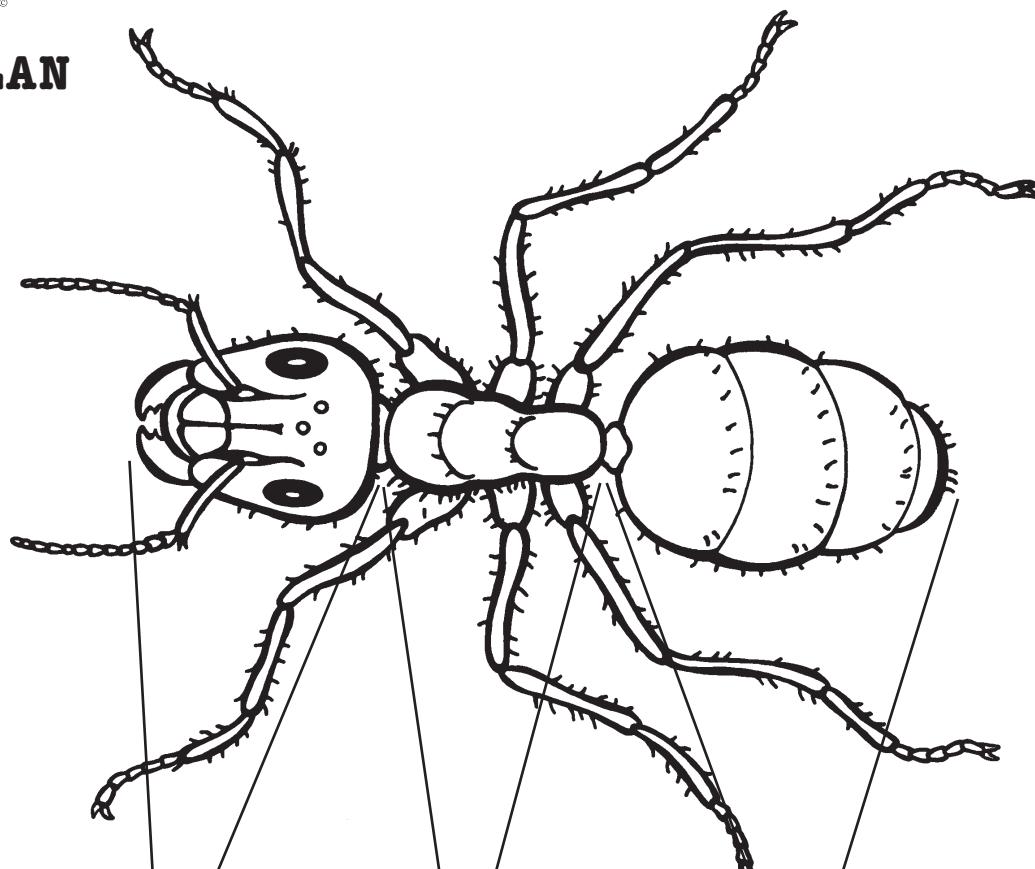
**Notes:** The word "bug" should only be used when talking about the insects called *hemiptera* (half-wing), which have long sucking tubes to eat with.

Follow this lesson with [Lesson 3: Parts of an Insect](#). [Lesson 2: Looking for Insects \(Field Trip\)](#) can be done anytime at your convenience.

**\*FACT FILES:** Copy the Learning Page Fact Files and distribute with a colored pocket folder. Give students time to organize, look them over, and decorate the covers of the folder. As an introduction to the Unit, take some time with the students to look at the [Fact Files](#), page by page, reading the information slowly as they follow with their eyes.

**LESSON PLAN**

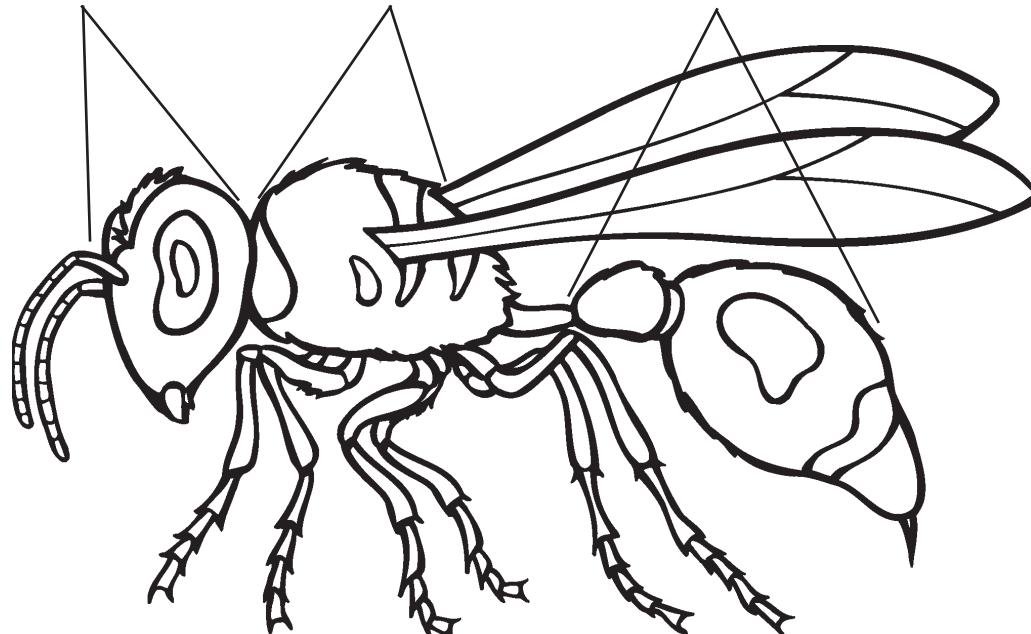
**1** (cont.)



Head

Thorax

Abdomen



Head

Thorax

Abdomen

## LESSON PLAN 2

**Skills:** observation, recording observations, cooperation, respect for animals and their environment

**Preparation:** Preread [Bagging Big Bugs](#) and bookmark sections to read to the class; choose a garden, park or wildlife area near the school and make the necessary arrangements to have the class visit.

**Materials:** gloves, simple digging tools (garden trowel, sticks), plastic cups, zip-lock plastic bags, garden journals (see [Lesson 1](#)). Hats, water and sunscreen may be necessary in the summer months or in Southern states.

**Tips:** Emphasize the importance of working as a team and dividing responsibilities.

**Resources:** [Bagging Big Bugs: How to Identify, Collect and Display the Largest and Most Colorful Insects of the Rocky Mountain Region](#) by Whitney Cranshaw, Boris Kondratieff (Contributor); [The Bug Book](#), by H. V. Danks

**Funsheets:** [Fundamentals, 20, 28](#); Grade K, [Math 11](#)

# Looking for Insects (Field Trip)

Grade PreSchool-K

**Objective:** Students will learn how to look for insects in a familiar outdoor setting, near the school or in a park. The purpose here is to observe and record observations rather than to collect.

**Introduction:** Brief students as a group before you go outside. They will need to be aware of the hazards of touching or disturbing insects in nature, and not to touch anything unless they know for sure it is harmless. Show them the materials you've collected to take with you; call them entomologists' tools! Ask for suggestions for where to look for insects, prompt for possibilities (see #2 below). This preparation and the reading can be done in one session; the field trip can be later in the day or the next day.

**Read:** Parts of [Bagging Big Bugs](#) in preparation for your field trip.

### Procedure:

1. Divide the class into groups of 2 or 4 and have students work together and stay together (choose students of different skill level and learning styles to work together).
2. Students may find insects under rocks, beneath logs, on trees (under bark or in a hole in the trunk, or on leaves), in the grass, or in the dirt. They can also look for spider webs and try to spot the spider, or blobs of frothy stuff on stems of grass or plants. Also look for leaves that have been eaten, and nuts or pods that may have tiny holes bored in them. Remember to use gloves when turning over logs or stones.
3. The teacher and the aide will look for opportunities to capture an insect in a cup and transfer it to a zip-lock bag that has holes prepunched in it. Small groups can then observe it and make notes and drawings in their journals.

**Conclusion:** Students should have demonstrated respect and care in their search and discovery of insects on the field trip.

**Further possibilities:** See Insects/Spiders: [Grade 1–2, Lesson 1](#) for further activities and methods of capturing insects in the field and making homes for them for the classroom.

# LESSON PLAN

## 3

**Skills:** recognize the same/different, making generalizations, ordering parts by size, looking at and making charts

**Preparation:** Know the different insect body parts and what they do.

**Materials:** scissors, construction paper, white paper, drawing materials

**Tips:** Look for the game called Cootie, a good exercise for addition skills.

**Resources:** Bugs, by Nancy Winslow Parker and Joan Richards Wright. Has a simple rhyme on the left (even-numbered) pages and a detailed description of the bug on the right. Talks about other creepy-crawlies besides insects.

**Funsheets:** Fundamentals 5–11, 36; Grade K, Science 3; Grade 1: Science 1; Grade 2, Science 1

# Parts of an Insect

Grade PreSchool-K

**Objective:** The students will learn the basic body parts of an insect.

**Introduction:** Take time to give students long looks at the pictures in the book as you read. Talk about each picture as you go.

**Read:** Bugs, the even-numbered pages up to page 12, then only the pages that refer to insects, and pause to point out the detailed diagrams of the different insects. Some questions to ask: Do the bugs look the same or different? (All have segmented bodies made up of many small sections.) They all have exoskeletons (hard skins on the outside of their bodies), three pairs of jointed legs, and lay eggs. They may also have wings and antennae. How do they look different? Pass out the worksheets from Lesson 1 you have prepared, review the head, thorax (middle), and abdomen (rear section).

**Procedure:** Now let's make our own bugs. (Can follow reading or be done the following day.)

1. Show students how to trace and cut out three segments of an insect. Tell them these are our imaginary insects so they don't have to look just like the ones in the pictures.
2. They can then paste the shapes down on the white paper in the correct order, making sure that the sections just touch, not overlap.
3. Using a black marker or pencil, let them draw in the details. If you can, provide additional materials such as pipe cleaners, black construction paper, etc.

**Conclusion:** Review: Can everyone now see that all adult insects have a body made up of three parts in this order: Head, thorax, and abdomen? Adult insects also have three pairs of jointed (parts that fit together) legs attached to the thorax. All three body parts and the six legs are covered by a hard jointed outside covering called an exoskeleton. Compare insect body parts to our body parts. What parts of our bodies are jointed?

Show a picture of an earthworm. Ask if this is an insect. Why not?

Show a picture of a crayfish. Ask if this is an insect. Why not?

After students can identify why they are not, show them the pie chart (see Grade 1–2 Lesson 3) that illustrates the distribution of annelids, crustaceans, and insects in the arthropoda class. Talk again about the word *arthropod* and what it means.

**Further possibilities:** Ask students to make up a rule for how to tell if an animal is an insect. Mention the 3 + 3 rule: an insect has three body parts and three pairs of legs.

## LESSON PLAN

### 4

**Skills:** comparing and ordering things by size

**Preparation:** Arrange the insects made from [Lesson 3](#) on a desk or table to the side of the classroom, easily seen and accessible to students; prepare word cards for the words appearing in the book: big, bigger, biggest, small, smaller, smallest.

**Materials:** the construction paper insects from the previous lesson

**Resources:** Read [\*The Best Bug Parade\*](#) by Stuart Murphy

**Tips:** As a prelude or follow up to this Lesson, the [Fact Files](#) can be ordered by size based on the information provided. Remember that the [Fact Files](#) can be colored with crayons or colored pencils any time a student has free time.

**Funsheets:** [Fundamentals 8-10](#)

**Objective:** To understand the diversity of sizes in the insect world; to reinforce students' comprehension of big, bigger, biggest; small, smaller, smallest.

**Introduction:** Point out the insects that were made in [Lesson 3](#), displayed on a side table

**Read:** [\*The Best Bug Parade\*](#)

**Procedure:**

1. Have the students examine the insects; ask which is the biggest? Let each student go up and choose the next biggest, etc., and tape each one to the board in size order, biggest to smallest.
2. Stand back and look at the progression. Is it correct? Make any necessary changes.
3. To add a verbal element to this, have word cards available and one by one show them to the students, pronounce them, spell them, and have students echo you. Then place, or have students place, the word cards in their correct position.

**Conclusion:** Review what you have talked about during this session, with random questioning of students about the relative sizes of the insects: Which insect is the biggest? Which is the smallest?, etc.

**Further possibilities:**

1. After this Lesson students will be able to make comparable size judgments and use these words correctly. Example: Who is the biggest person in the class? A bigger one? A big one?, etc. You could make a game out of looking around the room to find items (doors, windows, furniture) to label as big, bigger, or biggest with the word cards.
2. Have students design and create a poster advertising the The Best Bug Parade. Students can use their [Fact Files](#) or the Favorite Insect List in [Grade 1-2 Lesson 10](#)

# LESSON PLAN

## 5

**Skills:** learn the numbers two and eight, following directions

**Preparation:** Make a batch of black wash for painting the backgrounds of the spider webs. Mix a jar of black tempera paint with water to thin out, and dissolve thoroughly.

**Materials:**

black construction paper, white paper heavy enough to take a wash of paint, white glue or white wax crayons, smocks or aprons, newspapers

**Resources:** [The Very Busy Spider](#), by Eric Carle; [Little Miss Spider](#) and [Miss Spider's ABCs](#) by David Kirk

**Funsheets:** [Fundamentals 15–18, 32, 34](#); Grade K, [Math 2, 8](#); Grade 1: [Science 2, 4](#)

# Are Spiders Insects?

Grade PreSchool-K

**Objective:** Students will understand why a spider is not an insect, and change any thinking that spiders are creepy, scary bugs to be scared of or stepped on.

**Introduction:** Spiders are not insects. They have eight legs, not six. They have two main body parts, not three. Spiders do not have wings or antennae.

Does anyone remember a song about spiders? (sing *Eensy Weensy Spider* and do body movements)

rhyme	movement
<i>The eensy weensy (or itsy bitsy) spider</i>	
<i>Crawled up the water spout</i>	'Climb' up arm
<i>Down came the rain</i>	Wiggle fingers down from head to waist
<i>And washed the spider out</i>	Throw arms to sides
<i>Out came the sun and dried up all the rain</i>	Raise hands above head, make circle for sun
<i>And the eensy weensy spider</i>	'Climb' up arm again
<i>Crawled up the spout again.</i>	

**Read:** [The Very Busy Spider](#), [Little Miss Spider](#) and/or [Miss Spider's ABCs](#)

**Procedure:** Two spidery activities

**1. Make a spider** using black construction paper with two body parts and eight legs. Follow the patterns of the cut-outs or the [Fact Files](#) for details to add. Hang them from the ceiling of the classroom by threads.

**2. Make Spider Webs**

- a. Using the glue resist technique, draw a spider web design on a piece of white paper with white glue right out of the container (using the squeeze top) or using a white crayon. The image may be hard to see because it is white on white, but encourage students to keep it simple. Demonstrate for them on the board an easy way to draw a spider web (start in the middle with an irregular shaped box, draw lines from there straight out to the edge of the paper, then connect the lines in a circular pattern. Don't forget to draw in a little spider, and the students may also add their names.
- b. Let the white glue dry. Crayon drawings can be continued right away.
- c. Using the diluted black paint you have prepared. Demonstrate painting over the white drawing with a light touch. Spider webs will appear right before your eyes.
- d. Post these drawings in the classroom along with other models you have made of spiders (from #1).

**Conclusion:** Look at all the variations produced by the class and talk about how all spider webs, even though constructed the same, will look different in lots of ways. Mention some amazing facts about spider webs such as: silk starts out as a liquid but turns into elastic strands that can be as strong as steel. Webs are the main use of silk but there are others: to protect their eggs, to wrap up prey, to use as a drag line so they may return to the nest.

# LESSON PLAN

## 6

**Skills:** learn about how animals hide in their habitat and why, visual perception, identifying colors

**Preparation:** Print out the 15 pages for the [Mural](#) from the Learning Page. Because of the size of the mural it may be more productive to have students color the individual pages and *then* tape them together. Divide the class in half and have one group color each color scheme (or, for simplicity, color only one). Begin the mural a week or more before this lesson is taught.

**Materials:** crayons and tape to construct the mural, colored and white construction paper, green poster board, drawing materials, scissors

**Resources:** [The Very Hungry Caterpillar](#) by Eric Carle and [Where's That Insect?](#) by Barbara Brenner

### Words with Special Meanings:

**Camouflage**-the colors and patterns of an animal that blend in with the background and conceal it from predators and help it to ambush prey.

**Funsheets:** Fundamentals [28, 38, 39, 40, 35](#); Grade K, [Math 11](#); Grade 1: [Math 8](#)

# Hide and Seek!

Grade PreSchool-K

**Objective:** This lesson will show students how camouflage helps insects, and why it is important to their survival.

**Introduction:** Many insects blend in with their surroundings because they are the same shape and/or color as their surroundings. Write the word *camouflage* on the board and say the definition. Ask: Why would an animal want to be hidden?

**Read:** One or both of the books listed at left.

### Procedure:

1. Using a copy of the mural from the Learning Page, have students color it using basically two color schemes: shades of greens (with yellows and blues) and shades of browns (monochromatic, neutral tones). This may take a few sittings; hang the finished mural on the wall where it is accessible to the students.
2. Tell students they will now have the opportunity to create their own insects, and that their insects will need to hide in the picture to stay safe. Write a list of possible insects and spiders, and suggest that they consult the books in the reading center for visual ideas.
3. Give students ample time to create their insects using paper, crayons, and colored pencils, cutting out the shape when they are finished. Remind them that their insect will need to hide in the mural so students should look carefully at the shapes and colors of the picture. Point out that if an insect were these colors (point to a specific area), it could hide "here." Give another example.

**Conclusion:** Camouflage may be a tricky word to say and understand but is a concept that will translate to many other units in the Learning Page.

### Further possibilities:

**Camouflage colors:** Using blue and yellow paints, show how together they make green. Draw an outline of a caterpillar (or use patterns from next page). Fill it in with yellow paint, and then while it is still wet, add blue to it. It is said that caterpillars aren't born green; it is the green color from the leaves that they eat that turns them green.

Write each child's name on a pre-cut leaf and have them paste their caterpillar on it. Staple all of the leaves on a bulletin board (with a blue butcher paper background) clustered and overlapped to resemble a tree or bush.

For the **Camouflage colors**, use the caterpillar and leaf patterns on the next page (copied at 121%); use green poster board precut into the shape of a leaf large enough to hold the caterpillar.

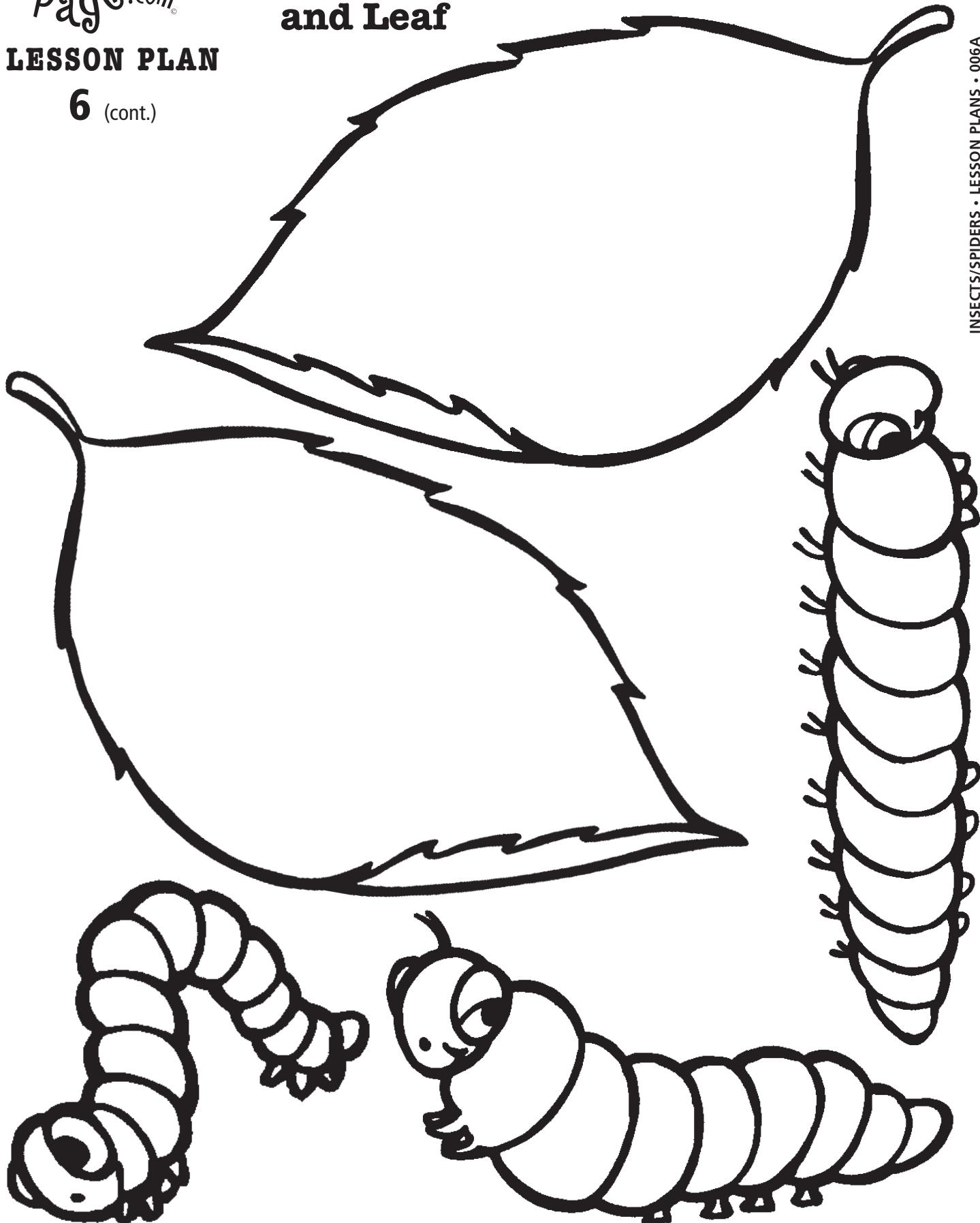


**LESSON PLAN**

**6** (cont.)

**Pattern of Caterpillar  
and Leaf**

Grade PreSchool-K



# LESSON PLAN

## 7

**Skills:** symmetry (half, double, center) mixing colors (yellow and red)

**Materials:** symmetry (half, double, center) mixing colors (yellow and red)

**Resources:** [See How They Grow: Butterfly](#) by Mary Ling, [Monarch Butterfly](#) by Gail Gibbons, [Butterfly Story](#), by Anca Hariton

**Funsheets:** [Fundamentals 13, 21, 31, 32](#); Grade K, [Math 5](#); Grade 2: [Math 10](#)

# Symmetry

Grade PreSchool-K

**Objective:** Students will understand the concept of symmetry, and use it to show the structure of a butterfly.

**Introduction:** As you read, note the details of the butterfly's structure.

**Read:** Any of the butterfly books mentioned at left.

**Procedure:** Demonstrate the steps before students work on their own.

1. Fold a piece of paper in half; open it up and show them how two halves make a whole.
2. On the center fold of the paper, draw a butterfly's body with a black marker or pencil.
3. On one side of the fold, drop blobs of paint (use yellow and red). While it is still wet, fold the two halves together and press down firmly.
4. Open up immediately and see what happened! Let dry thoroughly.
5. Now cut out the whole butterfly.

**Conclusion:** Children should be able to transfer this method for cutting out two identical sides of a thing to other images, such as a heart, a circle, a house shape, or a ladybug.

**Further possibilities:** Use the butterfly shapes to:

1. Make a simple mobile: hang in clusters from the ceiling with heavy thread or tie two coat hangers together at the hooks and hang the butterflies from the corners of the hangers; or thread three drinking straws together to form a triangle and hang all the butterflies along the bottom straw.
2. Add these dimensional butterflies to the murals.
3. Or you could fold them and staple to a bulletin board along with word cards for *symmetry, half, center, yellow, red, and orange*.
4. Looking carefully at each insect in the [Fact Files](#), see if students can recognize symmetry.

# LESSON PLAN

## 8

**Skills:** conservation, creating a habitat, recording observations

**Preparation:** Get a commercially made ant farm tank or create one using an empty aquarium tank. Directions for this may be found in [Ant Cities](#), by Arthur Dorros

**Materials:** precut white paper pages for journal writing

**Resources:** [Two Bad Ants](#) by Chris Van Allsburg; [Ant Cities](#) by Arthur Dorros, and [Ant Homes Under the Ground](#), by Echols, Kopp, and Bergman

**Funsheets:** [Fundamentals 1, 15](#); Grade K, [Math 7, Language 2](#); [Science 1](#)

# The Social Life of Ants

Grade PreSchool-K

**Objective:** To learn about a specific member of the insect family, ants, and be able to observe its habits over time and record them.

**Introduction:** Like some of us, ants are small and they are also social insects (they live in large families). Think about what it feels like to be small. Students are small (relatively). Talk about ants as social insects that live in huge colonies.

**Read:** [Two Bad Ants](#)

### Procedure:

1. See [Grade 1–2 Lesson 2](#) for ways to make a collecting tool for very small insects.
2. Go outside and collect some ants using a collecting bottle, being very gentle with them as they are small delicate creatures. Bring them back to the classroom.
3. Carefully add the ants to the ant farm, using a soft paint brush to move them if necessary. Make sure the lid is carefully replaced, and there is a way to block out the light except when they are being watched. Don't forget to leave food for the ants.
4. Have a different student each day (for several days and weeks) observe the progress, changes, and activities in the ant farm and record this information on a page that will become part of the collective class journal. They can use whatever means they like for recording the observations: pictures or words.

**Conclusion:** After all the pages are finished, compile and bind them into a journal. Perhaps one of the students could volunteer to make a cover. Have a class discussion about the journal, and place it in the Learning Center for all to read and use.

Remember that this ant farm is a temporary home for the ants. They must be returned to where you found them.

# LESSON PLAN

## 9

**Skills:** creative writing, applying knowledge to art work, language arts

**Preparation:** Samples of a story drawn "comic-strip style" to show students the possibilities.

**Materials:** washable ink pads, in a variety of colors if possible, felt tip pens, white paper cut in long strips, paper towels

**Resources:** [The Grouchy Ladybug](#) by Eric Carle; [The Ladybug](#) by Sabrina Crewe

\*\*No one knows how or why this rhyme started, though children in many countries sing it. One idea is that it came from places where hops were grown. Ladybug larvae live on hop vines, which were burned after the harvest. So singers warned the ladybug that her children would burn.

**A ladybug party:** Make ladybug puppets out of red and black felt, googly eyes, pipe cleaners for antennae (pre-cut everything); face-paint ladybugs on their cheek or hand (very easy!); play pin-the-spot on the ladybug; read [The Grouchy Ladybug](#).

**Funsheets:** [Fundamentals 26](#); Grade K, [Language 1, 2](#); [Math 9](#)

# Ladybugs: Garden Friends

Grade PreSchool-K

**Objective:** To learn about a specific member of the insect family, ladybugs, and be able to draw it and use it in a made-up story.

**Introduction:** The ladybug, also called a ladybeetle or ladybird\*, has a smooth, round body with a hard shell to protect against enemies. Ladybugs also let out a smelly liquid from their joints when attacked to keep away predators. Their bright red color is a warning to predators.

Ladybugs are great friends of gardeners. Ladybugs eat aphids and other soft-bodied insects such as green flies, black flies, and their larvae. Ladybugs can eat up to 100 aphids a day!

**Read:** [The Grouchy Ladybug](#) or [The Ladybug](#). Also, ask if anyone remembers the nursery rhyme about the ladybug and can

Ladybug, ladybug,  
Fly away home.  
Your house is on fire,  
Your children will burn.\*\*



**Procedure:** Let's make a ladybug story.

1. Practice first: on a single piece of paper make lots of fingerprints by touching the ink with your finger, then pressing it on to the paper. Wash your hands while you are waiting for the fingerprints to dry, and wipe your fingers on a paper towel before changing colors.
2. Using a felt tip pen, add a head, antennae, spots, legs, and a wing dividing line.
3. Have fun creating a comic-strip story! Demonstrate to students how to divide the long strip of paper into "frames" like they've seen in a comic book. The frames need not be uniform in length.

Encourage students to show some of their ladybugs with their wings open; show motion by drawing lines around them. They can make mommy and daddy bugs and baby bugs with different fingers. Green prints can be leaves. Make the bugs talk or think by adding cartoon bubbles; you can help by adding words that the students dictate.

## Further possibilities:

1. **Writing/art:** this activity can also be easily done with other insects, such as bumblebees or butterflies.
2. **Art:** The ladybug is a popular motif; the image can be used in a variety of other art projects: stuffed animals, printmaking, books and rock paperweights.
3. **Language/verbal:** in your introduction, write the words on the board or use word cards that divide the word into its compound parts. Mention that ladybug is a compound word, made up of two words.

# LESSON PLAN

## 10

**Skills:** using movement and dance to express knowledge

**Preparation:** Obtain tape or CD of the *Flight of the Bumblebee*, by Rimsky-Korsakov (this short piece was actually composed as part of an opera called "The Tale of Tsar Saltan") or get it from the Internet.

**Time needed:** introduction and reading, 20 minutes; listening, dancing and movement, 30 minutes

**Materials:** Pastels, chalks, and/or oil pastels; large sheets of drawing paper, or one continuous sheet of butcher paper spread out on the floor, perhaps on the floor space where the dancing took place.

**Resources:** *Busy, Buzzy Bees (Rookie Read-About Science Series)* by Allan Fowler, Mary Nalbandian and Robert L. Hillerich (Contributors)

# Fly Like a Bumblebee

Grade PreSchool-K

**Objective:** To improvise body movement based on listening and imagining. To learn what it feels like to be a bumblebee.

**Read:** Read *Busy, Buzzy Bees*, or any other children's story book about bees.

**Part 1 Procedure:** Have students close their eyes as you play the *Flight of the Bumblebee* for them. Then play it again. Ask for reactions, feelings, ideas.

Then, gather students to an area with enough room for moving freely about. Play the music again and this time let them use their bodies to describe the movements of the bumblebee. Students should be careful not to collide with the other bees, as bees swarm together. Call out suggestions such as, "Wings! flap your wings; you are flying; arms flutter fast; flying high, flying low."

After this rather physical activity, a time of sitting quietly is necessary before continuing.

**Conclusion:** What have we learned about the bumblebee from listening? All students should participate in this activity in some way, even those who may have physical limitations.

**Part 2:** Follow up the rest period with a spontaneous drawing exercise. While students are catching their breath, roll out the butcher paper on the floor, one or two lengths, enough to accommodate all students. Use chalk, pastels, or oil pastels to encourage looseness and freedom. Encourage them to carry over the dance movements from their arms to the chalk to the paper. Tell students not to limit their drawings to one place on the paper. Play the music again. Let them know at the outset that they have only the four minute duration of the music playing to complete their drawings. This is a good exercise for letting go of fears or reluctance to draw

**Further possibilities:** The movement exercise could be choreographed into a unified piece that could be performed for other classes or parents. Costumes could be created using simple materials.

**Note:** A bee is a fun Halloween costume! If this Unit falls near Halloween, costumes could be created using simple materials. Don't forget to take pictures!

# LESSON PLAN

## 1

**Skills:** learn the number three, ordering by size, assigning words to insect structure

**Preparation:** Copy the Insect Anatomy Worksheet on the next page for students to look at while you review the information in the introduction.

**Materials:**  
colored construction paper,  
glue sticks

**Funsheets:** Grade 1, [Science 1, 3, Language 4](#), [Math 1](#); Grade 2, [Language 4](#), [Math 1, 2, 6](#), [Science 2, 4](#)

### Words with Special Meanings

**Arthropod**-an animal with jointed legs and a hard exoskeleton. They make up the largest group of animals on Earth and include insects, spiders, crustaceans, centipedes and millipedes.

**Books:** For detailed instructions on how to make a Journal, see [Dinosaurs, Grade Preschool-K, Lesson 2](#), and [Dinosaurs, Grade 1–2 Lesson 2](#); in this case the shape could be a butterfly (see [Symmetry Lesson 5](#)) and the journal could be used for recording observations in the field and in the classroom

# Introduction to Bugs

## What Is an Insect?

Grade 1-2

**Objective:** To find out what students already know or think they know about insects.

The word bug is often used to refer to any insect or creepy crawlly. But while all bugs are insects, all insects are not true bugs. What is a true bug?

**Introduction:** How many of you have ever seen an insect? Outside in the garden or park? How about inside? What is an insect? Children call out ideas as to what an insect looks like. Does it have a head? What shape? Draw this on your poster paper or the board as students name a characteristic, exaggerating features and colors to make a point. What does the body look like? Does it have a tail? Legs? How many? Nose, ears, mouth, eyes? What color? After the drawing is done, stand back and look at it. Does it look like any insect you have ever seen?

What else do we know about insects? Record students' responses on the chalkboard on an idea web next to the drawing you have just made.

insects are alive	insects have three body segments	insects have wings
insects are small	insects have (3 pairs of) legs	insects eat plants
insects jump	insects swim	insects sing
		insects are pests

### Procedure:

1. Pass out the worksheets and review the information in the Introduction paragraph prompting for the correct information.
2. Have the students cut out three parts from colored construction paper. Review the concept of three; remind them about the head, thorax, and abdomen.
3. Students will order head, thorax, and abdomen correctly on a piece of dark paper and paste them down.

**Conclusion:** Using any drawing materials available, do a drawing exercise where students create an imaginary insect using the elements they have learned so far.

**Independent Reading:** Your classroom routine may include a time for silent independent reading. Plan regular time slots of 15 or 20 minutes for students to read a book or article about insects taken from the [Insect/Spider Learning Center](#).

**Notes:** Technically, the word *bug* should only be used when talking about a particular group of insects, called the *hemiptera* (half-wing), which have mouthparts that pierce and suck.

**\*FACT FILES:** Copy the Learning Page [Fact Files](#) to distribute to each student with a colored pocket folder to store them in. This could be done at the very beginning of the Unit, giving students time to organize, look them over, and decorate the covers of the folder. As an introduction to the Unit, take some time with the students to look at the [Fact Files](#), page by page, reading the information slowly as they follow with their eyes. Fact file can also be colored with crayons or

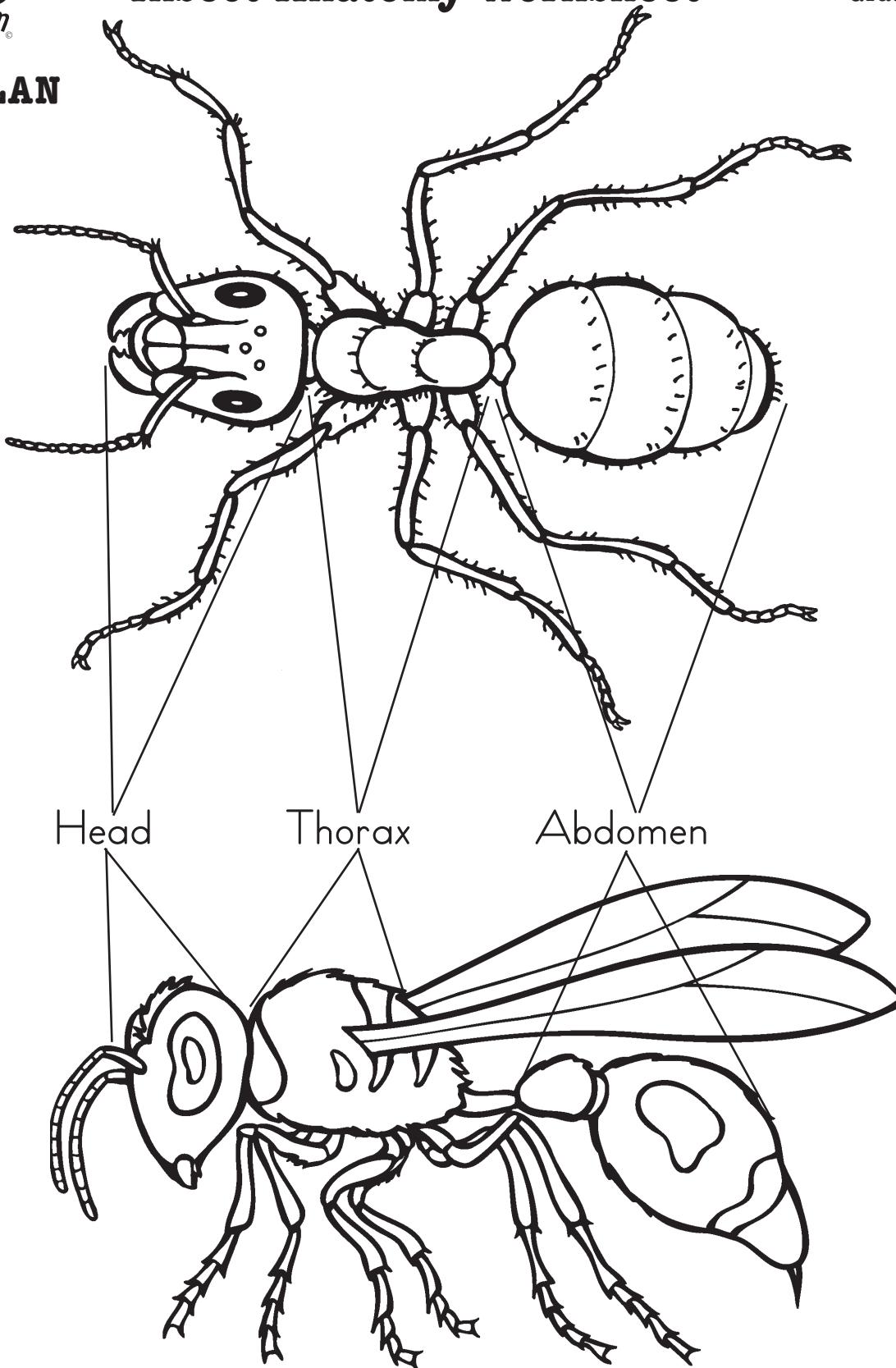
## LESSON PLAN

1 (cont)

# Insect Anatomy Worksheet

Grade 1-2

INSECTS/SPIDERS • LESSON PLANS • 001A



Head

## LESSON PLAN 2

**Skills:** appreciation for the habitat of insects, visual perception, conservation

**Preparation:** Preread [Bagging Big Bugs](#) and bookmark the parts you want to read to the class

**Materials:** field guide, gloves, simple digging tools (garden trowel, sticks), clean jars, cheesecloth (or net, nylon stocking or screening), rubber bands, zip-lock plastic bags, garden journals (see [Lesson 1](#)). Collecting jars with magnifying lids if available. Hats, water, and sunscreen may be necessary in the summer months or in Southern states.

**Tips:** Prepare the jars before class, securing cheesecloth with rubber bands

**Resources:** [Bagging Big Bugs: How to Identify, Collect and Display the Largest and Most Colorful Insects of the Rocky Mountain Region](#) by Whitney Cranshaw, Boris Kondratieff (Contributor); [The Bug Book](#), by H. V. Danks

**Funsheets:** Grade 2, [Science 3, Math 11](#)

# Looking for Insects (Field Trip)

Grade 1-2

**Objective:** Students will learn how to look for and collect insects in a familiar outdoor setting, near the school or in a park. The purpose is to observe and collect specimens without harming them, and to observe in the classroom for a few days.

**Introduction:** Insects are everywhere. Brief students as a group before you go outside. They will need to be aware of the hazards of touching or disturbing insects in nature, and not to touch anything unless they know for sure it is harmless. Ask for suggestions for where to look for insects, prompt for possibilities (see #2 below).

**Read:** Parts of [Bagging Big Bugs](#).

### Procedure:

1. Prepare one or more of the collecting devices described on the next page.
2. Divide the class into groups of 2 or 4 and have students work together and stay together.
3. Students may find insects under a rock, beneath a log, on a tree (under bark or in a hole in the trunk, or on leaves), in the grass, in the dirt, and of course in the air. They can also look for spider webs and try to spot the spider, or blobs of frothy stuff on stems of grass or plants. Also look for leaves that have been eaten, and nuts or pods that may have tiny holes bored in them.
4. Caterpillars may be collected from hedges and leaves of plants and flowers in the summer. Remember not to remove them from the leaf on which you find it and to provide fresh leaves of the same kind every day. Soon, it will build a chrysalis (cocoon) and a few weeks later a butterfly or moth will want to fly away. Be sure to release it at that time.
5. Spiders can be caught carefully in a cardboard box. Place them in a specimen jar that has net or screen stretched over the opening. Give them a twig, some leaves, and wet cotton balls for moisture that you replenish daily. A spider can only live a few days in a jar; try feeding it a fly if you catch one.

**Conclusion:** Gather together as a group (check that everyone is present) before returning to the classroom to share discoveries and ideas. Be sure that each group has at least one specimen to take back to the class.

### Further possibilities:

**Mapping:** In journals, or on a separate sheet of paper, draw a map of the area visited on the field trip.

**Recording:** Use a field guide to help identify insects before recording them in your notebook and to help with making sketches.

**Insect Survey:** Use the Insect Inventory Sheet following [Lesson 10](#) to count the types of insects you see. Chart the results of your observations and collecting. Use locations such as *dirt, leaves, trees, grass, under stones*, as headings for the different insects and where you located them.

**LESSON PLAN****2** (cont)

**Sweep Net** Materials: wire hanger, masking tape, scissors, 13-gallon tall plastic garbage bag, pencil

Bend the wire hanger into a big hoop with the ends twisted together to form a handle. Twist several lengths of masking tape around the ends to cover up any sharp ends.

Lay the garbage bag flat on a table or the floor and cut diagonally from the edge of the top (opening end) to the opposite end of the bottom (closed edge). Fold the cut edge over and run a strip of tape along that edge to seal it, the result being that you have a triangular-shaped plastic bag. (See drawing).

Carefully perforate the bag 20 or so times with a sharp pencil being sure not to tear the plastic. Then fold the open end of the plastic "net" over the hoop and tape the edges of the bag inside the net.

**How to Use:** Hold the handle and turn the net sideways across grass or bushes where insects may live. Carefully invert the net into a collecting can or holding bag to observe.

**Aspiration Bottle, or "pooter" Materials:** small plastic bottle, scissors, modeling clay, wide bendable straws, small pieces of cheesecloth, rubber band, sharp pencil

Cut off the bottom of a plastic bottle. Roll out one large and one small ball of modeling clay and flatten into round disks. Press the larger one onto the bottom of the bottle.

To stop insects from going into your mouth, cut a straw and attach a piece of muslin with a small rubber band at one end. Insert the other end through the smaller disk of clay and push this into the smaller end of the bottle.

Make a hole with the pencil in the larger disk of clay, and form that disk to the larger end of the bottle.

**How to Use:** This tool picks up small or fast-moving insects safely. Hold the aspirator near an insect on a leaf or flower and suck on the muslin-ended straw. Air rushes in through the other end, carrying small insects with it. Lift the larger disk of clay to release insects outside.

# Collecting Devices to Make in Preparation for the Insect Field Trip

**Grade 1-2**

**Collecting Can** Any clear plastic container with holes punched in the lid will serve as a field collecting can.

**Pitfall Trap** Materials: a small clean jar or can, trowel, four small rocks and one flat rock large enough to cover the jar.

In an out-of-the-way area, dig a hole with a trowel and bury a small jar or can, its opening at ground level. Place 4 small stones around the opening and then a large flat stone on top of those to protect it from the rain and to prevent trapped insects from escaping. Put some syrup or wet sugar in the bottom to attract beetles. Check the trap every couple of hours; record the number and types of insects you've collected.

**Holding Bag** Use a sharp pencil to make several small holes near the top of a zip-lock bag. Hold the bag open while a classmate "pours" the insect in, and then seal it shut. Place the bag on a white surface, use a magnifying glass, and hold down the plastic to keep the insect still without hurting it. Then observe!

**Insect Cages** An insect cage can be anything from an individual container to large community cages for many bugs.

Large clean (plastic) jars work well for single specimens. A little sand on the bottom, twigs, sponge or cotton balls for moisture, cheesecloth or stocking to make a lid is all you need (see below for food).

A cardboard carton with windows and doors cut out and covered with nylon net will house many specimens. Place newspaper on the bottom, then dirt, twigs, and growing plants. Keep the cage wet and out of direct sunlight.

**Food for live insects:**

Grasshopper fresh grass and weeds

Beetles grubs, caterpillars, meal worms

Crickets wet bread, lettuce, peanut butter

Caterpillars leaves from plant where found, lettuce

# LESSON PLAN

## 3

**Skills:** the same/different, making generalizations

**Preparation:** Know the different insect body parts and what they do.

**Materials:** Plasticine modeling clay, paper, ruler, table knife, toothpick, pencil, 4 x 8 unrulled index cards, waxed paper, markers, pipe cleaners, tape

**Tips:** Look for the game called Cootie, a good exercise for addition skills.

**Resources:** Bugs, by Nancy Winslow Parker and Joan Richards Wright. Has a simple rhyme on the left hand pages and a detailed description of the bug on the right. Covers other creepy-crawlies besides insects.

**Funsheets:** Grade 1, [Science 1, 2](#); Grade 2, [Science 1](#)

### Words with Special Meanings

**Arthropod**-an animal with jointed legs and a hard exoskeleton. They make up the largest group of animals on Earth and include insects, spiders, crustaceans, centipedes and millipedes.

# Parts of an Insect

Grade 1-2

**Objective:** The students will learn the basic body parts of an insect.

**Introduction:** Take time to give students long looks at the pictures in the book as you read. Talk about each picture as you go.

**Read:** Bugs, the left pages up to page 13; thereafter, only the pages featuring insects. Pause to point out the detailed diagrams of the different insects. Ask: Do the bugs look the same or different? [They all have segmented bodies made up of many small sections. They also have exoskeletons (hard skins on the outside of their bodies), three pairs of jointed legs, and lay eggs. They may also have wings and antennae.] How do they look different?

### Insect checklist:

- segmented bodies
- exoskeletons
- three pairs of jointed legs
- lays eggs

**Procedure:** Let's make a model of an insect. Watch me demonstrate how to start one and then you can each make your own.

1. Give each student a roll of clay. They should form it into three pieces: one inch, two inches, and three inches long.
2. Round off the ends of each piece of clay. Break the toothpick in half and connect the body parts by pushing the pieces close together.
3. Lay the connected clay pieces on the paper and mold into the shape of the insect's body; use the point of a pencil to carve two shallow grooves around the middle clay section, dividing it into three sections. Carve nine shallow grooves around the larger end, dividing it into ten parts. This number is not absolutely crucial but gets the idea across that there are many segments.
4. Place the model on a piece of stiff white paper or large index card and label as shown; show students a sample of this diagram on the board to follow.

**Conclusion:** All adult insects have a body made up of three parts, in this order: head, thorax, and abdomen. Adult insects also have three pairs of jointed (parts that fit together) legs attached to the thorax. All three body parts and the six legs are covered by a hard jointed outside covering called an exoskeleton. Compare insect body parts to our body parts

Show a picture of an earthworm. Ask if this is an insect. Why not?

Show a picture of a crayfish. Ask if this is an insect. Why not?

After students can identify why they are not, show them the pie chart on the next page that illustrates the distribution of annelids, crustaceans, and insects in the arthropoda class. Talk again about the word arthropod and what it means.

**Further possibilities:** Ask students to make up a rule for how to tell if an animal is an insect. Mention the 3 + 3 rule: an insect has three body parts and three pairs of legs.

## LESSON PLAN

## 3 (cont)

**Objective:** To further explore exterior aspects of insect structure.

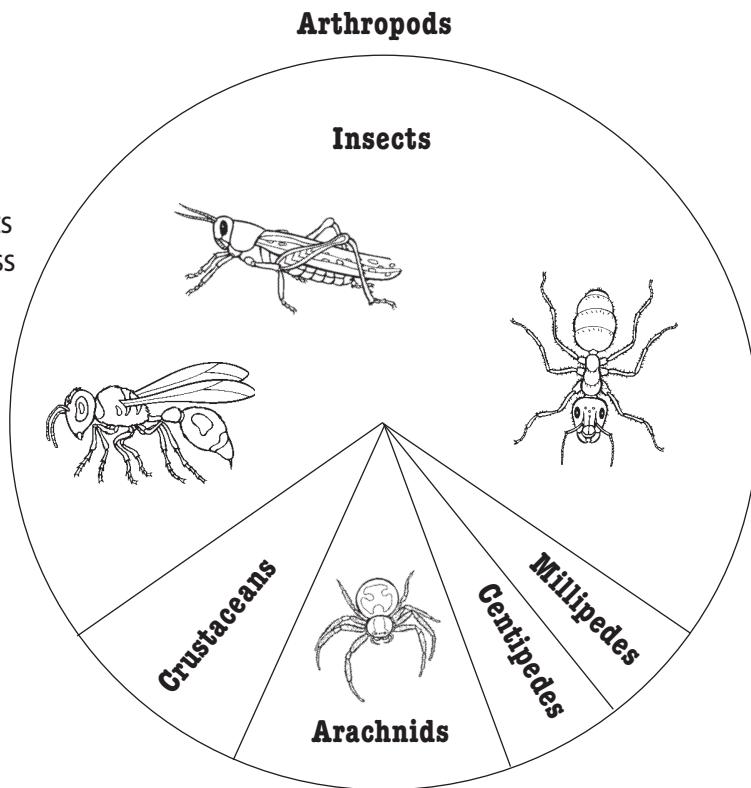
**Introduction:** Have students tell you what is missing from the models we made last time. Brainstorm ways you could add antennae, eyes, mouthparts, legs, and wings. Pipe cleaners (sometimes called chenille craft stems) serve as wonderful legs, as they can be jointed; different colored clay can be used for the eyes, toothpicks for the antennae, and any type of paper for the wings, though waxed paper is fun to work with and is translucent.

**Procedure:**

1. Using a variety of materials, have students complete their models by accurately adding the features we mentioned above. As they do so, talk about the functions of each part.
2. Using the Fact Files, students can decide what shape and pattern to make the wings, or you can provide a pattern. Let them use "sharpie" markers to draw the veins on the wings. To attach the wings, tape a pipe cleaner to the back of the wing and stick the end into the clay in the correct spot.

**Further possibilities:** The insect model made in this lesson with its diagram is an excellent beginning of a science project.

pie chart showing distribution of insects in the arthropod class



# LESSON PLAN

## 4

**Skills:** learn the numbers two and eight

**Preparation:** Make a batch of black wash for painting the backgrounds of the spider webs. Mix a jar of black tempera paint with water to thin out, and dissolve thoroughly.

**Materials:** black construction paper, white paper heavy enough to take a wash of paint, white glue or white wax crayons, smocks or aprons, newspapers

**Resources:** [The Very Busy Spider](#), by Eric Carle; [Miss Spider's ABCs](#) or [Little Miss Spider](#) by David Kirk

**Funsheets:** Grade 1, [Math 7](#), [Science 2, 4](#); Grade 2, [Math 11](#)

# Are Spiders Insects?

Grade 1-2

**Objective:** Students will understand why a spider is not an insect, and change any thinking that spiders are creepy, scary bugs to be scared of or stepped on.

**Introduction:** Spiders are not insects. They have eight legs, not six. They have two main body parts, not three. Spiders do not have wings or antennae.

Does anyone remember a song about spiders? (sing *Eensy Weensy Spider* and do body movements)

rhyme	movement
<i>The eensy weensy (or itsy bitsy) spider Crawled up the water spout Down came the rain</i>	'Climb' up arm Wiggle fingers down from head to waist
<i>And washed the spider out Out came the sun and dried up all the rain</i>	Throw arms to sides Raise hands above head, make circle for sun
<i>And the eensy weensy spider Crawled up the spout again.</i>	'Climb' up arm again

**Read:** One or all of the books mentioned at left.

**Procedure:** two spidery activities

**1. Make a Spider** using black construction paper with two body parts and eight legs. Follow the patterns of the cut-outs or the [Fact Files](#) for details to add. Hang them from the ceiling of the classroom by threads.

**2. Make Spider Webs**

- a. Using the glue resist technique, draw a spider web design on a piece of white paper with white glue right out of the container (using the squeeze top) or using a white crayon. The image may be hard to see because it is white on white, but encourage students to keep it simple. Demonstrate for them on the board an easy way to draw a spider web (start in the middle with an irregular shaped box, draw lines from there straight out to the edge of the paper, then connect the lines in a circular pattern. Don't forget to draw in a little spider, and the students may also add their names.)
- b. Let the white glue dry. Crayon drawings can be continued right away.
- c. Using the diluted black paint you have prepared, demonstrate painting over the white drawing with a light touch. Spider webs will appear right before your eyes.
- d. Post these drawings in the classroom along with other models you have made of spiders (from #1).

**Conclusion:** Look at all the variations produced by the class and talk about how all spider webs, even though constructed the same, will look different in lots of ways. Mention that spider silk would be as strong as a steel thread of the same weight.

## LESSON PLAN

### 5

**Skills:** symmetry (half, double, center) mixing colors (yellow and red)

**Preparation:** Using the [Fact Files](#), make a copy of the butterfly enlarging it at 130% to fit on an 8 1/2 x 11 sheet

**Materials:** 8 1/2 x 11 paper, yellow and red tempera paints, black markers, scissors

**Resources:** [\*Monarch Butterfly\*](#) by Gail Gibbons, [\*Butterfly Story\*](#), by Anca Hariton, and [\*The Butterfly\*](#), by Sabrina Crewe

**Funsheets:** Grade 2, [Math 6, 9, 10](#)

## Symmetry

Grade 1-2

**Objective:** Students will understand the concept of symmetry as having two parts (cut by an imaginary line) that are exactly the same; they will also be able to apply it to the structure of insects.

**Introduction:** As you read, note the details of the butterfly's structure

**Read:** Any of the butterfly books mentioned at left.

**Procedure:** Demonstrate the steps before students work on their own.

1. Fold a piece of paper in half; open it up and show students how two halves make a whole. Then show them the pattern folded in half and then open.
2. On the center fold of the paper, draw a butterfly's body with a black marker or pencil, or use the pattern to trace.
3. On one side of the fold, drop blobs of paint (use yellow and red). While it is still wet, fold the two halves together and press down firmly.
4. Open up immediately and see what happened! Let dry thoroughly.
5. Now cut out the whole butterfly.

**Conclusion:** Children should be able to transfer this method for cutting out two identical sides of a thing to other images, such as a heart, a circle, a house shape, or a ladybug.

**Further possibilities:** Use the butterfly shapes to

1. Make a simple mobile: hang in clusters from the ceiling with heavy thread or tie two coat hangers together at the hooks and hang the butterflies from the corners of the hangers; or thread three drinking straws together to form a triangle and hang all the butterflies along the bottom straw.
2. Add to the murals.
3. Or you could fold them and staple to a bulletin board along with word cards for *symmetry, half, center, yellow, red, and orange*.
4. Look carefully at each insect in the [Fact Files](#), see if students can recognize symmetry.

# LESSON PLAN

## 6

**Skills:** creative writing, applying knowledge to art work

**Preparation:** Samples of a story drawn "comic-strip style" to show students the possibilities.

**Materials:** washable ink pads, in a variety of colors if possible, felt tip pens, white paper cut in long strips, paper towels for wiping fingers

**Resources:** [The Grouchy Ladybug](#) by Eric Carle; [The Ladybug](#) by Sabrina Crewe

\* **Tips:** Other names for ladybug:

Flower Lady (China)  
Water Delivery-Man's Daughter (Iraq)  
Indra's Cowherd (India)  
Crop Picker (Africa)  
Good News (Iran)  
Lord God's Little Fatty (Switzerland)

**Funsheets:** Grade 1, [Math](#)  
[4: Language 1, 2, 3](#)

# Ladybugs: Garden Friends

Grade 1-2

**Objective:** To learn about a specific member of the insect family, the ladybug, and be able to draw it and use it in a made-up story.

**Introduction:** The ladybug, also called a lady beetle or lady bird\*, has a smooth, round body with a hard shell to protect against enemies. Ladybugs also let out a smelly liquid from their joints when attacked to keep away predators. Their bright red color is a warning to predators.

Ladybugs are great friends of gardeners. Ladybugs eat aphids and other soft-bodied insects such as green flies, black flies, and their larva. Ladybugs can eat up to 100 aphids a day.

**Read:** [The Ladybug](#) or [The Grouchy Ladybug](#). Also, ask if anyone remembers the little rhyme about the ladybug and can recite it:

Ladybug, ladybug,  
Fly away home.  
Your house is on fire,  
Your children will burn. \*\*



**Procedure:** Let's make a ladybug story.

1. Practice first: on a single piece of paper make lots of fingerprints by touching the ink with your finger, then pressing it on to the paper. Wash your hands while you are waiting for the fingerprints to dry, and wipe your fingers on a paper towel before changing colors.

2. Using a felt tip pen, add a head, antennae, spots, legs, and a wing dividing line.

3. Have fun creating a comic-strip story! Demonstrate to students how to divide the long strip of paper into "frames" like they've seen in a comic book. The frames need not be uniform in length.

Encourage students to show some of their ladybugs with their wings open; show motion by drawing lines around them. They can make mommy and daddy bugs and baby bugs with different fingers. Green prints can be leaves. Make the bugs talk or think by adding cartoon bubbles; you can help by adding words that the students dictate.

**Conclusion:** After students have experimented and created at least one comic-strip-style story, hang the comic strips on the bulletin board and have each student present his or her story and narrate it to the class.

**Further possibilities:** This can also be easily done with other insects, such as bumblebees or butterflies. See [Pre-School-K Lesson Plan 9](#) for more Further Possibilities.

\*\*No one knows how or why this rhyme started, though children in many countries sing it. One idea is that it came from places where hops were grown. Ladybug larvae live on hop vines, which were burned after the harvest. So singers warned the ladybug that her children would burn.

**LESSON PLAN****7**

**Skills:** using movement and dance to express knowledge

**Preparation:** obtain tape or CD of the *Flight of the Bumblebee*, by Rimsky-Korsakov (this short piece was actually composed as part of an opera called "The Tale of Tsar Saltan"). Available on the Internet.

**Materials:** Pastels, chalks, and/or oil pastels; large sheets of drawing paper, or one continuous sheet of butcher paper spread out on the floor, perhaps on the floor space where the dancing took place.

**Resources:** *Busy, Buzzy Bees (Rookie Read-About Science Series)* by Allan Fowler, Mary Nalbandian (Contributor), Robert L. Hillerich (Contributor)

# Fly like a Bumblebee

**Grade 1-2**

**Objective:** To improvise body movement based on listening and imagining. To learn what it feels like to be a bumblebee.

**Read:** Read *Busy, Buzzy Bees*, or any other children's story book about bees.

**Procedure:** Bumblebees visit flowers to collect pollen and nectar. They help the flower by carrying its pollen to other flowers of the same kind so they can develop into seeds.

- Have students close their eyes as you play the *Flight of the Bumblebee* for them. Then play it again. Ask for reactions, feelings, ideas.
- Then, as a group, gather them to an area with enough room for moving freely about. Play the music again and this time let them use their bodies to describe the movements of the bumblebee. Students should be careful not to collide with the other bees, as bees swarm together. Call out suggestions such as: "Wings! flap your wings; you are flying; arms flutter fast; flying high, flying low."
- After this rather physical activity, a time of sitting quietly is necessary before continuing.

**Conclusion:** What have we learned about the bumblebee from listening? All students should participate in this activity in some way, even those who may have physical limitations.

**Further possibilities:** Follow up the rest period with a spontaneous drawing exercise. While students are catching their breath, roll out the butcher paper on the floor, one or two lengths, enough to accommodate all students. Use chalk, pastels, or oil pastels to encourage looseness and freedom. Encourage them to carry over the dance movements from their arms to the chalk to the paper. Tell students not to limit their drawings to one place on the paper. Play the music again. Let them know at the outset that they have only the four-minute duration of the music playing to complete their drawings. This is a good exercise for letting go of fears or reluctance to draw.

The movement exercise could be choreographed into a unified piece that could be performed for other classes or parents.

A bumblebee is a fun Halloween costume! If this Unit falls near Halloween, costumes could be created using simple materials. Don't forget to take pictures!

# LESSON PLAN

## 8

**Skills:** learn about cycles and phases of life from observing a butterfly

**Preparation:** Be able to reproduce on the board a circle diagram as an example of what students will draw on their paper plates.

**Materials:** thin white paper plates, colored paper, pipe cleaners or chenille yarn or pom poms, twigs, rice or beans

**Resources:** [The Butterfly](#) by Sabrina Crewe

### Words with Special Meanings:

**Metamorphosis**-a way of developing in which an animal's body's changes shape. Many invertebrates, including insects, undergo metamorphosis.

**larva**-a young animal that looks completely different from its parents. Insect larva change into adults through metamorphosis. A larva is also called a grub or a caterpillar.

**Funsheets:** [Fundamentals, 14](#); Grade 2, [Language 3](#)

# Life Cycles

Grade 1-2

**Objective:** Students will understand and be able to draw the life cycle of a monarch butterfly.

**Introduction:** All insects start life as tiny eggs.

**Read:** [The Butterfly](#).

### Procedure:

1. Each student will get a paper plate and a square piece of blue paper. Demonstrate how to fold it into quarters and cut into a circle. Paste the blue circle onto the center of the plate and label as follows (diagram on the board): 1. eggs, 2. caterpillar, 3. chrysalis, 4. adult.
2. With crayons, markers, and pencils, students will illustrate the different stages of development. This could be extended into a collage using a cut-out paper shape for the adult butterfly (remembering what they learned in [Lesson 5, Symmetry](#)), cut-out leaves with grains of rice or beans for the eggs laid by the adult, a chewed-up leaf with pom poms or pipe cleaners or chenille yarn for the emerging caterpillar, and a twig and masking tape chrysalis for the resting stage in which a caterpillar changes into an adult. Or use other materials that you have on hand that seem appropriate.
3. Try to obtain a chrysalis from the garden and give it a home in a large jar.

**Conclusion:** Draw arrows between the sections to show the direction of the metamorphosis. Review the life cycle of the butterfly.

**Further possibilities:** Looking through the books and materials in the [Learning Center](#), allow students to identify the different ways that other insects metamorphose, such as the cricket and the moth. Students can then make a life cycle for each of them and look at the differences and the things that are the same. Read [The Very Quiet Cricket](#) by Eric Carle.

## LESSON PLAN 9

**Skills:** learn about how animals hide in their habitat and why, visual perception, identifying colors

**Preparation:** Print out the 15 pages for the [Mural](#) from the Learning Page. Because of the size of the mural it may be more productive to have students color the individual pages and *then* tape them together. Divide the class in half and have one group color each color scheme (or, for simplicity, color only one). Begin the mural a week or more before this lesson is taught.

**Materials:** crayons and tape to construct the mural, colored and white construction paper, green poster board, drawing materials, scissors

**Resources:** [The Very Hungry Caterpillar](#) by Eric Carle and [Where's That Insect?](#) by Barbara Brenner

### Words with Special Meanings:

**Camouflage**-the colors and patterns of an animal that blend in with the background and conceal it from predators and help it to ambush prey.

**Funsheets:** Grade 1, [Math 4](#); Grade 2 [Science 3](#)

# Hide and Seek!

Grade 1-2

**Objective:** This lesson will show students how camouflage helps insects, and why it is important to their survival.

**Introduction:** Many insects blend in with their surroundings because they are the same shape and/or color as their surroundings. Give some examples of other animals that also use camouflage, and ask for suggestions as to why an animal would want to be hidden in this way.

**Read:** One or both of the books mentioned at left.

### Procedure:

1. Using a copy of the [Mural](#) from the Learning Page, have students color it using basically two color schemes: shades of greens (with yellows and blues) and shades of browns (monochromatic, neutral tones). This may take a few sittings; hang the finished mural on the wall where it is accessible to the students.
2. Tell students they will now have the opportunity to create their own insects, and that their insects will need to hide in the picture to stay safe. Write a list of possible insects and spiders, and suggest that they consult the books in the reading center for visual ideas or to look at their [Fact Files](#).
3. Give students ample time to create their insects using paper, crayons, and colored pencils, cutting out the shape when they are finished. Remind them that their insect will need to hide in the mural so students should look carefully at the shapes and colors of the picture. Point out that if an insect were these colors (point to a specific area), it could hide "here." Give another example.

**Conclusion:** Camouflage may be a tricky word to say and understand but is a concept that will translate to many other Units in the Learning Page. Students should be able to say the word and demonstrate its meaning.

**Further possibilities:** **Camouflage colors:** Using blue and yellow paints, show how together they make green. On an outline drawing of a caterpillar, fill it in with yellow paint, and then while it is still wet, add blue to it. It is said that caterpillars aren't born green; it is the green color from the leaves that they eat that turns them green.

Write each child's name on a pre-cut leaf and have them paste their caterpillar on it. Staple all of the leaves on a bulletin board (with a blue butcher paper background) clustered and overlapped to resemble a tree or bush.

For **Camouflage colors**, use the caterpillar and leaf patterns on the next page (copied at 121%); use green poster board precut into the shape of a leaf large enough to hold the caterpillar.

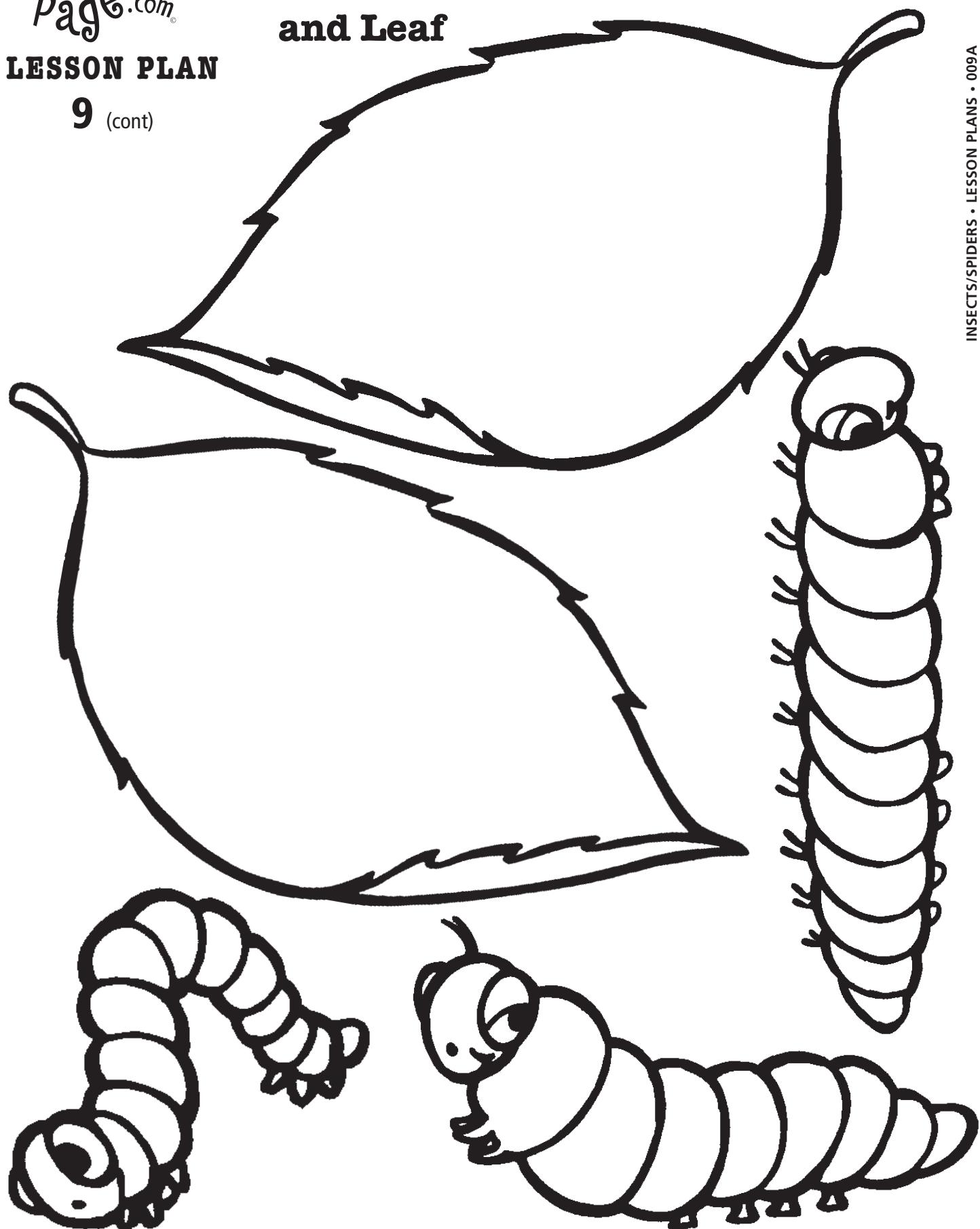
**Suggest an extra credit activity:** through your reading and listening to stories, make a picture of all the different ways that at least five different insects blend into their surroundings.

**LESSON PLAN**

**9** (cont)

**Pattern of Caterpillar  
and Leaf**

**Grade 1-2**



# LESSON PLAN

## 10

**Skills:** counting, writing numbers, creating a pictogram

**Preparation:** Copy enough inventory forms for each student to have one.

**Materials:** butcher paper, scissors, glue sticks, markers

**Funsheets:** Grade 1, [Math, 10](#); Grade 2, [Math 1–3, 5](#)

# Insect Inventory Worksheet

Grade 1-2

## End-of-Unit Activities

**Objective:** To learn how to take a poll or survey, collect and graph the results.

**Introduction:** Gather the group together on the rug and ask students what they think about the Insect Unit. Say: "I'm really curious to know which one is your favorite insect? Shall we vote on it?"

**Procedure:** Pass out form (see next page) listing all the insects from the [Fact Files](#) in this unit. Post a large piece of butcher paper with an enlarged image of the chart next to it.

1. Have students return to their seats and study their ballots. Give them a few minutes to make their choices. After they choose their insect, ask them to cut out the little picture closest to it.
2. One by one, have students come forward and paste their insect pictures on the chart, and have them say the name of it. Have only the insects chosen appear on the chart; 20 would be too cumbersome.
3. After each one is placed, write the name of it under that column, and proceed to the next.

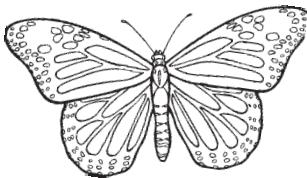
**Conclusion:** The end result will be a pictogram. Tell students a pictogram is another kind of graph used to organize things we learn. Talk about the results: which one was the class favorite?

**Further possibilities:** Use the Inventory form on the next page

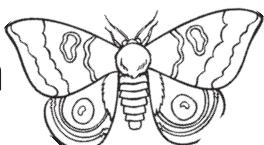
1. To help with data collection and observations on the field trip ([Lesson 2](#)). Besides checking off the insects and spiders seen, students may add tick marks to tally how many they've seen
2. Have each student pick an insect to "be" for five minutes. Tell them to walk, "talk," hear, see, and smell like that insect. At the end of the session have them record in their journals: What it felt like to be a \_\_\_\_\_.

# INSECT INVENTORY

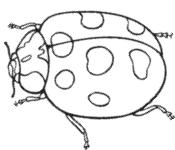
Butterfly



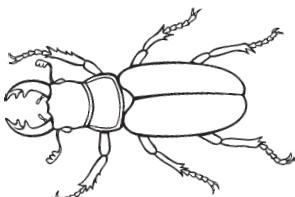
Moth



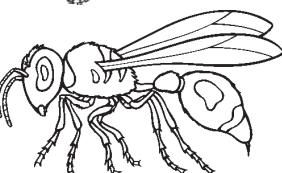
Ladybug Beetle



Beetle



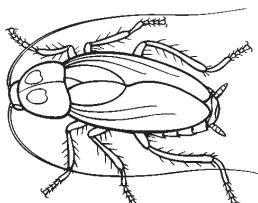
Wasp



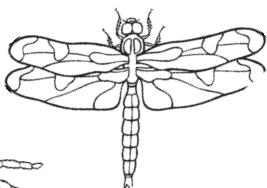
Grasshopper



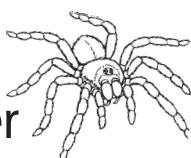
Cockroach



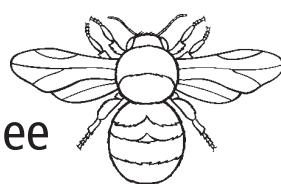
Dragonfly



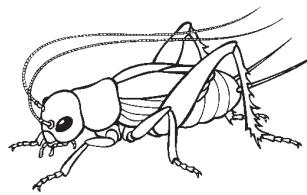
Spider



Bee



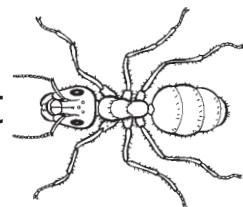
Cricket



Crab Spider



Carpenter Ant

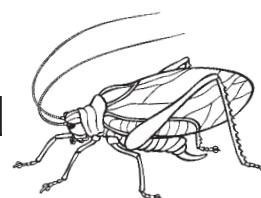


Praying Mantis

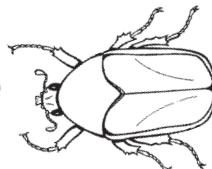
Cicada



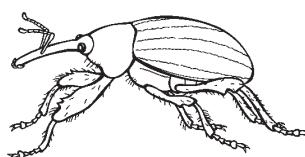
Katydid



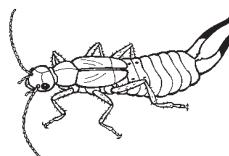
June Beetle



Boll Weevil



Earwig



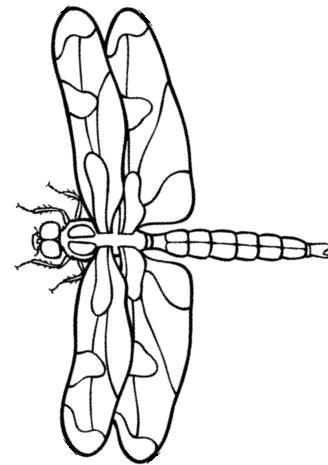
Black Widow Spider



# Setting Up an INSECTS Learning Center

The Insects Learning Center is an inviting and stimulating special interest annex that enriches the classroom work in the Unit. It should be available to students at all times as they work on Lessons or independent projects that you assign or that they initiate. Add your own ideas to the following list of suggestions and add to it as the Unit progresses. Keep a record for yourself of its contents to use in upcoming years.

- **Begin** gathering your ideas for putting together a special interest center in your classroom a few weeks before beginning the Unit on Insects.
- **Prepare** your classroom for a unit on insects and spiders by collecting books, magazines, and pamphlets on insects, spiders, entomology, etc.
- **Choose** an area that is convenient for a few students to work separately from the rest of the class. Set up a table top large enough for displays and a work area. A bulletin board along the wall is good, as are shelves for displaying books, artifacts, etc. Have storage boxes with lids for files, magazine articles, etc. (these could be permanent storage places for you). Place round bins under the table for toys, counters, or games.
- **Make** a big sign or poster announcing the topic, perhaps with a catchy name. You could also hang banners saying Book Making, Supplies, Art Materials, and Books, to liven up the area.
- **Contact** your school and local city librarians to let them know that you will be beginning the Insects Unit soon; ask them to begin gathering both non-fiction and picture books, reserving them for you.
- **Arrange** the books on a shelf separated into fiction and nonfiction titles and in alphabetical order by author. Ask students to replace the books correctly to make it easier for others to find them. To encourage good library habits, leave a box of cards or a sign-out sheet near the books so students can check them out of the classroom.
- **Provide** games and simple jigsaw puzzles featuring insects, plastic toys and models of insects, and counters or manipulatives in the shape of insects.



- **Arrange** shelves and bins so they are accessible to all of the students.
- **Hang** interesting lightweight objects from the ceiling, if possible, such as a stuffed insect mobile made in a previous year, or that you made as samples.
- **Have** boxes for art supplies, horizontal stacking file bins for papers and materials to make books, and a place for instruction sheets and independent assignment suggestions. Use large coffee cans (all sharp edges removed, covered with contact paper) to store tools needed for activities such as scissors, pencils, rulers, and glue. Continue collecting recycled materials such as egg cartons, cardboard, various papers, etc. Check your inventory of pipe cleaners, paints, etc.
- **Show** reduced samples of the Learning Page Fact Files on the bulletin board, pasted on colored construction paper and fanned out. Post maps, student artwork, and other eye-catching materials to make the Center more inviting. Be creative!
- **Display tools of the trade:** magnifiers, hand lenses, insect nets, measuring devices, display boxes and cases, collecting jars, tweezers, brushes to move insects gently, gloves, trowels, and small notebooks for recordkeeping, and field guides.
- **Involve** the parents. Send a note home asking for suggestions and the loan of items related to insects, spiders, or entomology. (Be sure items are labeled and returned at the end of the Unit.) Perhaps a parent has expertise in the field or knows someone with expertise who can come in and talk to the class. Contact your local agricultural extension agency to arrange for a speaker on local insects, both pests and beneficial ones.

Name \_\_\_\_\_

# Butterfly

Order: *Lepidoptera*

Description: Butterflies have 4 wings, which they fold vertically when resting.

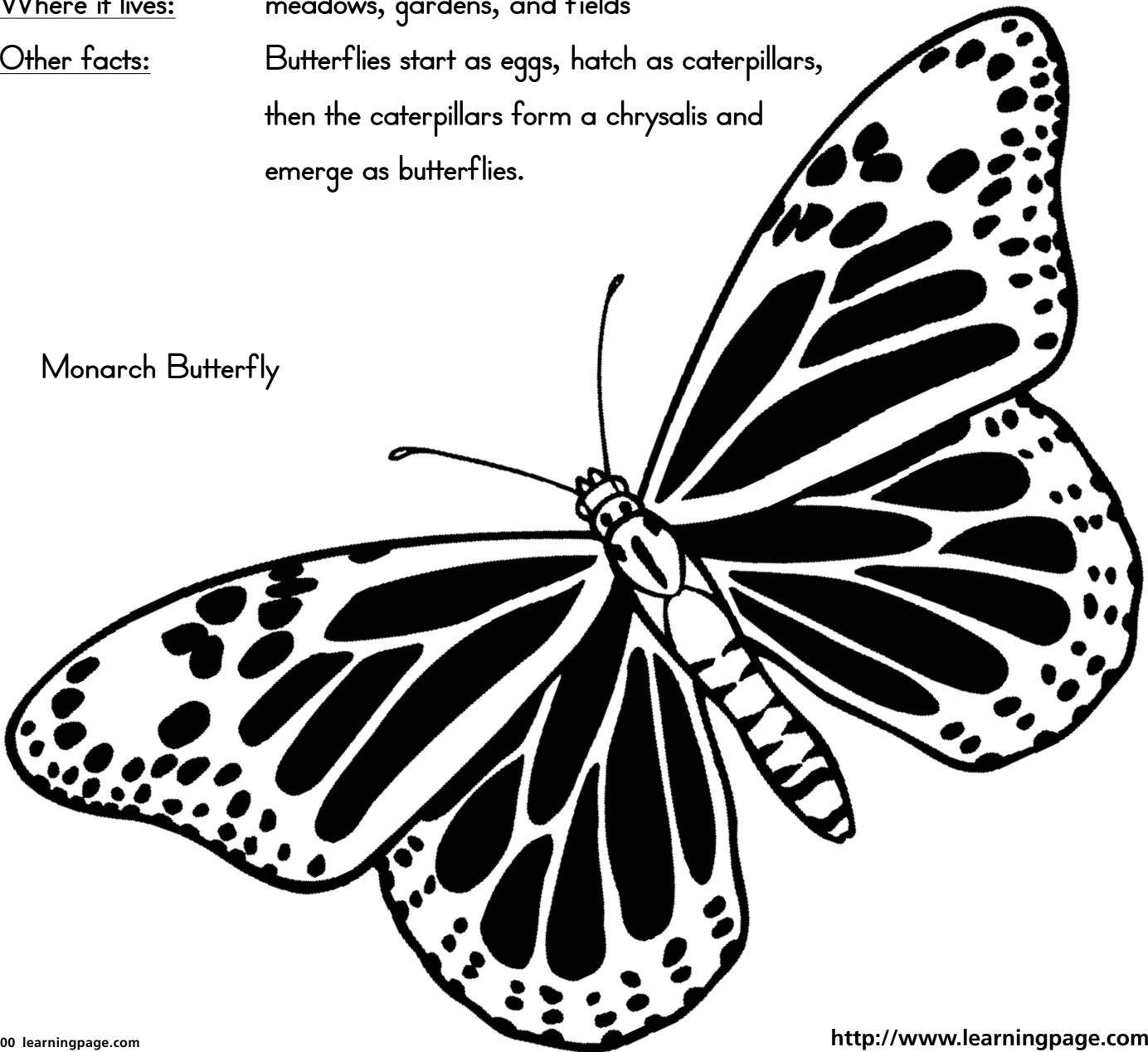
Size: Butterflies can be tiny, 3 millimeters (.125 inch) to very large, 270 millimeters (10.5 inches).

Food: nectar from flowers

Where it lives: meadows, gardens, and fields

Other facts: Butterflies start as eggs, hatch as caterpillars, then the caterpillars form a chrysalis and emerge as butterflies.

Monarch Butterfly



Name \_\_\_\_\_

# Moth

Order: *Lepidoptera*

Description: Moths have 4 wings, covered with colored scales that rub off easily when touched.

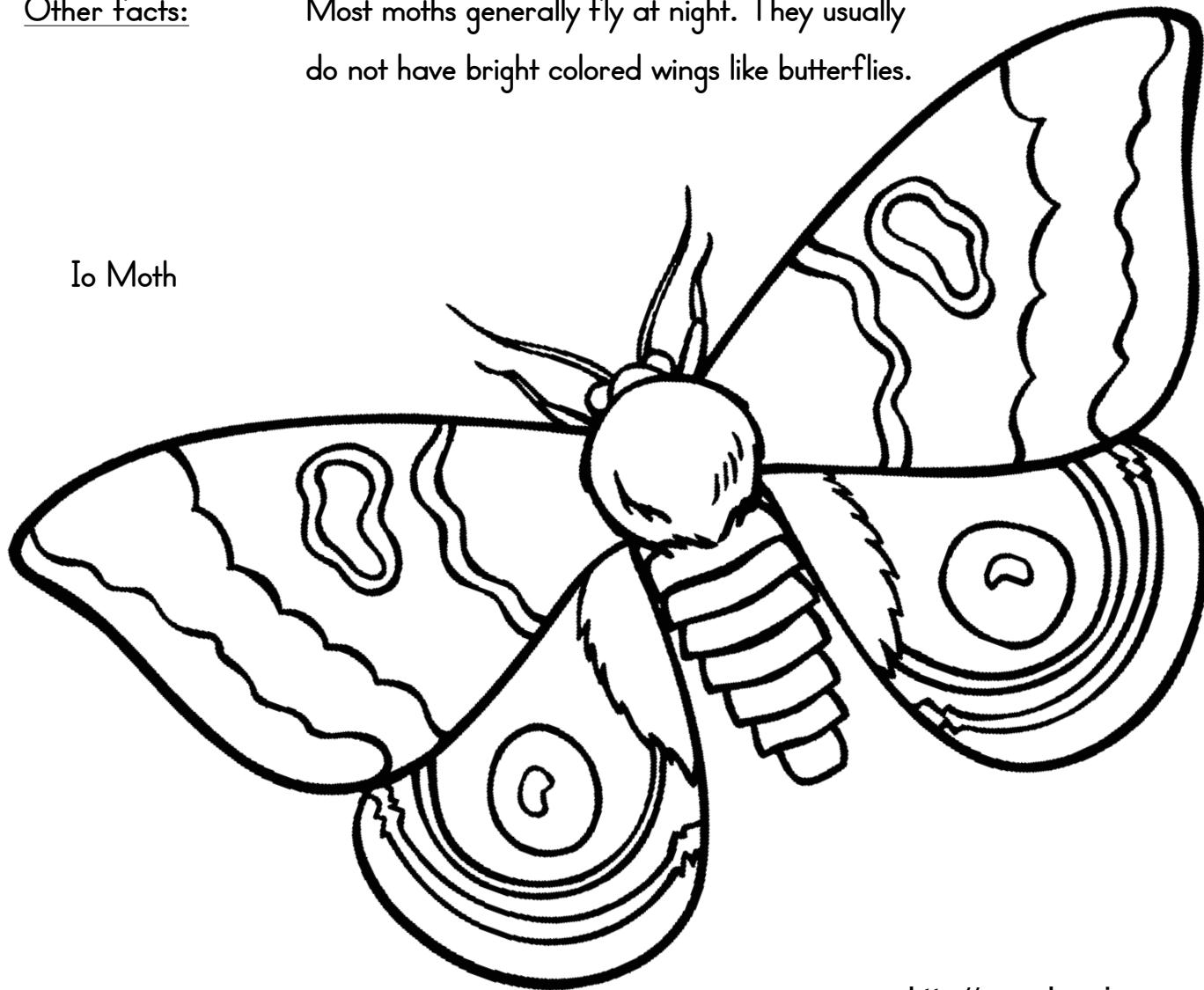
Size: Moths can be tiny, 3 millimeters (.125 inch) to very large, 270 millimeters (10.5 inches).

Food: nectar from flowers. They use a long sucking tube, which is coiled up when not used.

Where it lives: woods, gardens, and meadows

Other facts: Most moths generally fly at night. They usually do not have bright colored wings like butterflies.

Io Moth



Name \_\_\_\_\_

# Ladybug Beetle

Order: *Coleoptera*

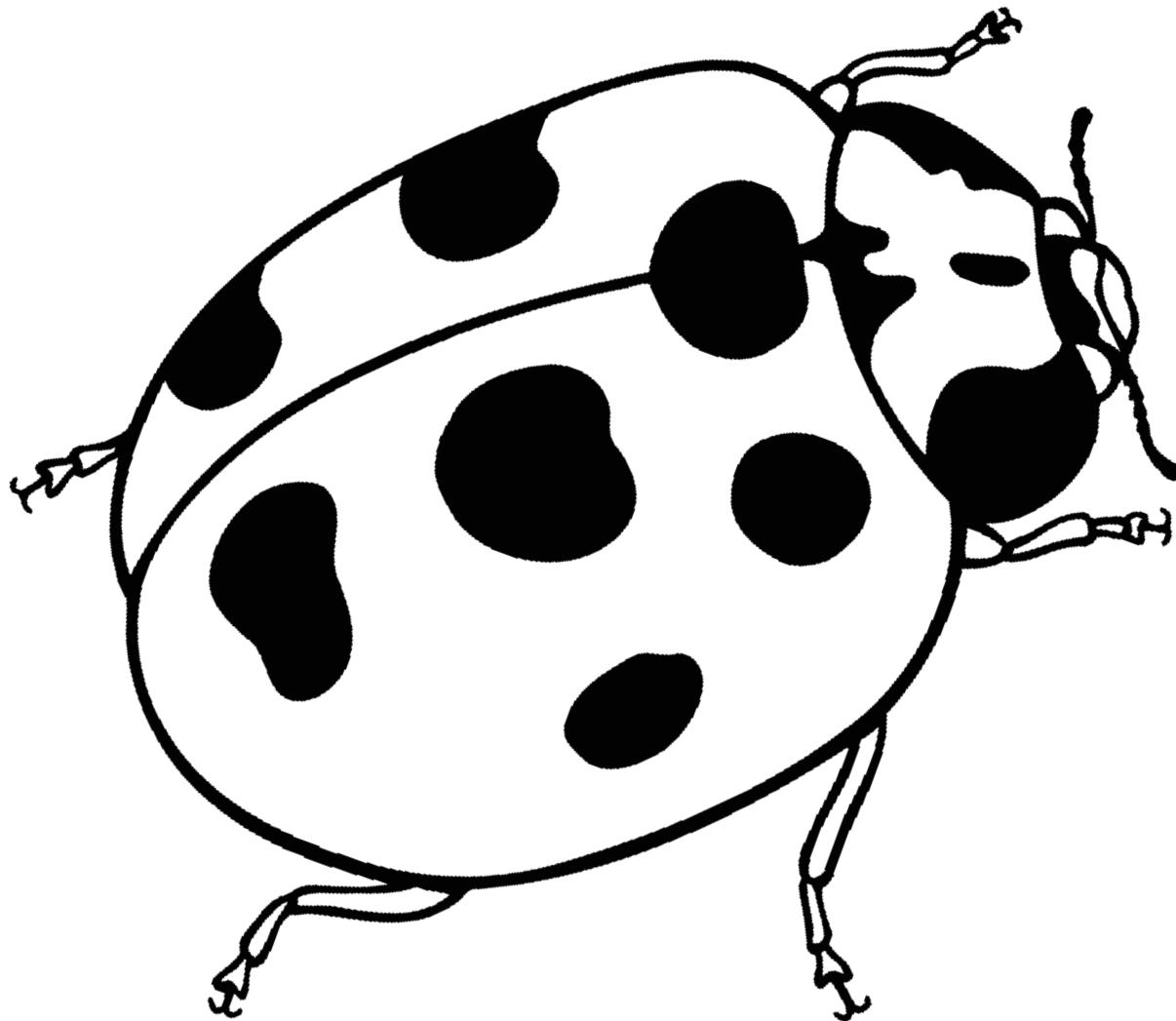
Description: Most are shiny orange or red with black spots  
and black underneath

Size: 5–7 millimeters (.25 inch)

Food: small, soft insects

Where it lives: marshes, gardens, and meadows

Other facts: Ladybugs are very helpful to gardeners as they  
eat insect pests that damage plants.



Name \_\_\_\_\_

# Beetle

Order: *Coleoptera*

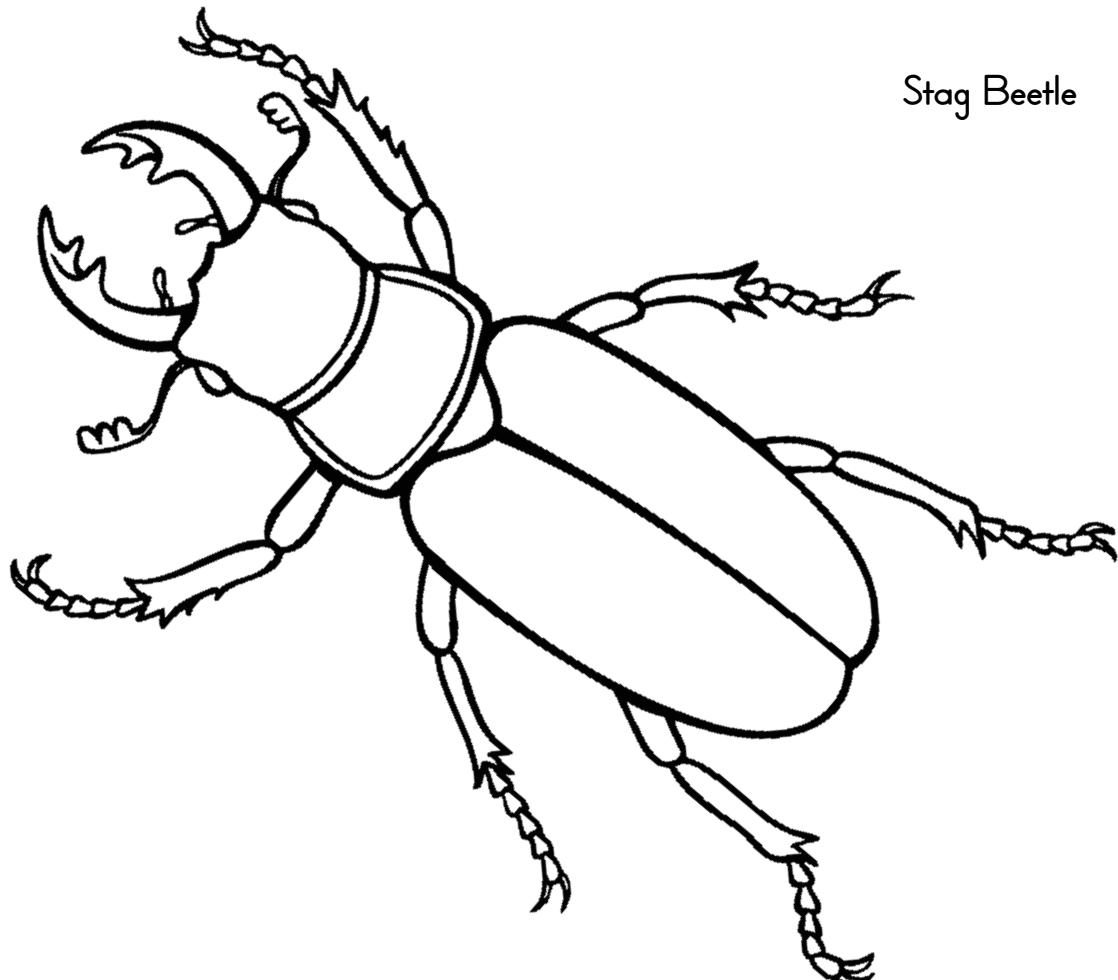
Description: Beetles have 2 tough, strong front wings, which cover the 2 soft back wings they use for flying.

Size: can be tiny - 1 millimeter (.0675 inch)  
to large - 130mm (5.125 inches)

Food: leaves, tree bark, wool, and other fabrics

Where it lives: There are 300,000 different types of beetles, which live in different kinds of places throughout the world.

Other facts: Most beetles have large eyes with many parts.



Stag Beetle

Name \_\_\_\_\_

# Wasp

Order: *Hymenoptera*

Description: Wasps have a narrow waist between the thorax and abdomen.

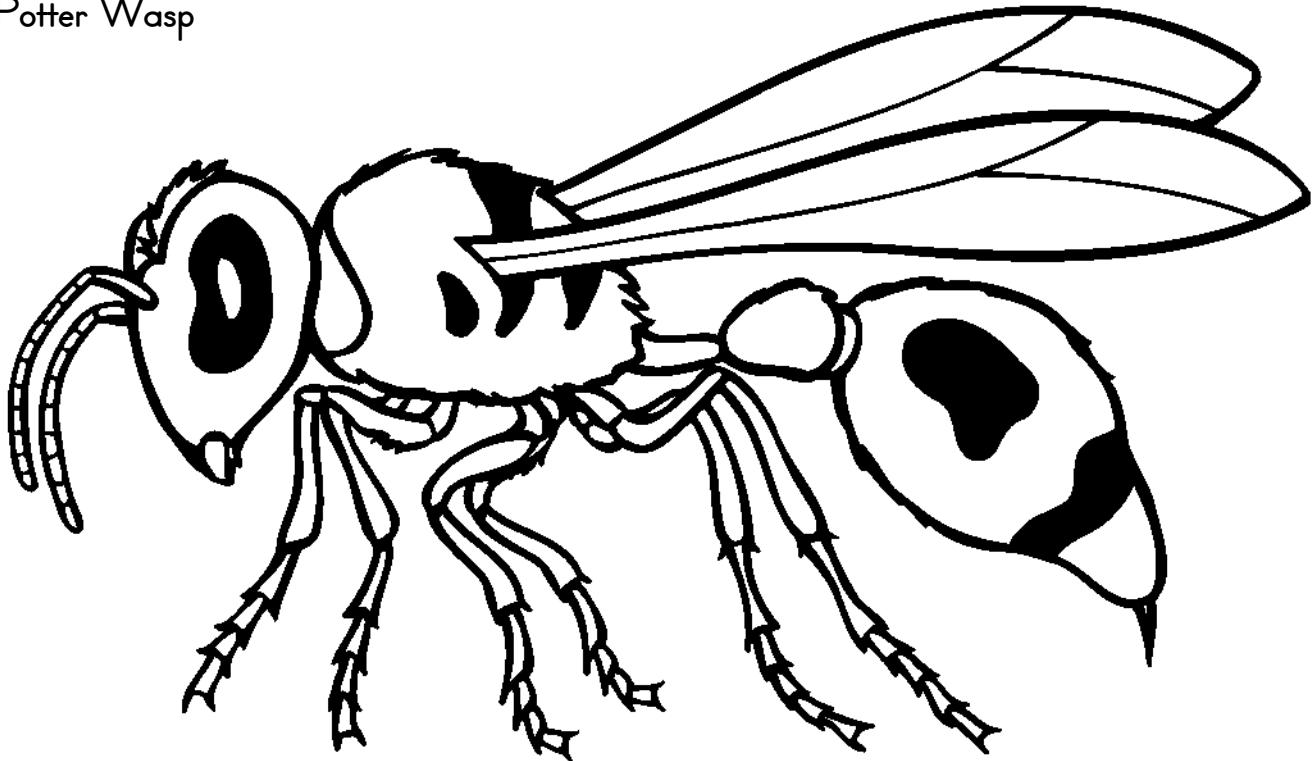
Size: 15–20 millimeters (.625–.75 inches)

Food: nectar from flowers

Where it lives: edges of woods, fields, and gardens

Other facts: Wasps are helpful to people because some kill the grubs and caterpillars that damage crops.  
Other species pollinate flowers so that we can have fruit and vegetables.

Potter Wasp



Name \_\_\_\_\_

# Grasshopper

Order: *Orthoptera*

Description: Grasshoppers have long, powerful back legs that they use for jumping.

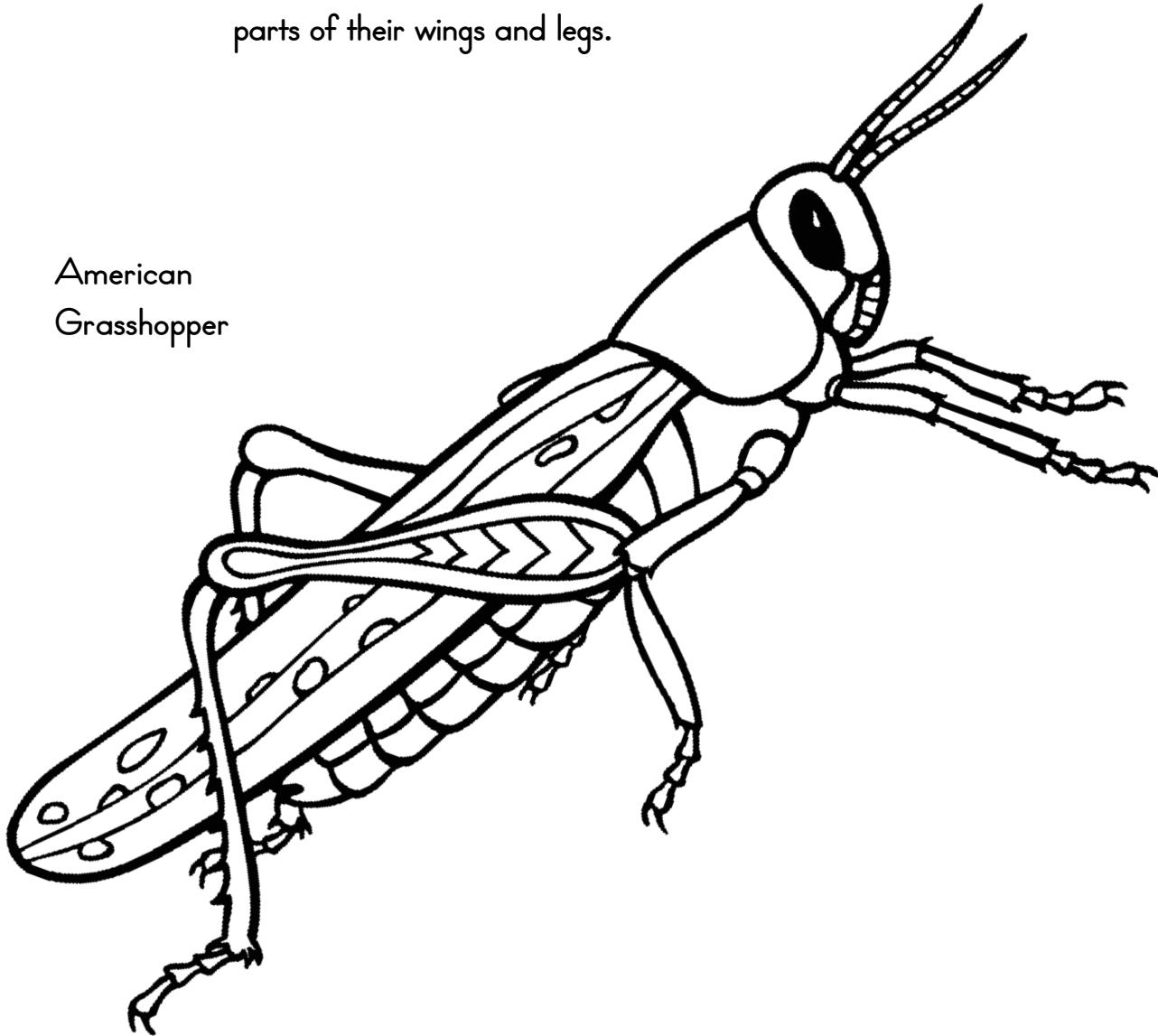
Size: 40–55 millimeters (1.625–2.125 inches)

Food: grass and leaves

Where it lives: grasslands and edges of forests

Other facts: Male grasshoppers “sing” by rubbing together parts of their wings and legs.

American  
Grasshopper



Name \_\_\_\_\_

# Cockroach

Order: *Blattoidea*

Description: reddish brown with oval bodies; long antennas

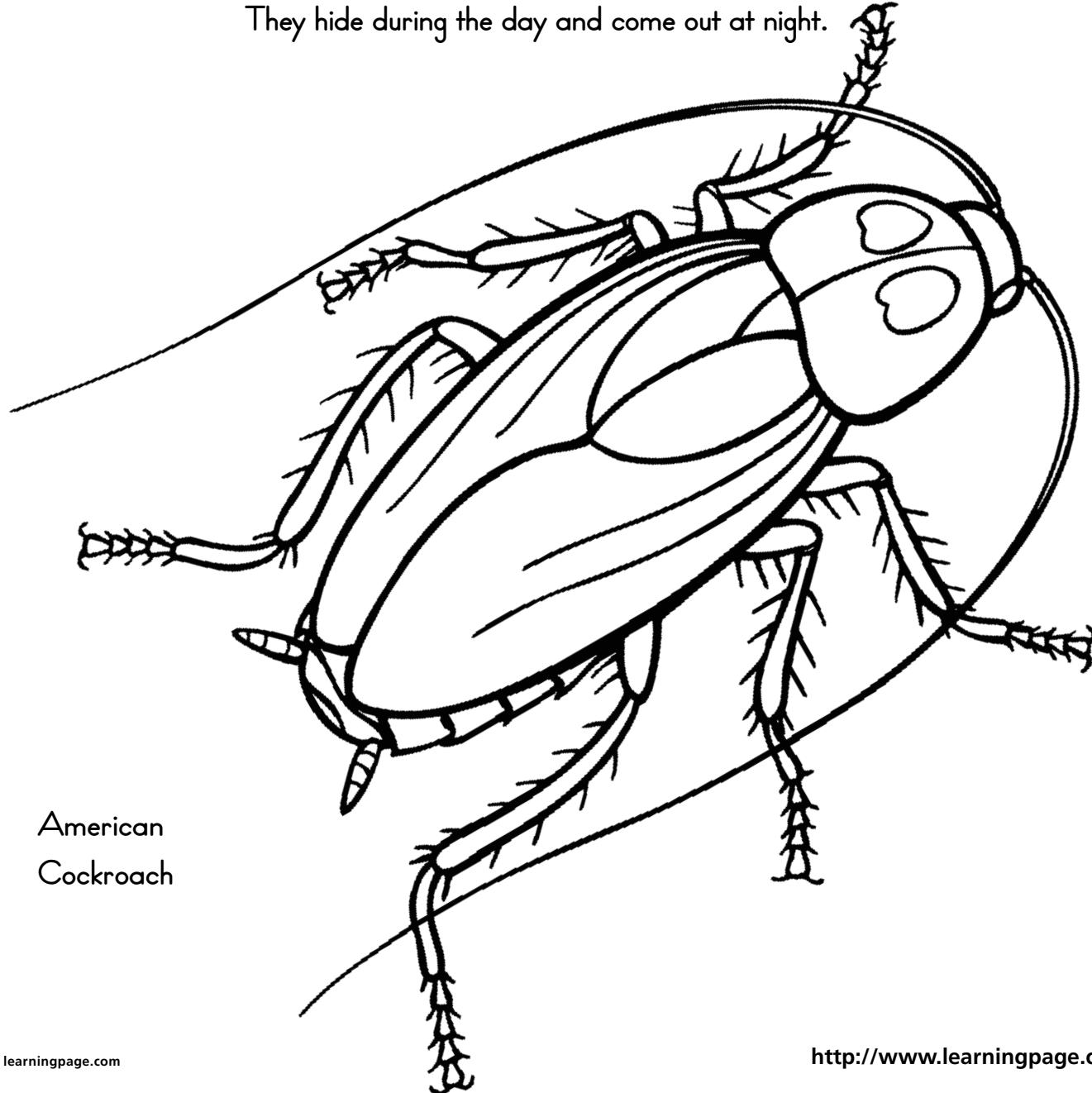
Size: 38–50 millimeters (1.5–2 inches)

Food: human food and pet food

Where it lives: hides between cracks in buildings

Other facts: Cockroaches have wings, but hardly ever fly.

They hide during the day and come out at night.



Name \_\_\_\_\_

# Dragonfly

Order: *Odonata*

Description: Dragonflies can fly backwards and forwards.  
They have 4 powerful wings.

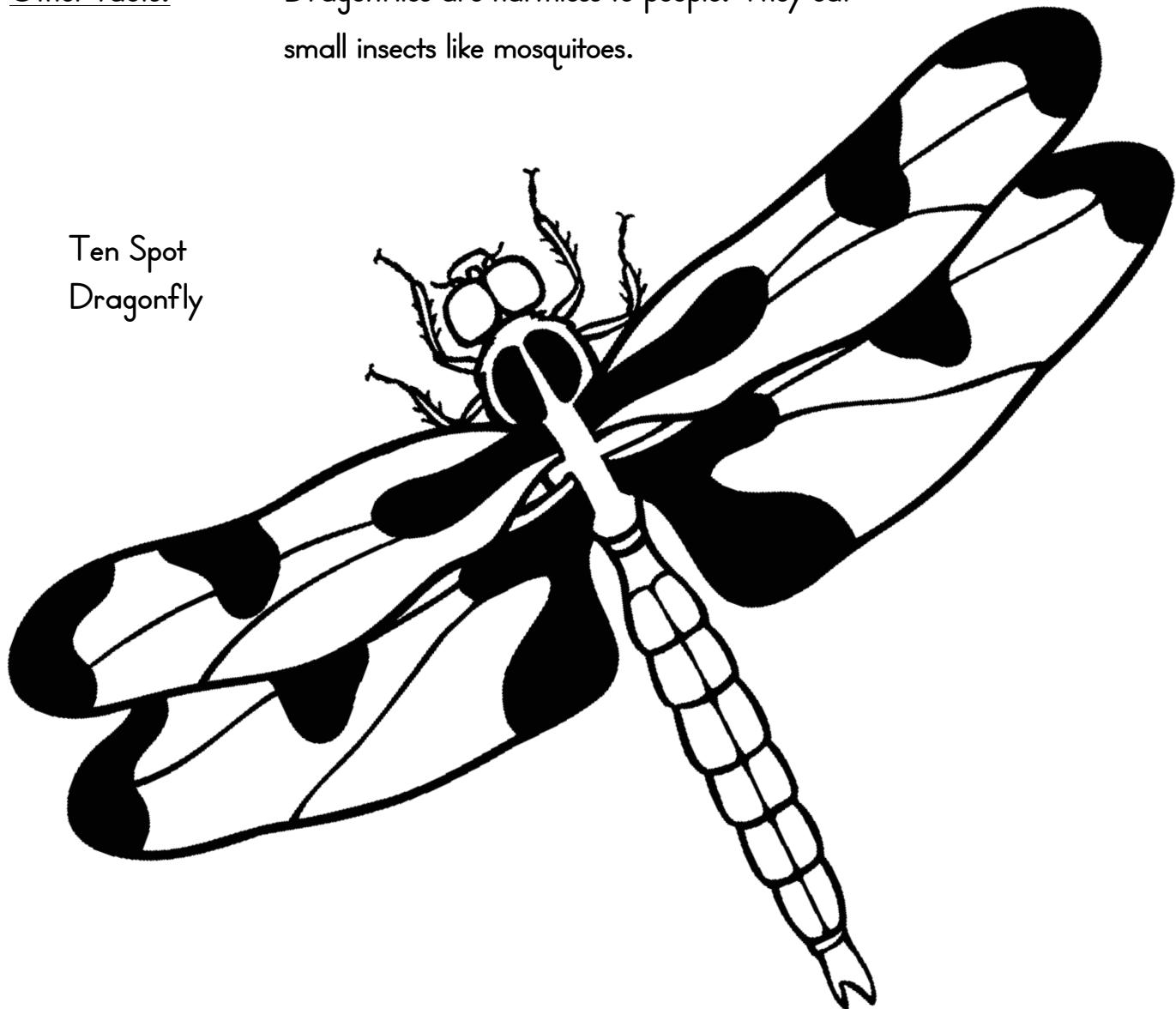
Size: 18 - 120 millimeters (.75 - 5 inches)

Food: small insects

Where it lives: near ponds and rivers

Other facts: Dragonflies are harmless to people. They eat  
small insects like mosquitoes.

Ten Spot  
Dragonfly



Name \_\_\_\_\_

# Tarantula

Order: Araneae

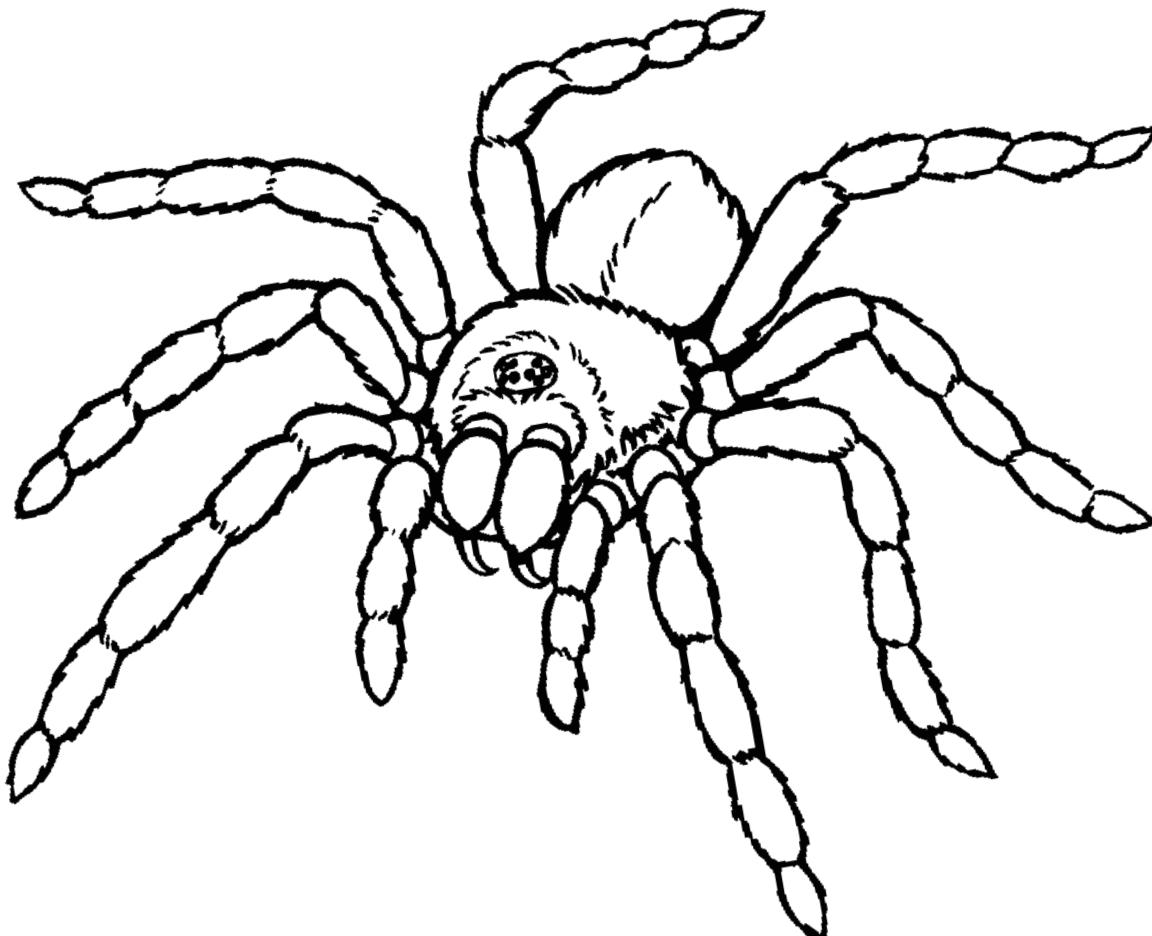
Description: Tarantulas have 8 legs, each with 7 sections.  
Most spiders have 8 eyes.

Size: Tarantulas can grow to 100 millimeters wide, from leg to leg.

Food: insects, lizards and other small animals.

Where it lives: mostly deserts, though some prefer tropical jungles.

Other facts: Tarantulas do not attack people. They can bite, but their poison is mild. When threatened, they may shed itchy hair to protect themselves.



Name \_\_\_\_\_

# Bee

Order: *Hymenoptera*

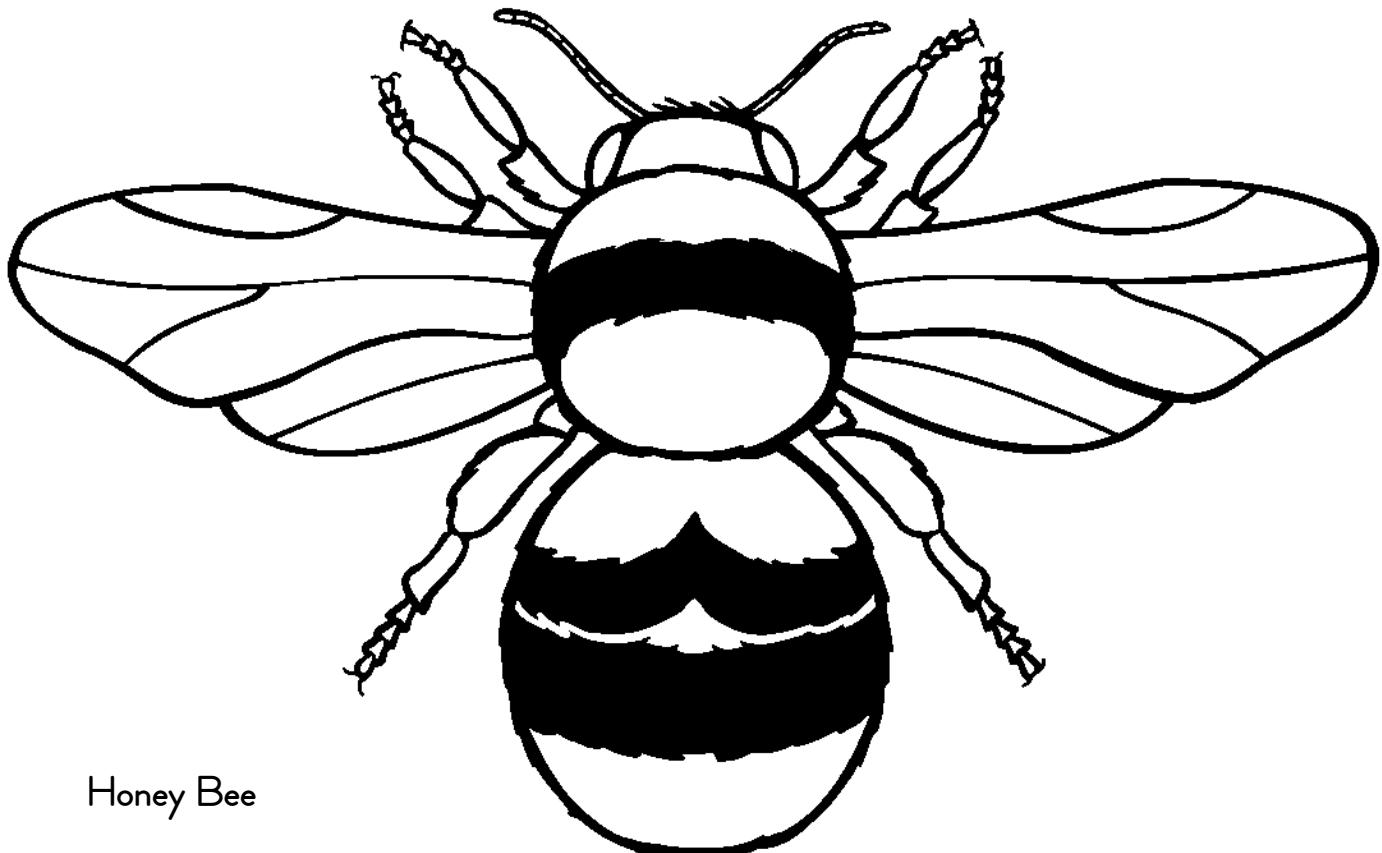
Description: Bees have hairy bodies and they have "pollen baskets" on their legs.

Size: 4–25 millimeters (.125–1 inch)

Food: nectar and honey

Where it lives: in hollow trees and hives kept by beekeepers

Other facts: Bees are helpful to people. They take pollen from flower to flower, which helps vegetables and fruit grow. Honeybees and Bumble bees make honey.



Honey Bee

Name \_\_\_\_\_

# Cricket

Order: *Orthoptera*

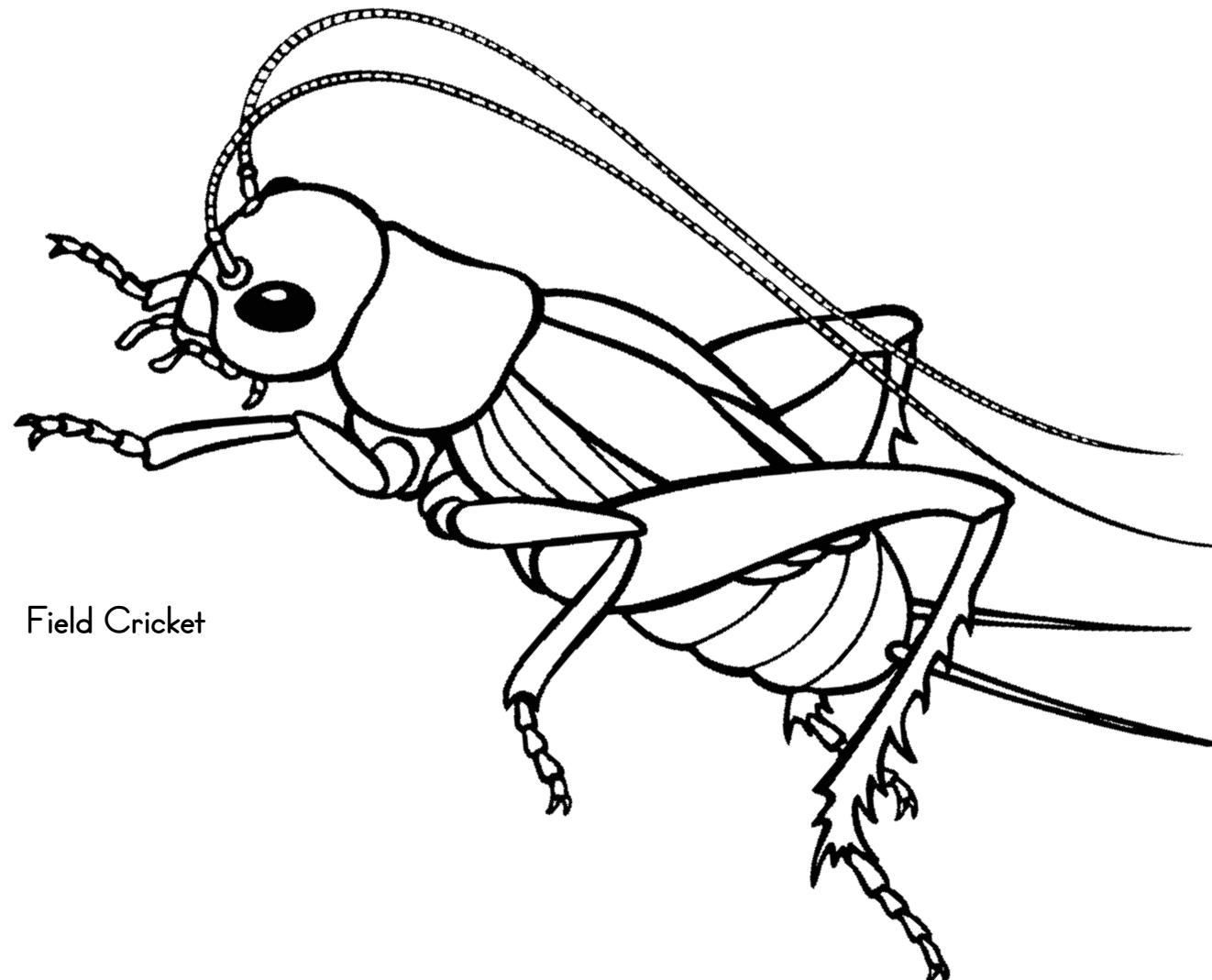
Description: Shiny black to dark brown with antennae longer than body.

Size: 15-25 millimeters (.625-1 inch)

Food: seeds, small fruits, occasionally dead insects

Where it lives: undergrowth, where there is protection from the cold

Other facts: often heard in houses, its song is a series of three chirps



Field Cricket

Name \_\_\_\_\_

# Crab Spider

Order: Araneae

Description: compact body, crablike leg arrangement. Often brightly colored.

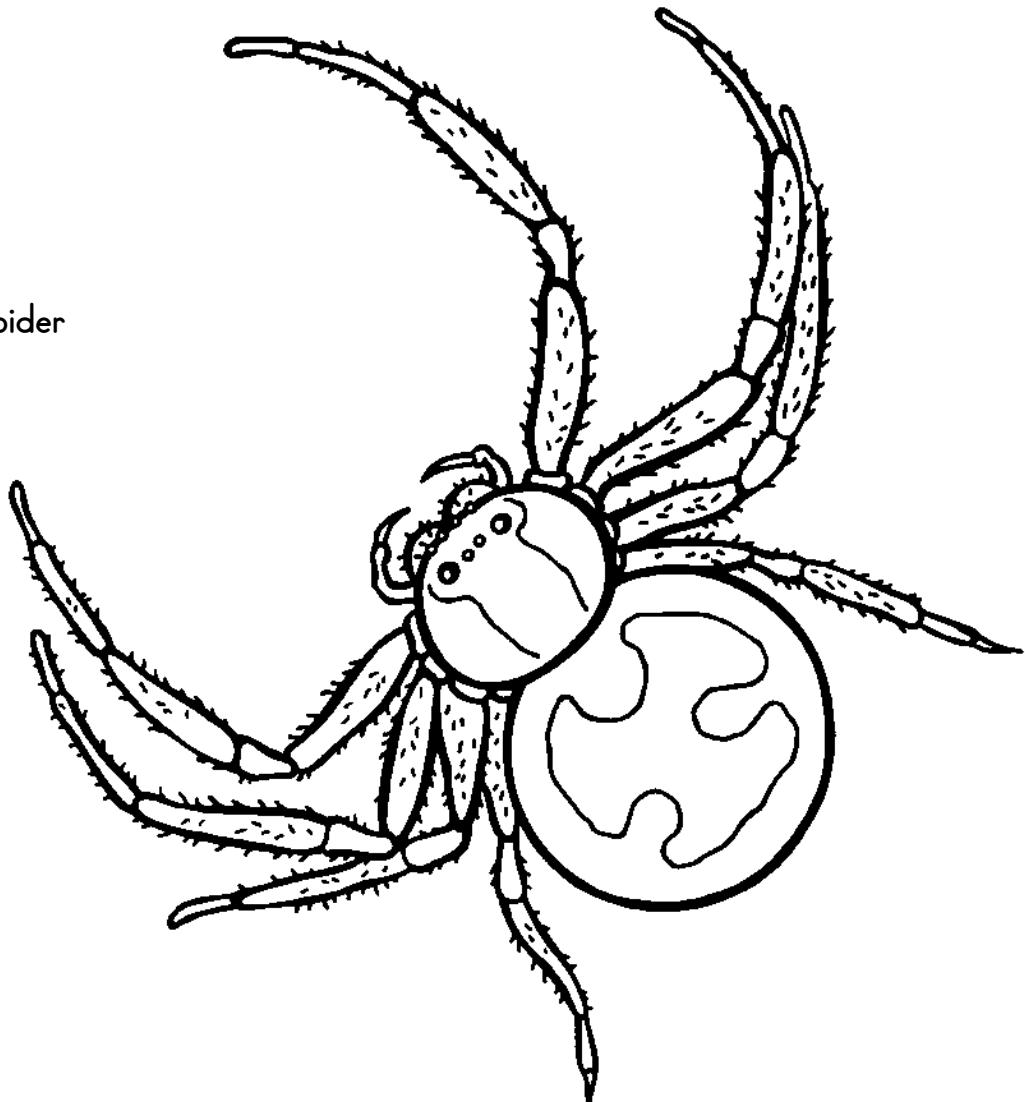
Size: 5–10 millimeters (.25–.375 inches)

Food: small insects

Where it lives: woods, on bark or low vegetation

Other facts: ambushes prey from camouflage instead of using silk to trap it

Elegant Crab Spider



Name \_\_\_\_\_

# Carpenter Ant

Order: *Hymenoptera*

Description: large ant, with abdomen covered in long, yellow to greyish hair

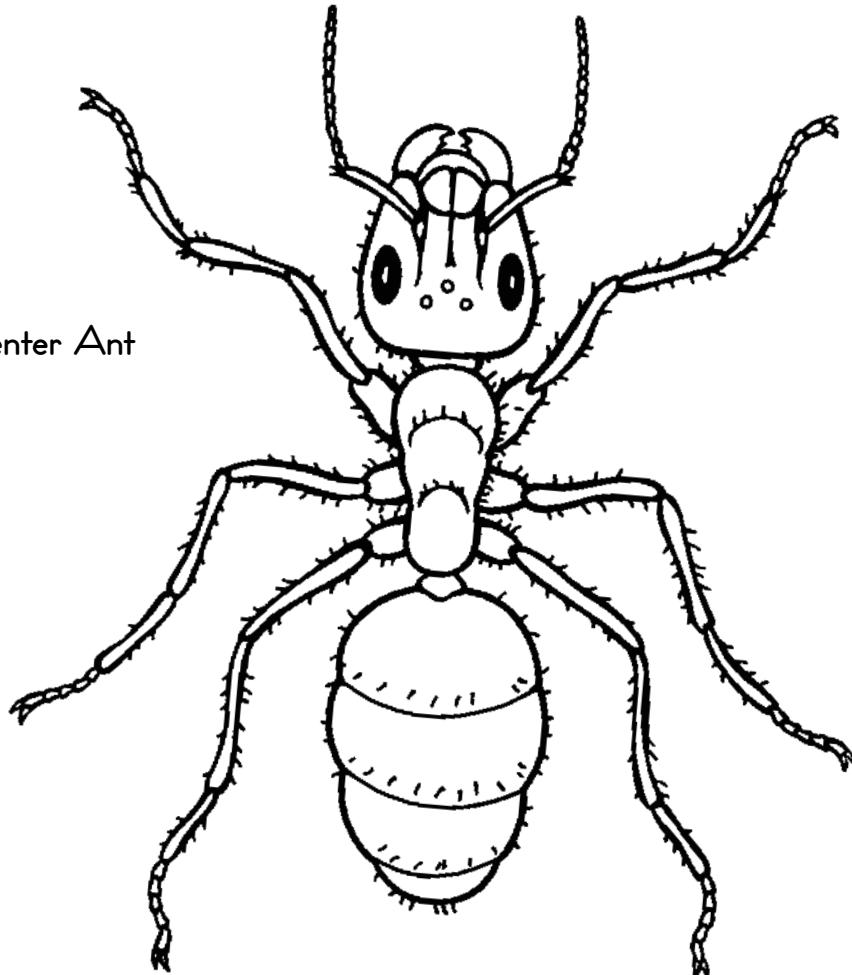
Size: 6–12 millimeters (.25-.5 inches)

Food: other insects, honeydew, fruit juices

Where it lives: deadwood of tree trunks, felled logs, poles, and wooden buildings

Other facts: unlike termites, carpenter ants do not eat wood, but tunnel in it to make their nests. This is often very destructive.

Black Carpenter Ant



Name \_\_\_\_\_

# Praying Mantis

Order: *Mantodea*

Description: green or tan, with long forelegs shaped for grasping prey

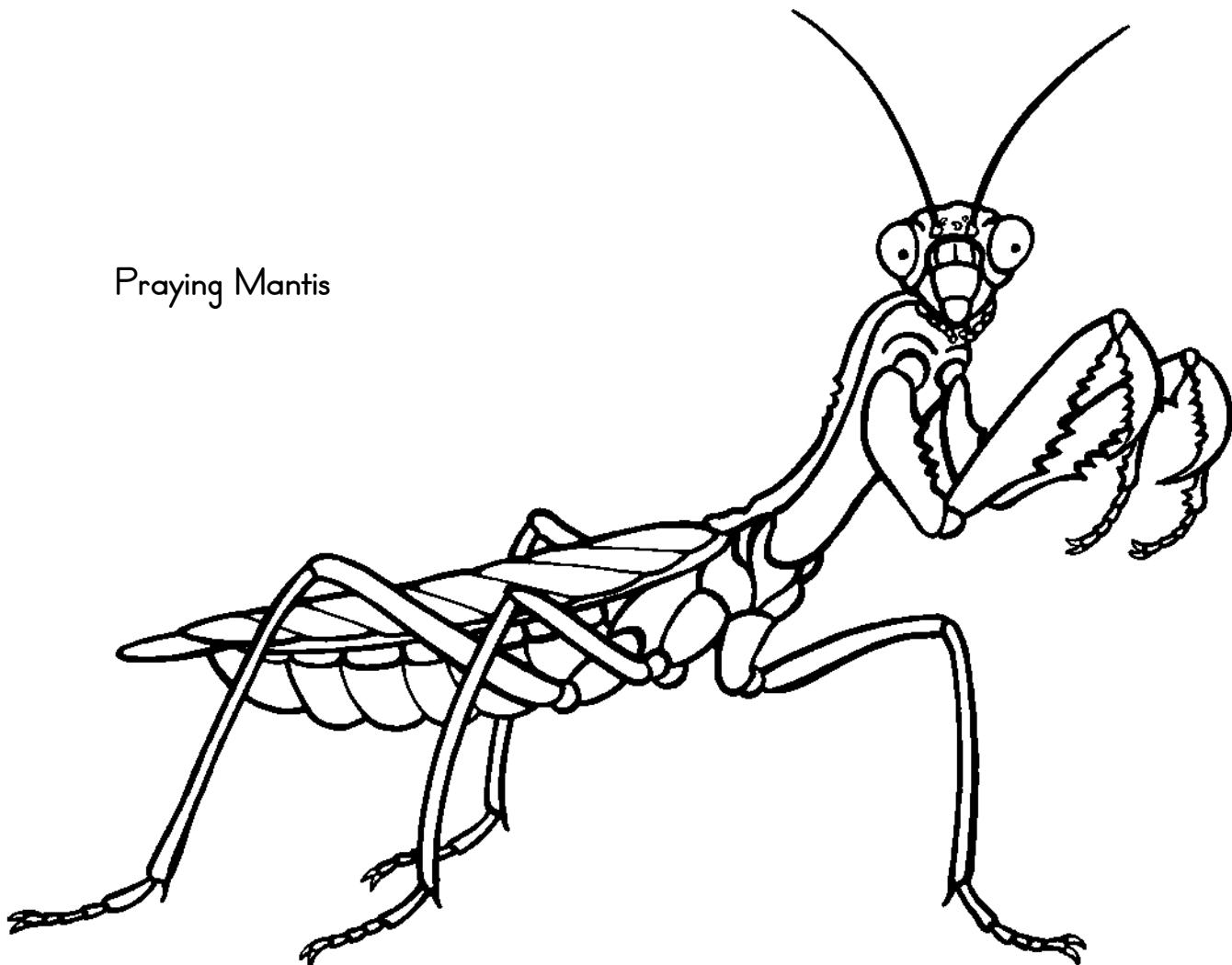
Size: 50–65 millimeters (2–2.5 inches)

Food: caterpillars, flies, bees, butterflies, some moths

Where it lives: meadows, on foliage or flowers

Other facts: accidentally introduced to the USA in 1899, it was quickly seen as helpful to gardeners as it ate pests.

Praying Mantis



Name \_\_\_\_\_

# Cicada

Order: *Homoptera*

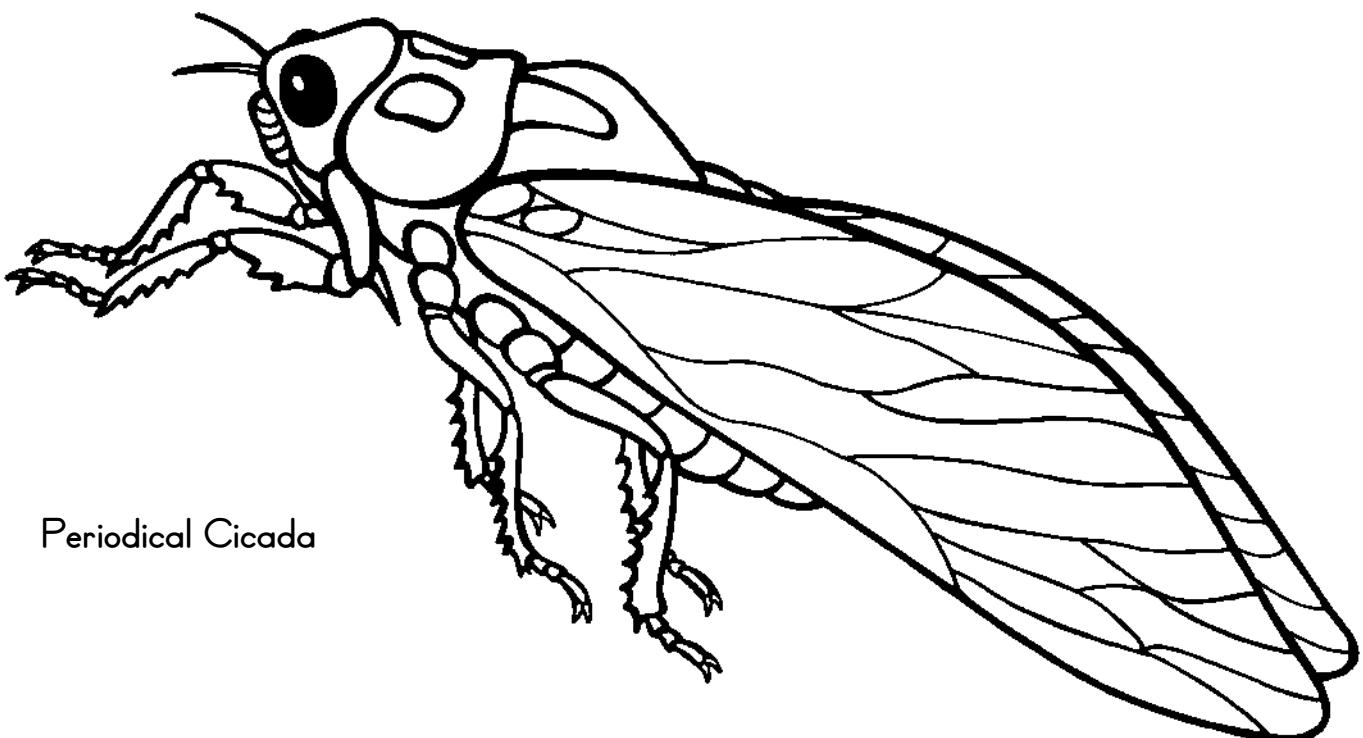
Description: large, membranous wings and wide, square heads

Size: 27–30 millimeters (1.125–1.625 inches)

Food: sap from tree roots

Where it lives: forests, grasslands, and pastures

Other facts: the loud buzzing song of the cicada is a familiar sound of summer.



Periodical Cicada

Name \_\_\_\_\_

# Katydid

Order: Orthoptera

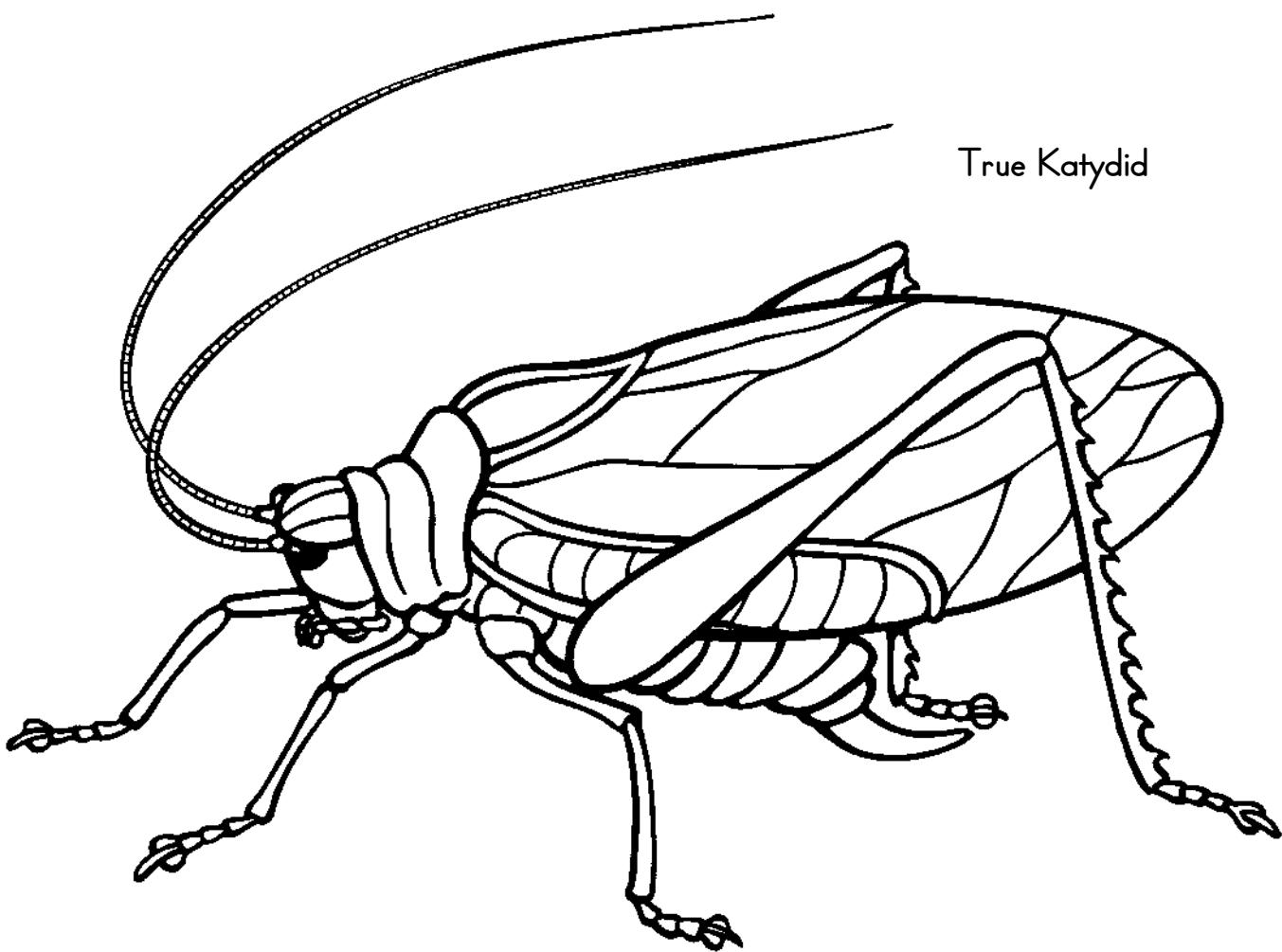
Description: bright green with leaflike wings for camouflage

Size: 45–55 millimeters (1.75–2.125 inches)

Food: leaves

Where it lives: woodlands and forests

Other facts: Its most common call is the loud *katy-DID*;  
less often is the four part *katy-DIDN'T*.



True Katydid

Name \_\_\_\_\_

# June Beetle

Order: *Coleoptera*

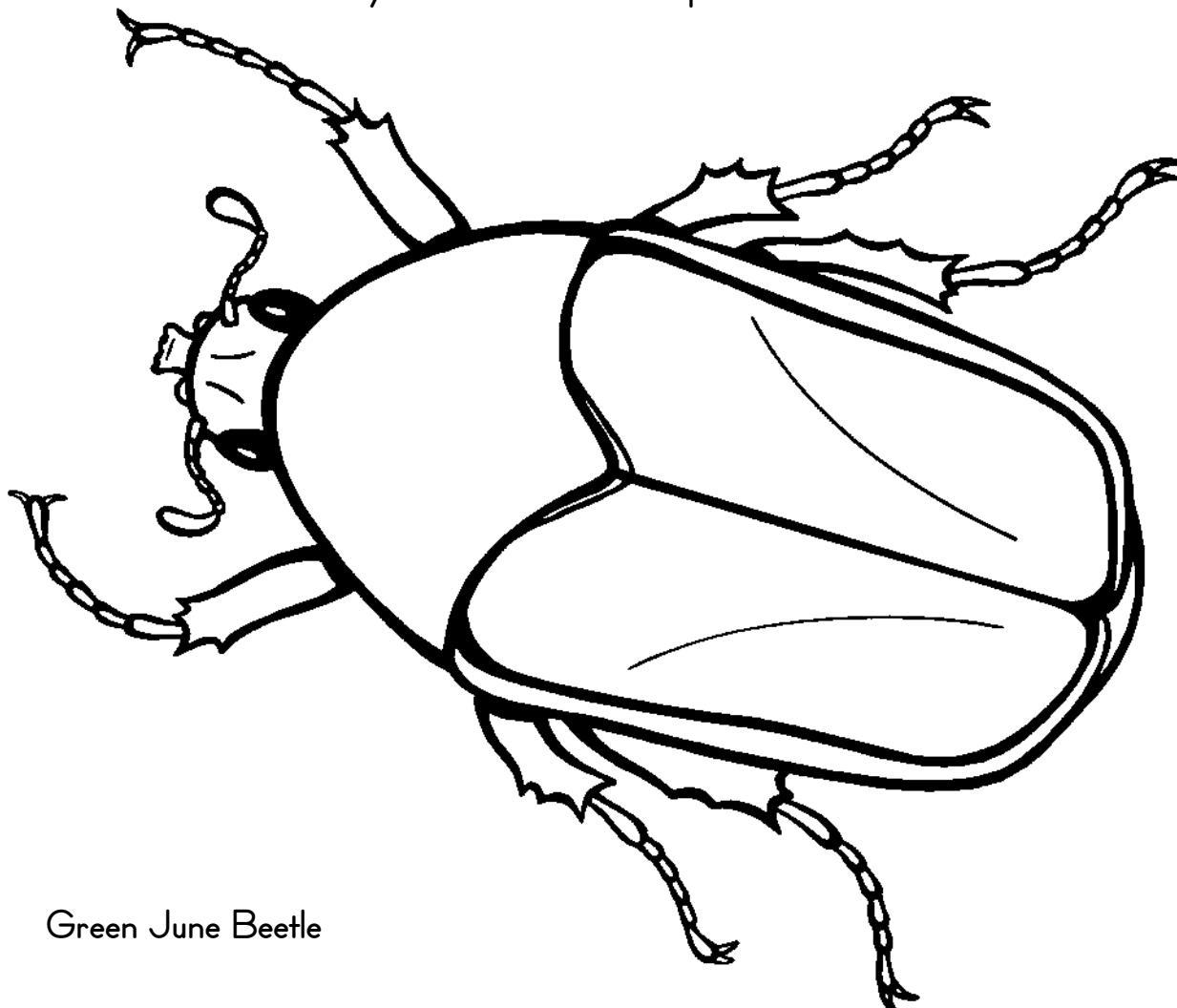
Description: bright, metallic green body with tan edges on the elytra (wing casings); has a short, square horn on head

Size: 20–23 millimeters (.75–.875 inches)

Food: pollen and ripe fruit

Where it lives: gardens, orchards, open woods

Other facts: Often an agricultural pest because its larvae destroy the roots of valuable plants.



Green June Beetle

Name \_\_\_\_\_

# Boll Weevil

Order: *Coleoptera*

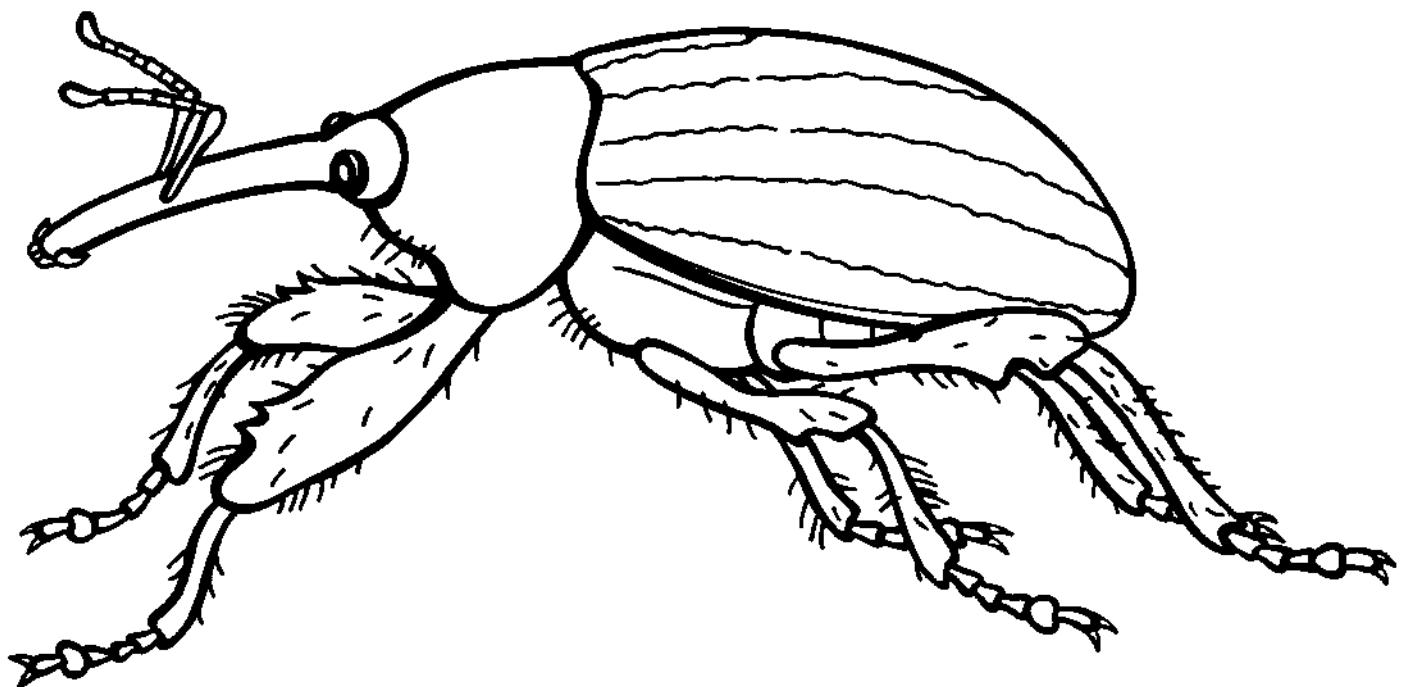
Description: Weevils have long tapered snouts with cutting jaws at the tip.

Size: 4–7 millimeters (.125-.25 inches)

Food: cotton seedpods and flower buds

Where it lives: wherever cotton grows

Other facts: Accidentally introduced to the USA from Mexico in the 1800s, it has become a major pest of the cotton industry.



Boll Weevil

Name \_\_\_\_\_

# Earwig

Order: *Dermoptera*

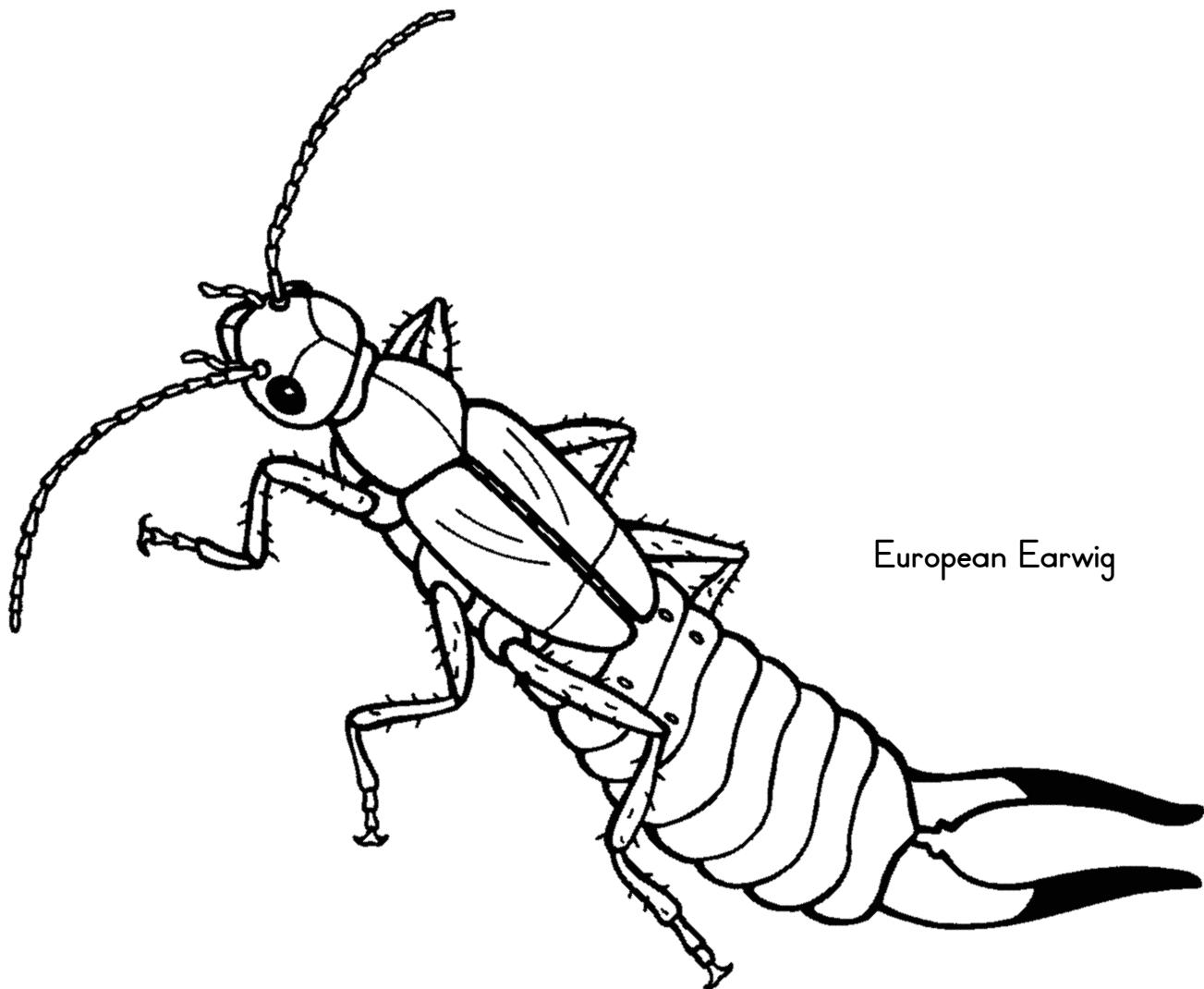
Description: long body with small leathery wings and pincers  
at the end of the abdomen

Size: 9–15 millimeters (.375–.625 inches)

Food: vegetables, garbage, insect larvae and pupae

Where it lives: dark, damp crevices and in ground litter

Other facts: Named for the old wives' tale that they will crawl  
into the ears of a sleeping person.



Name \_\_\_\_\_

# Black Widow Spider

Order: Araneae

Description: shiny, black body with nearly round abdomen;  
red hourglass on belly

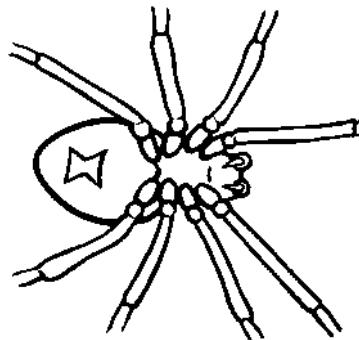
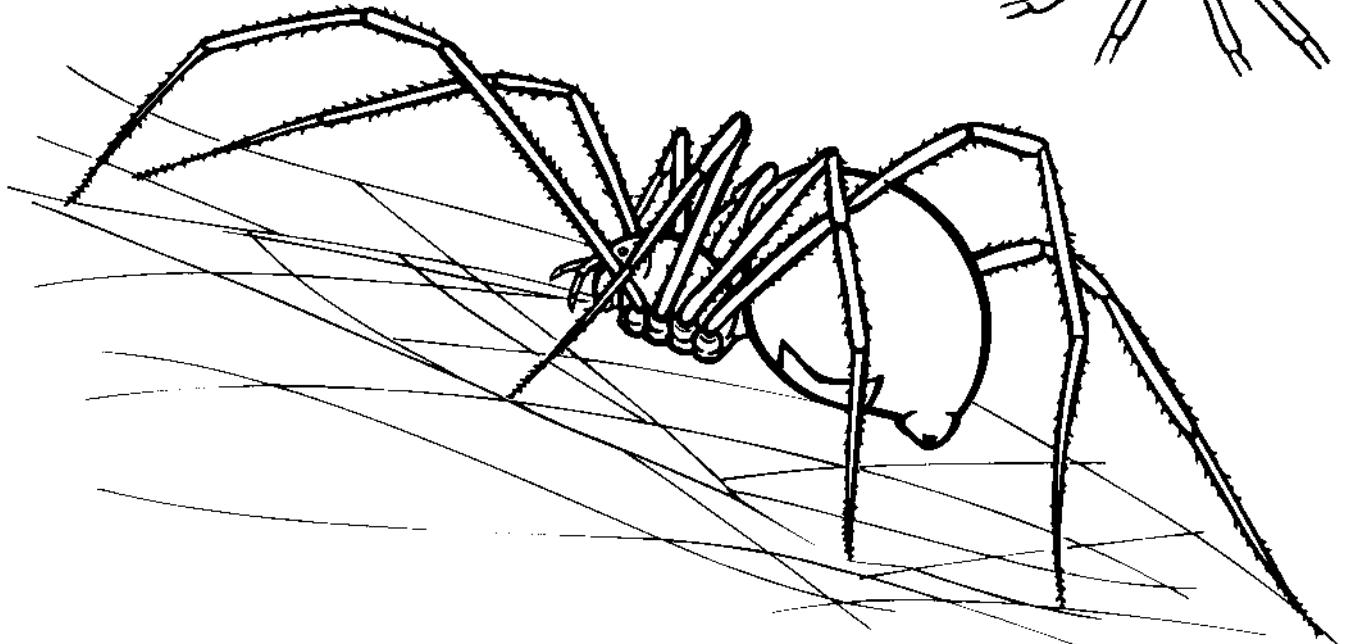
Size: 3–10mm (.125-.375 inches)

Food: insects

Where it lives: among fallen branches and under many kinds  
of objects

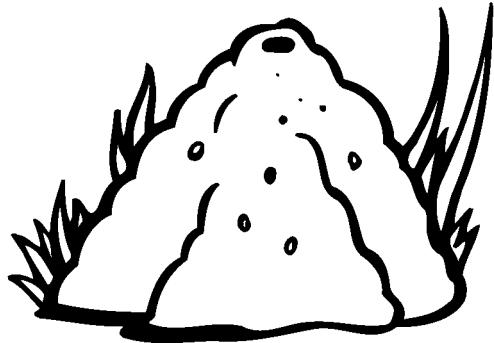
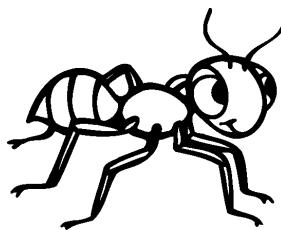
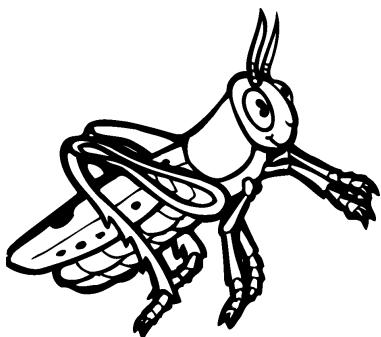
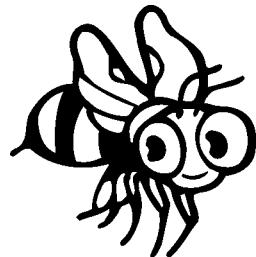
Other facts: The most feared of spiders, the female's venom  
is especially poisonous to people. It will often  
attempt to escape rather than bite.

Female Black Widow Spider



Name \_\_\_\_\_

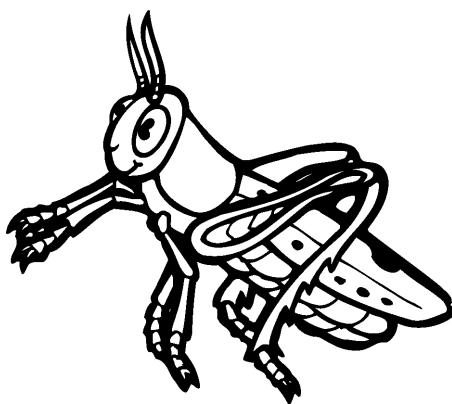
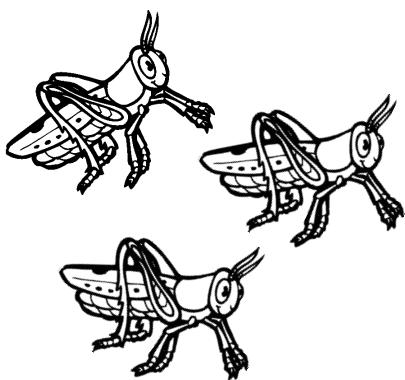
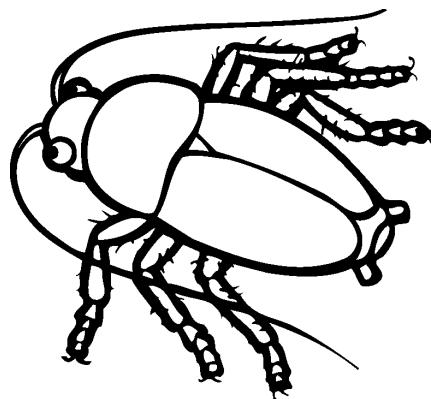
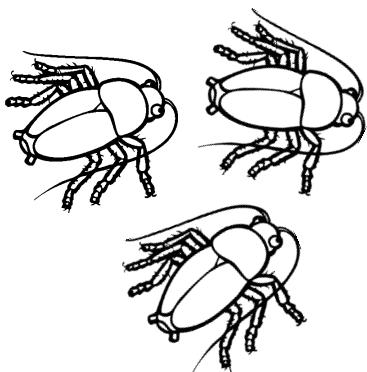
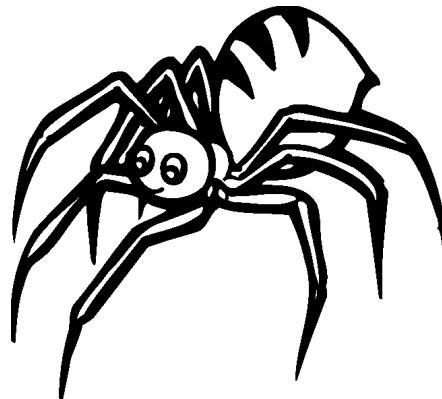
**INSTRUCTIONS:** Ask the student to start at the left and trace over the dotted lines from the insects to their homes. Then ask the student to color all the pictures on the right.



SKILL: IDENTIFY LEFT TO RIGHT

Name \_\_\_\_\_

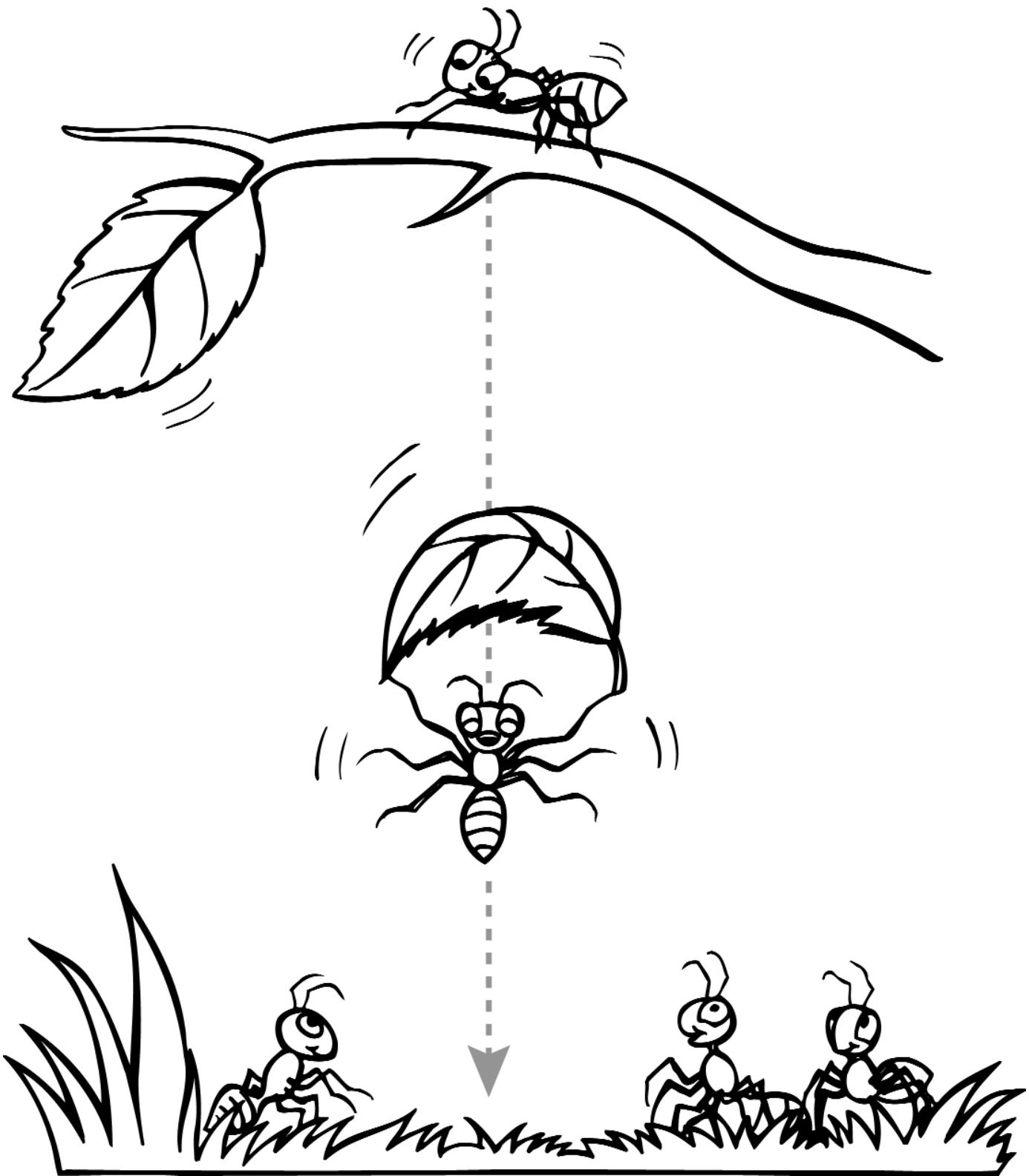
**INSTRUCTIONS:** Ask the student to start at the left and draw a line from the baby bugs to their mother. Then ask the student to color all the pictures on the left.



SKILL: IDENTIFY LEFT TO RIGHT

Name \_\_\_\_\_

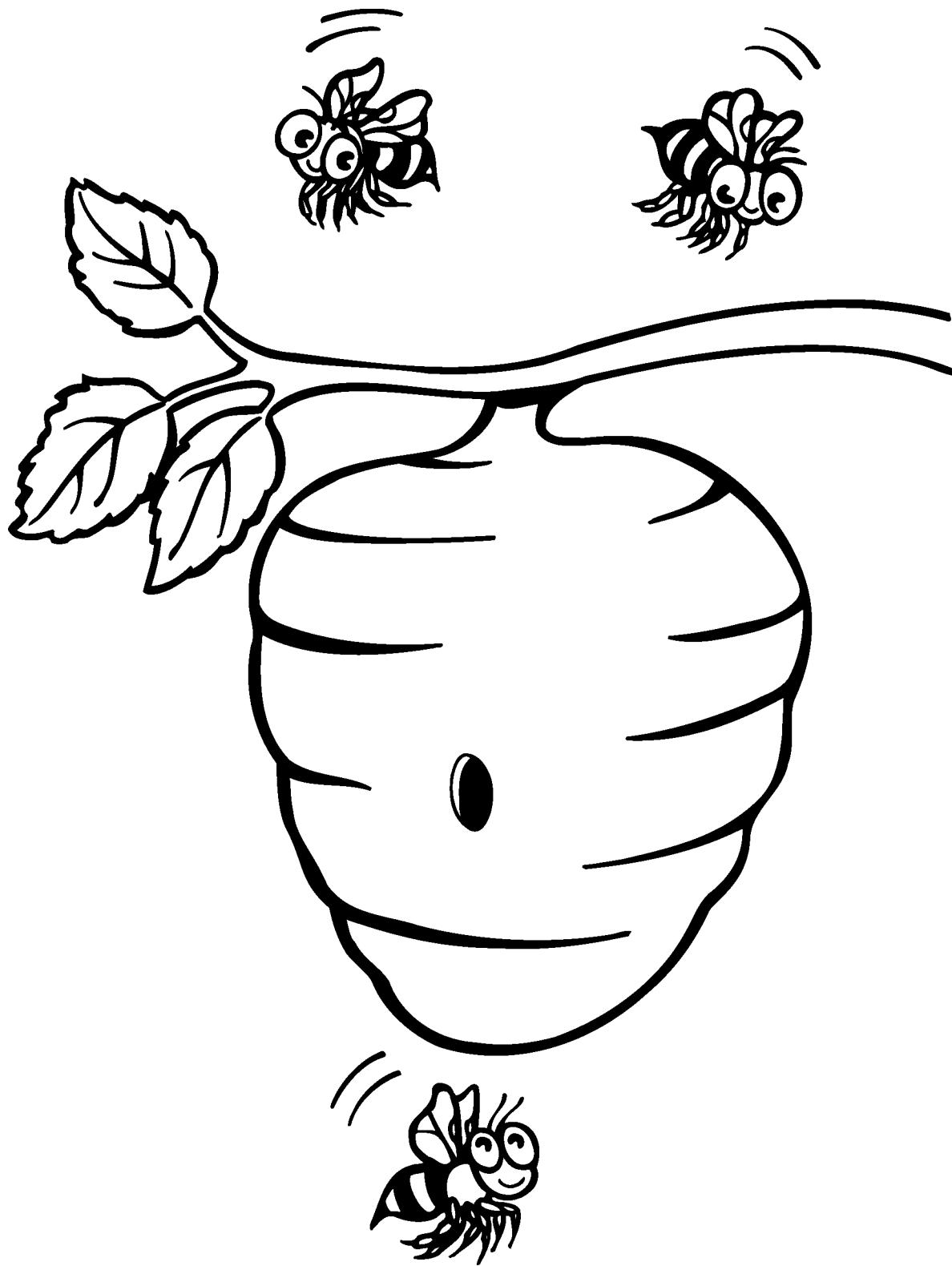
**INSTRUCTIONS:** Ask the student to trace the line from the top to the bottom.



SKILL: IDENTIFY TOP TO BOTTOM

Name \_\_\_\_\_

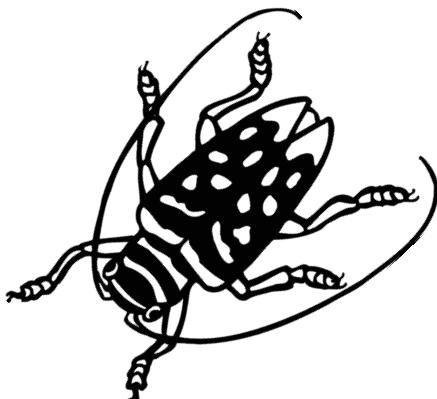
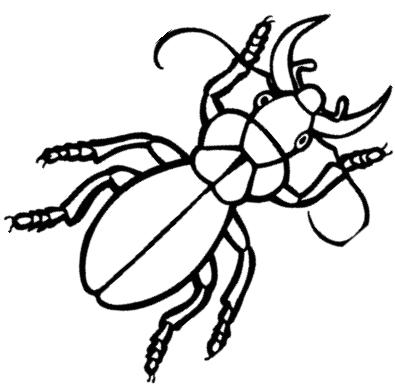
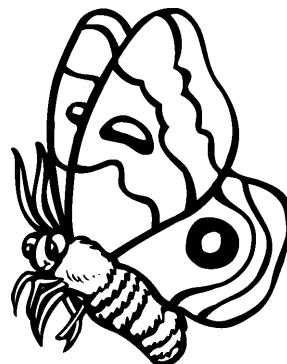
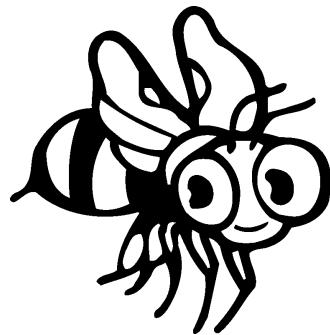
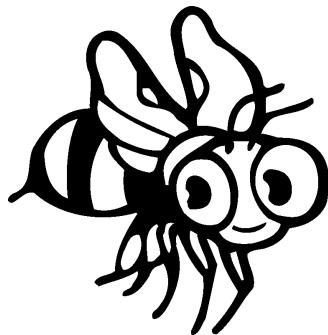
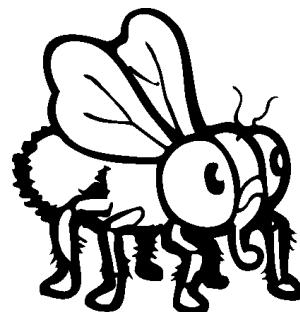
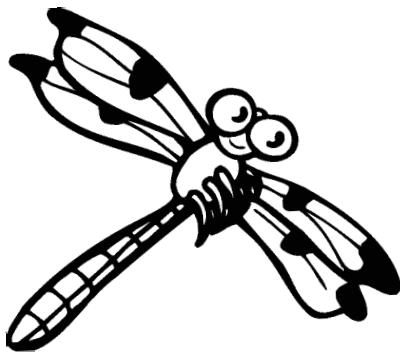
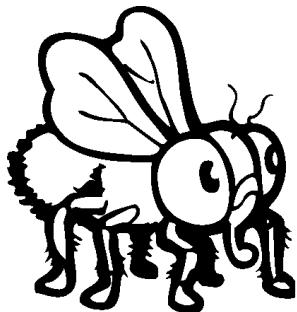
**INSTRUCTIONS:** Ask the student to circle the bumble bee that is under the hive. Then have the student color the bee on the *right* orange and color the bee on the *left* red.



SKILL: IDENTIFY OVER AND UNDER; LEFT AND RIGHT

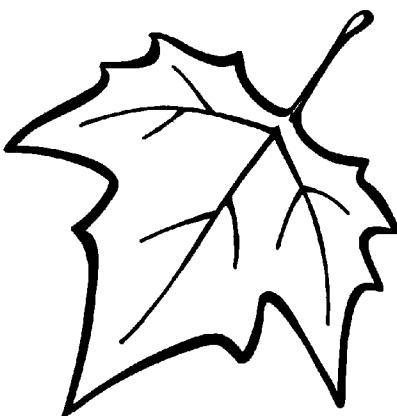
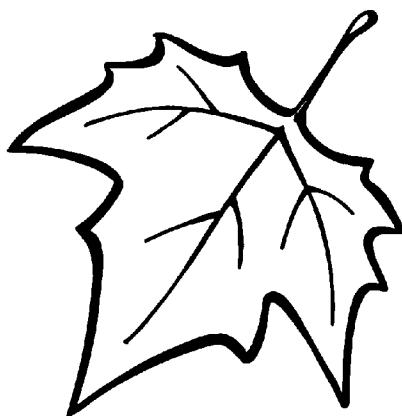
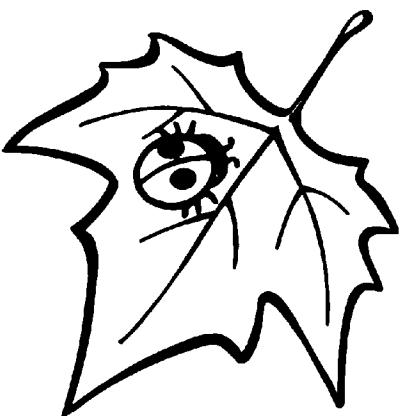
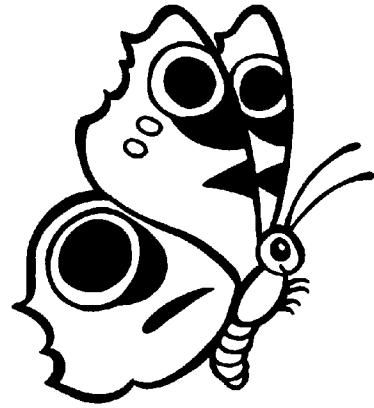
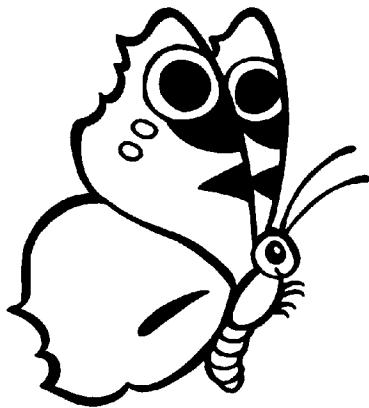
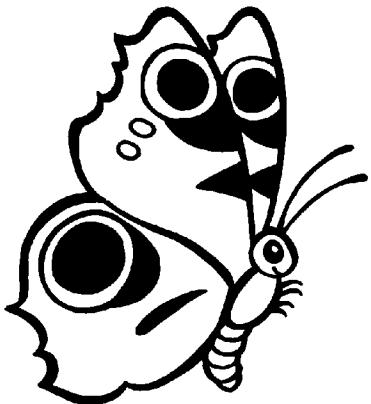
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to color the two pictures that are the same in each row.



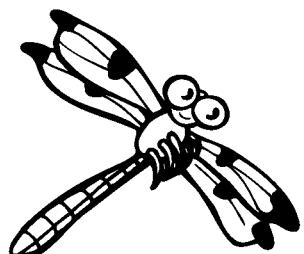
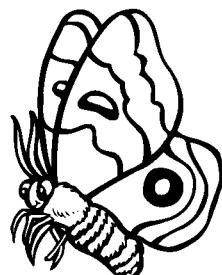
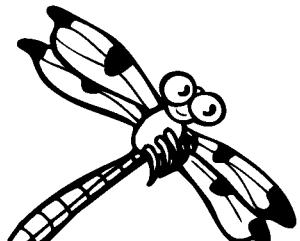
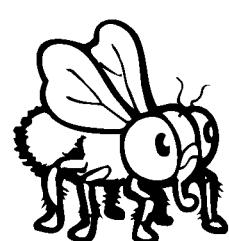
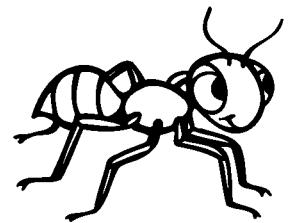
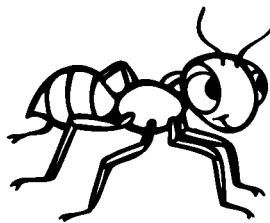
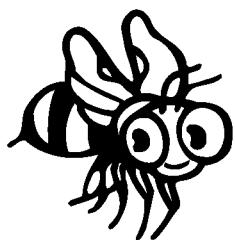
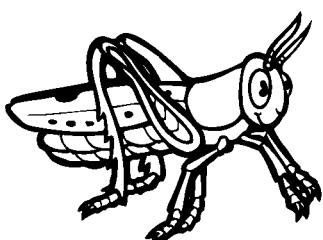
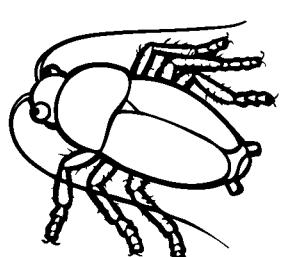
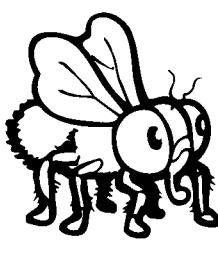
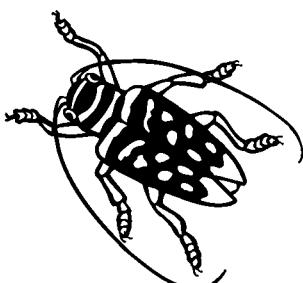
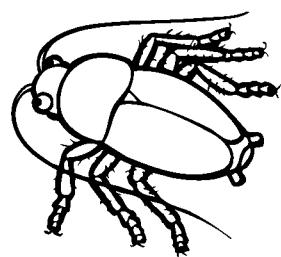
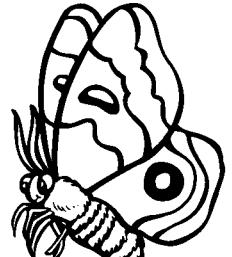
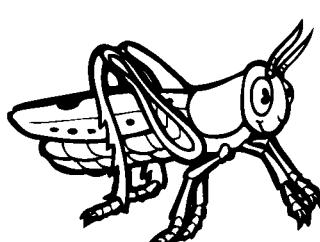
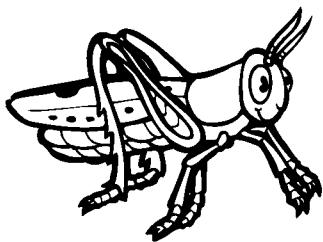
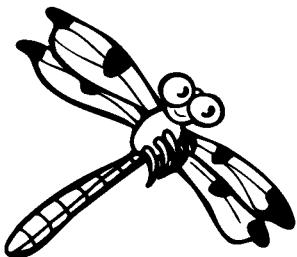
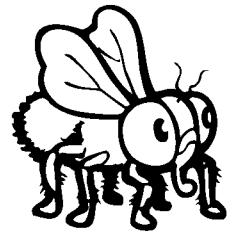
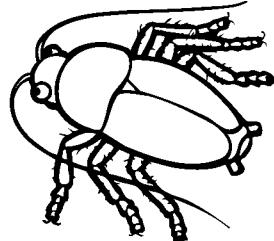
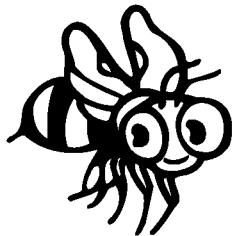
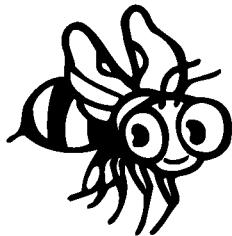
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to put a line through the picture in each row that is different. Then color the two pictures that are the same in each row.



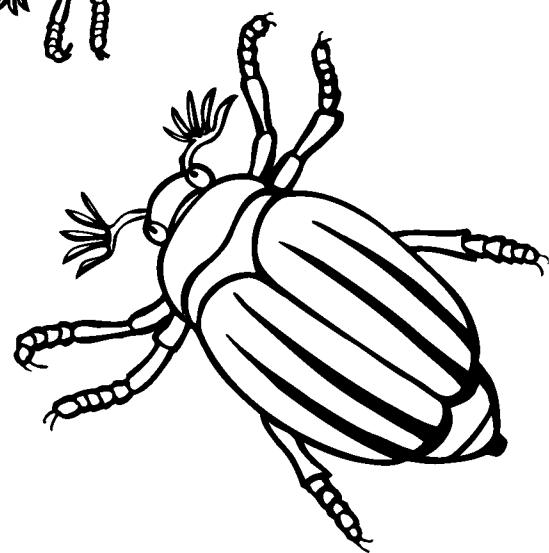
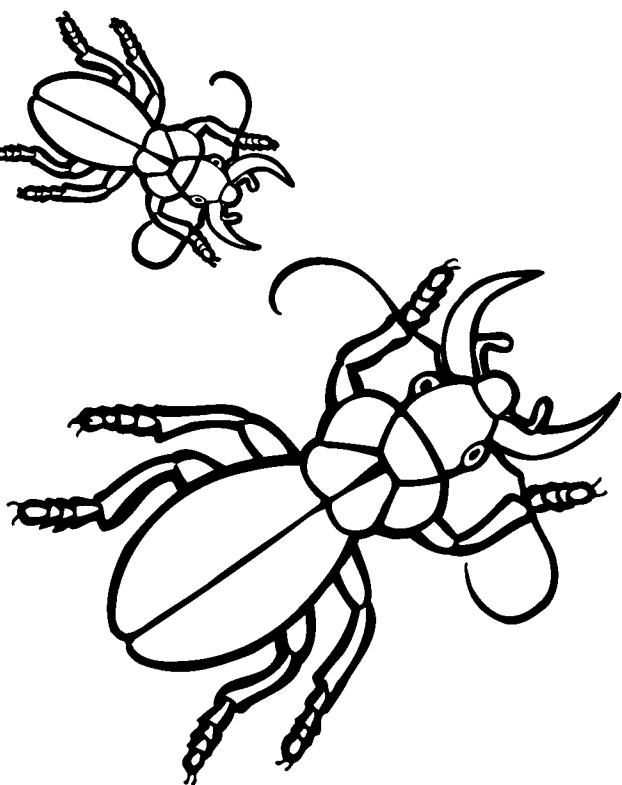
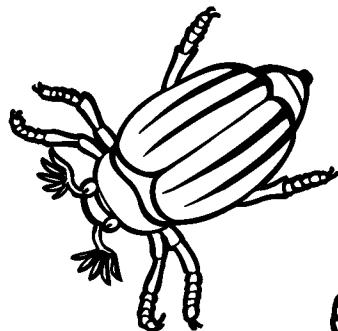
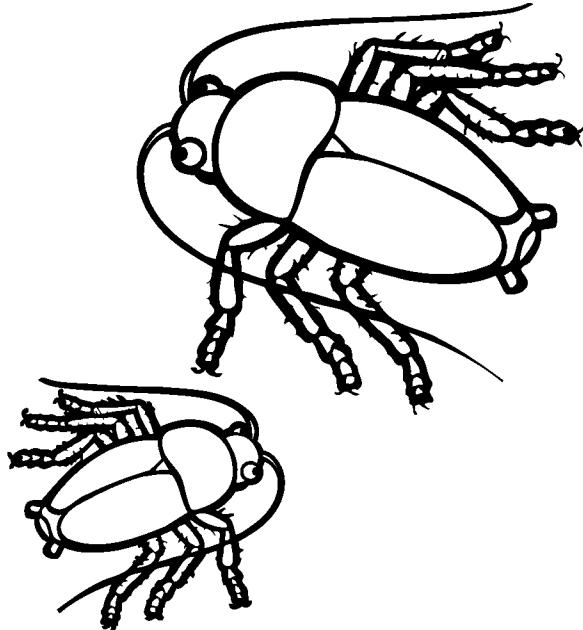
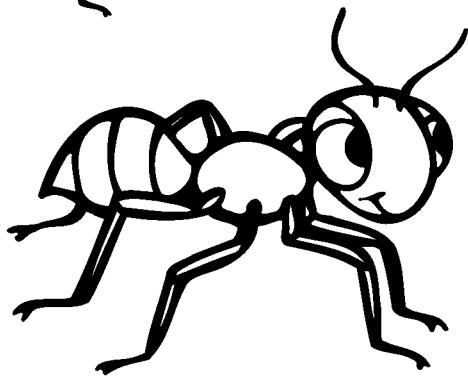
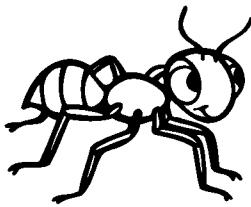
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to color the insects that are the same.



Name \_\_\_\_\_

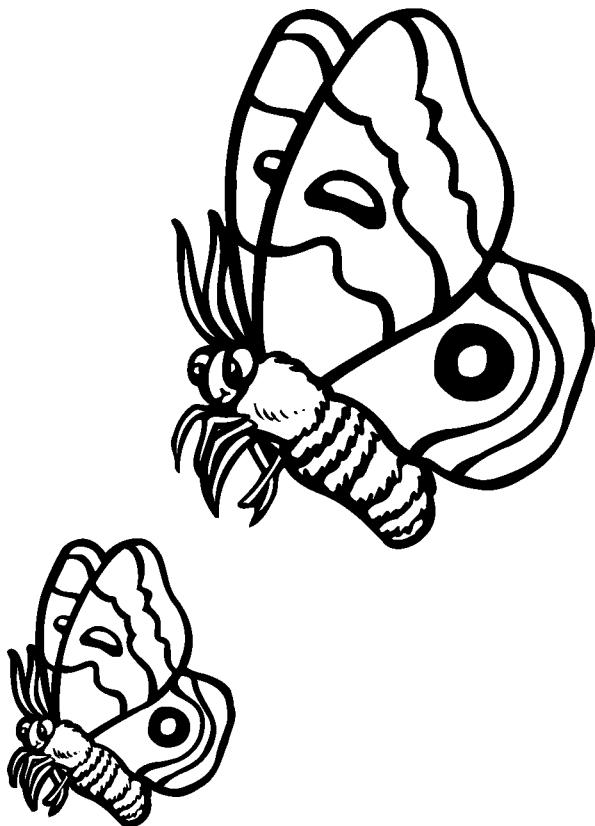
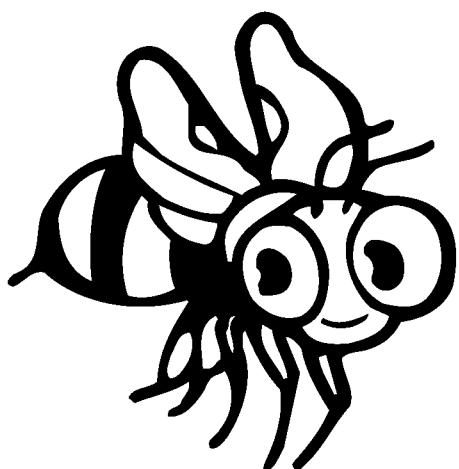
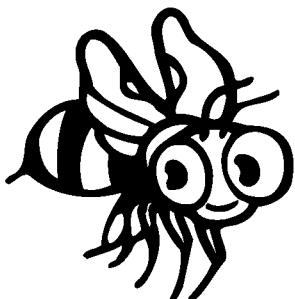
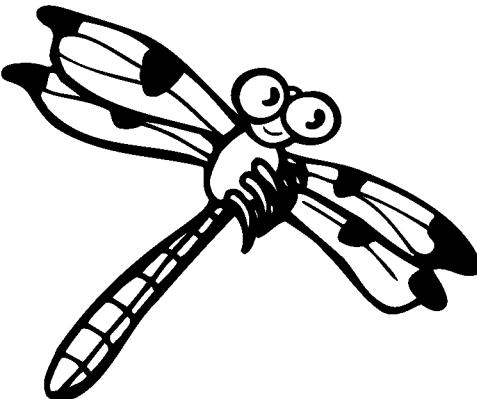
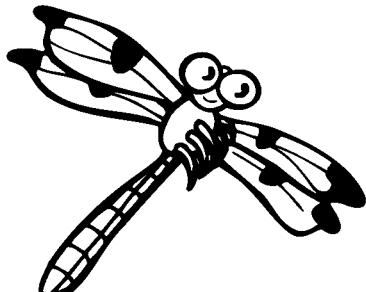
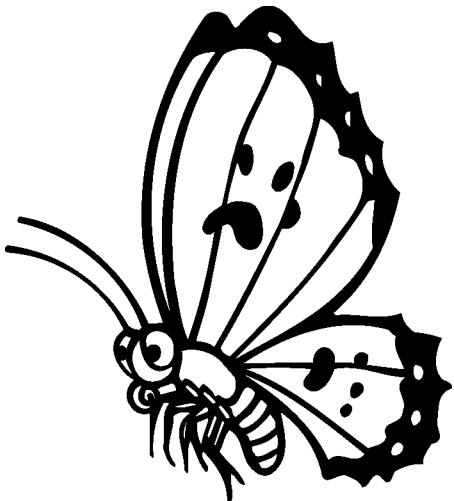
**INSTRUCTIONS:** Ask the student to draw a circle around the smaller one in each section, then color the larger one.



SKILL: IDENTIFY THE SMALLER

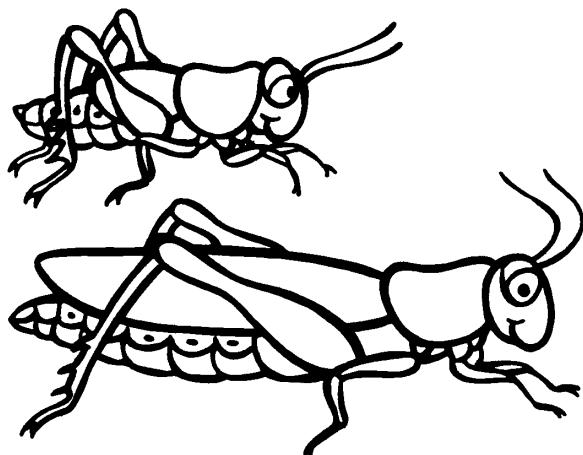
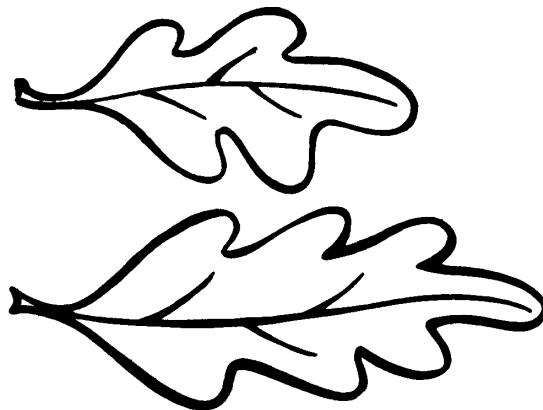
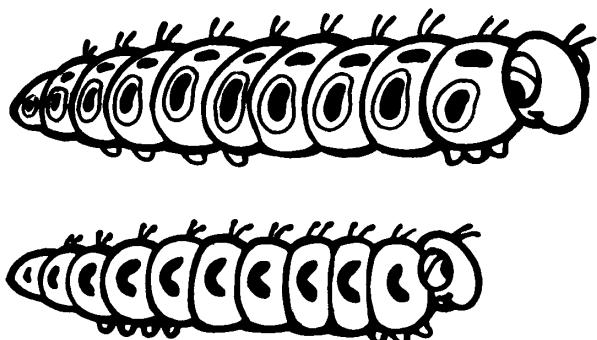
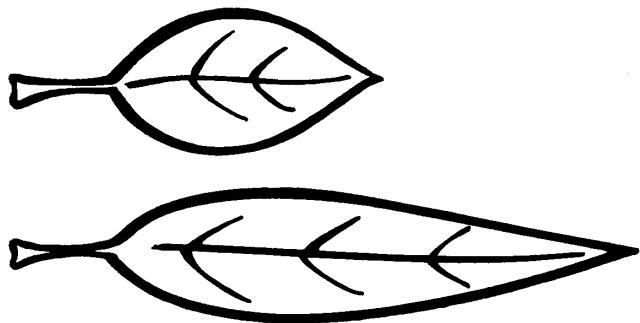
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to put an X on the bigger one in each section.  
Then color the smaller one.



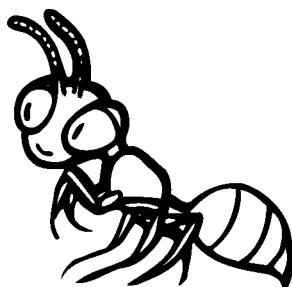
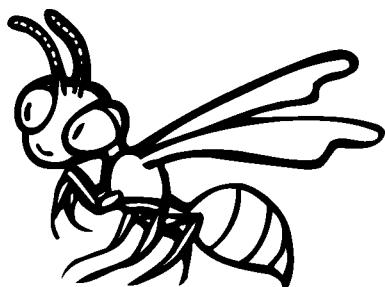
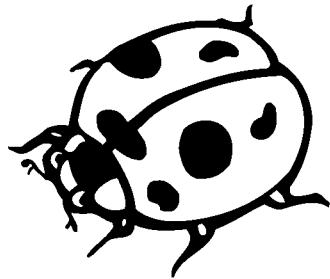
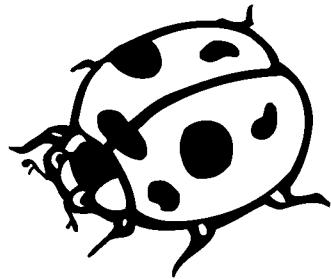
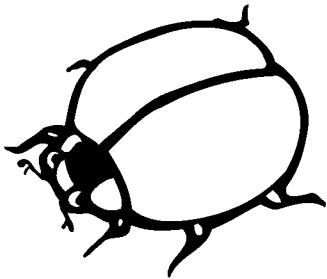
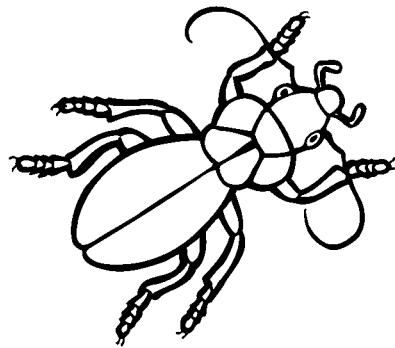
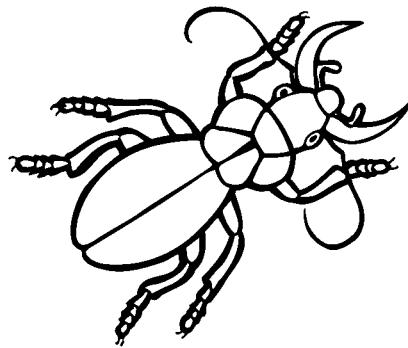
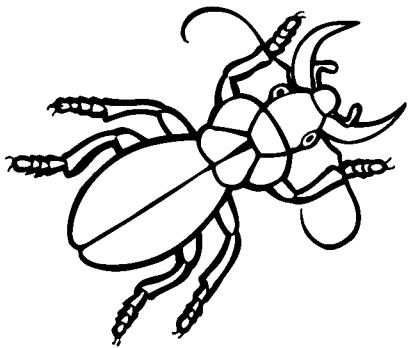
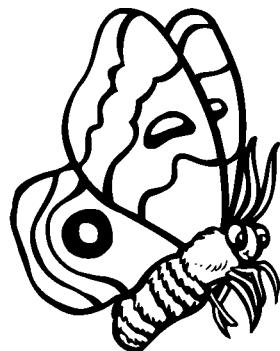
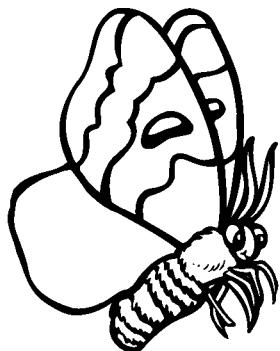
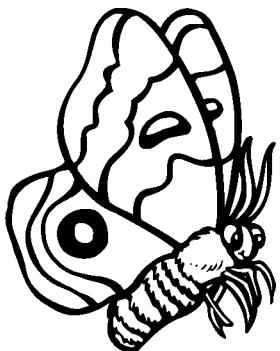
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to mark the shorter object in each section with an X.



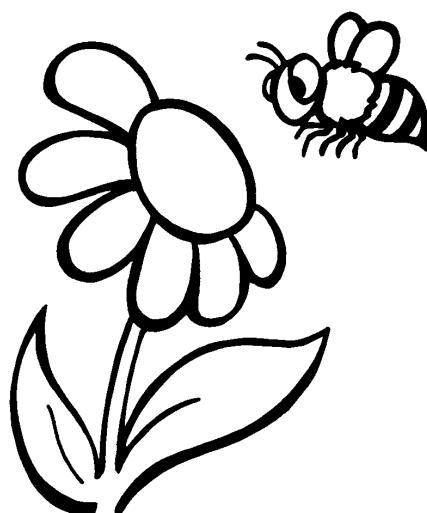
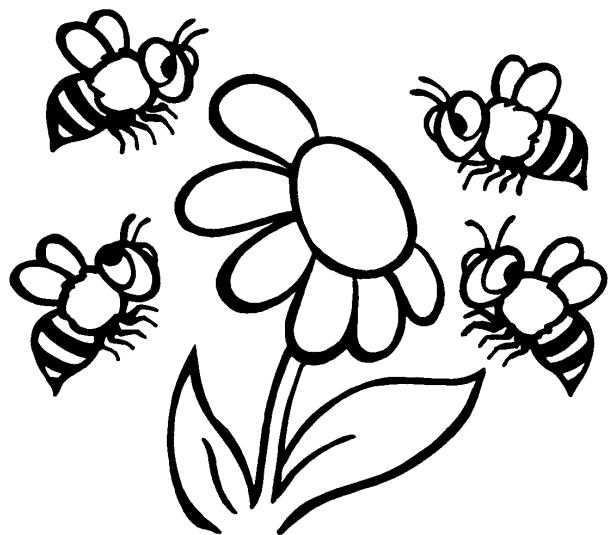
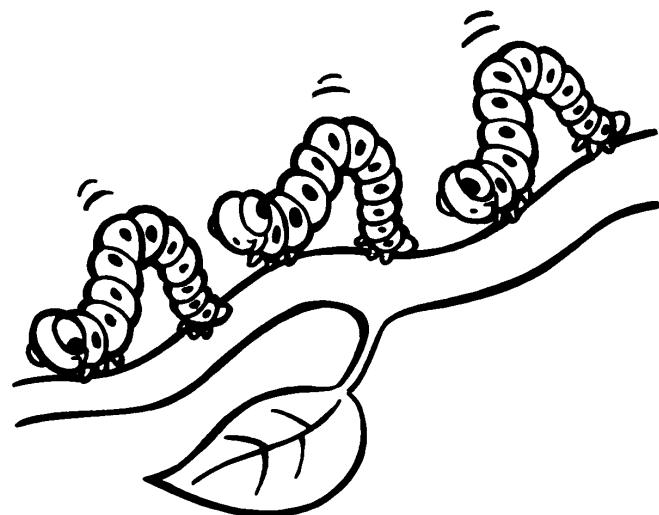
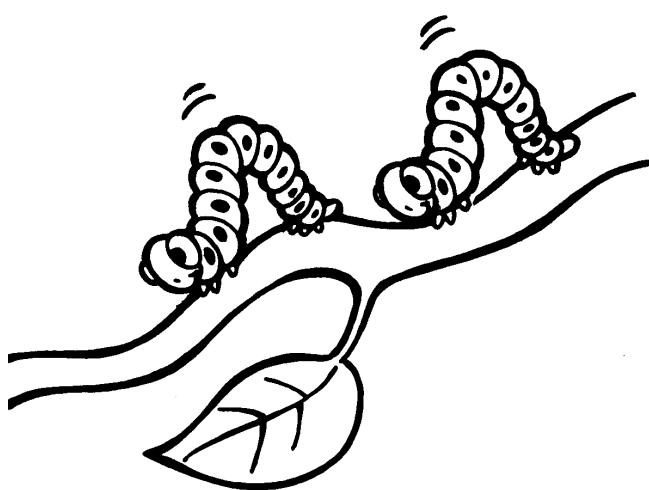
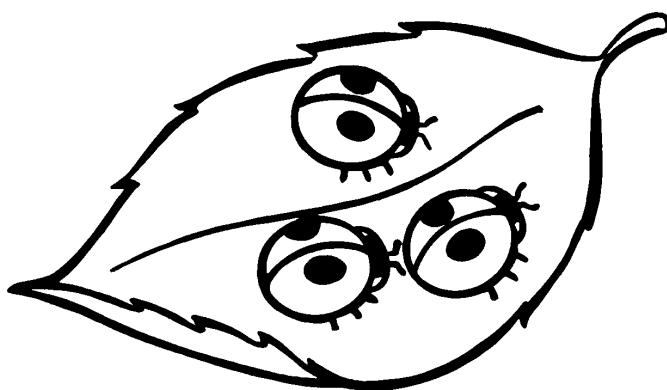
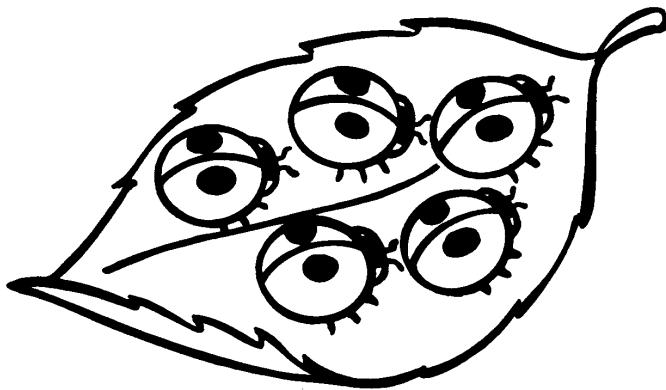
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to draw in what's missing from one of the pictures in each row.



Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to color the pictures that have more.



Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to color any grasshoppers that are above the leaves green and those *below* the leaves yellow.

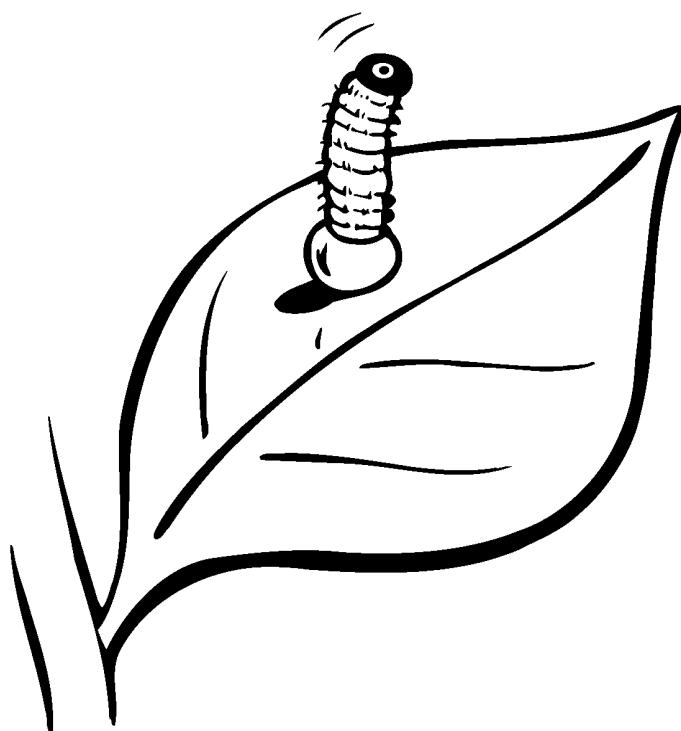
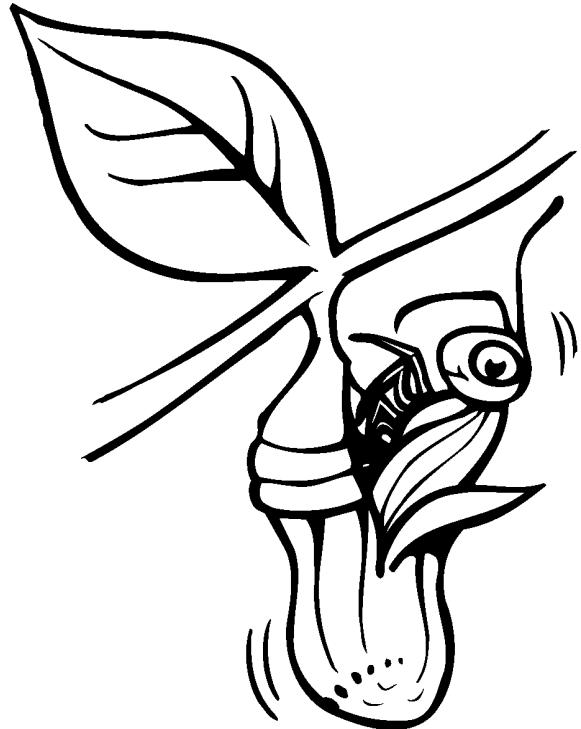


SKILL: IDENTIFY OVER AND UNDER

PRESCHOOL • INSECTS/SPIDERS • FUNDAMENTALS • 013

Name \_\_\_\_\_

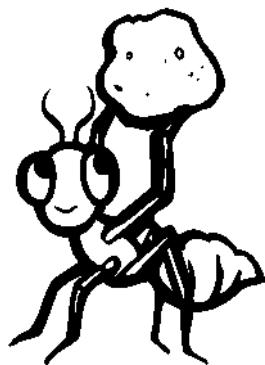
**INSTRUCTIONS:** Ask the student to connect the dots to show what happens first, next, next, and last.



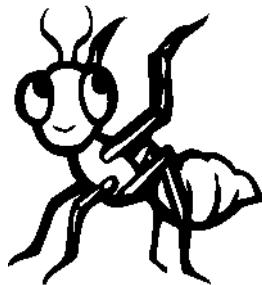
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to look at the example. Then, draw in the number of crumbs that the ant is carrying that corresponds to the number in the other boxes. Then color the crumbs orange where there are two on an ant and yellow where there is one on an ant.

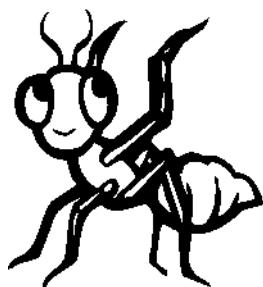
1



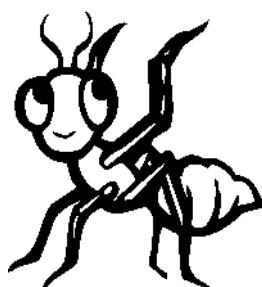
2



2



1



2

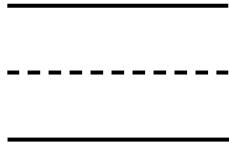
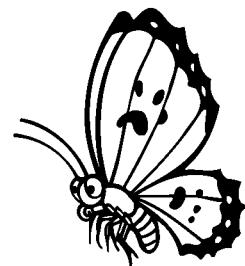
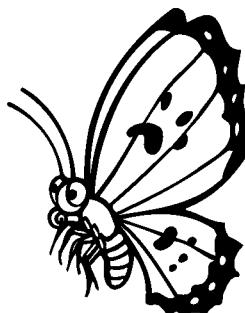
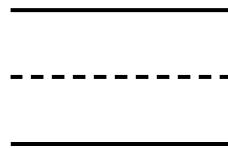
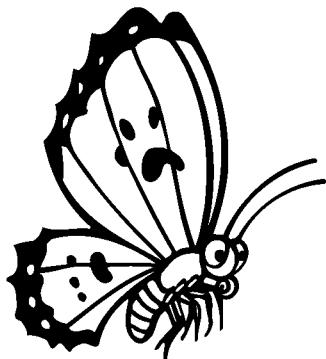
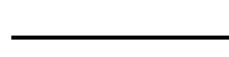
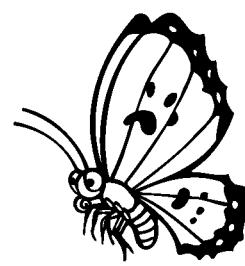
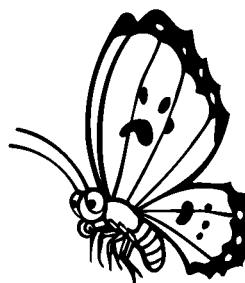
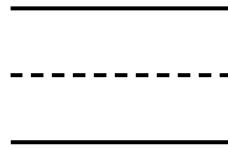
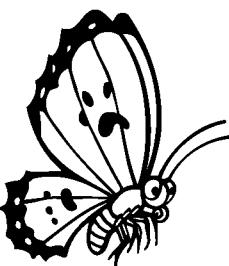
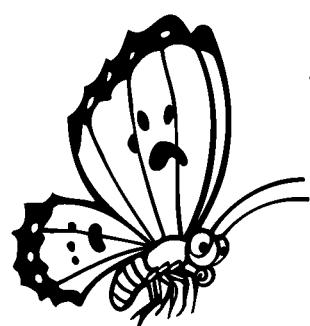
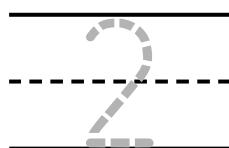
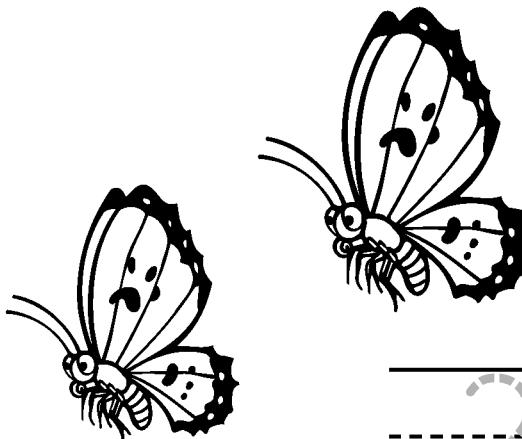
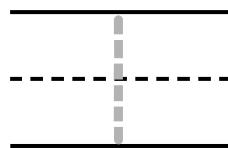
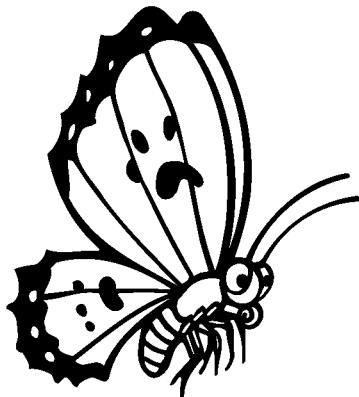


1



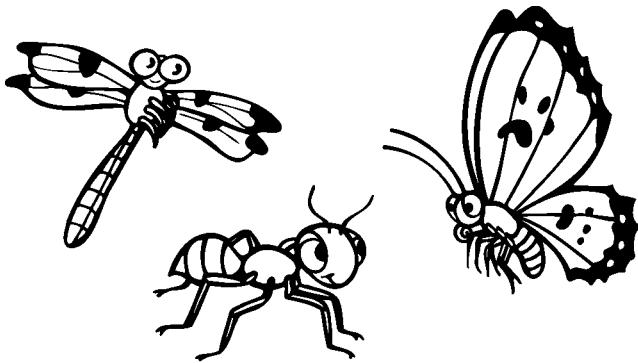
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to trace the numbers in the first two examples, then ask the student to count the butterflies in each block and write 1 or 2 to tell how many.



Name \_\_\_\_\_

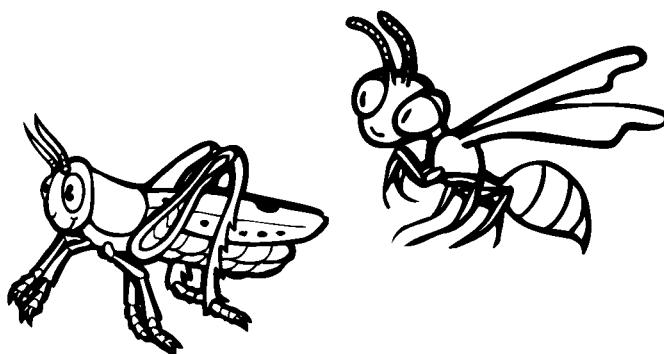
**INSTRUCTIONS:** Ask the student to count the insects in each block, then circle the correct number to tell how many.



1

2

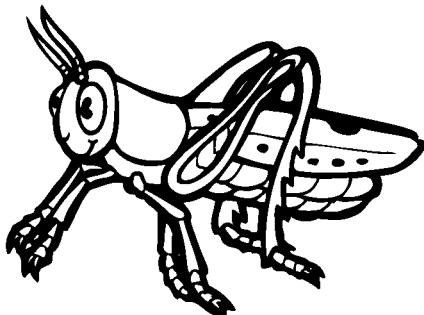
3



1

2

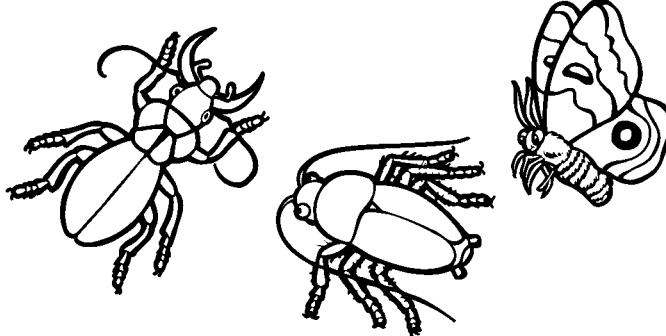
3



1

2

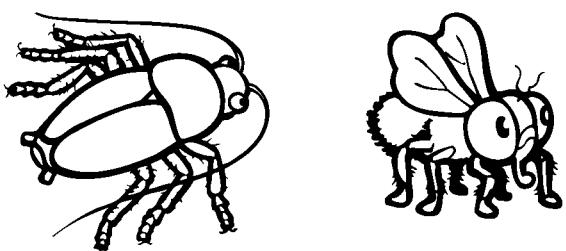
3



1

2

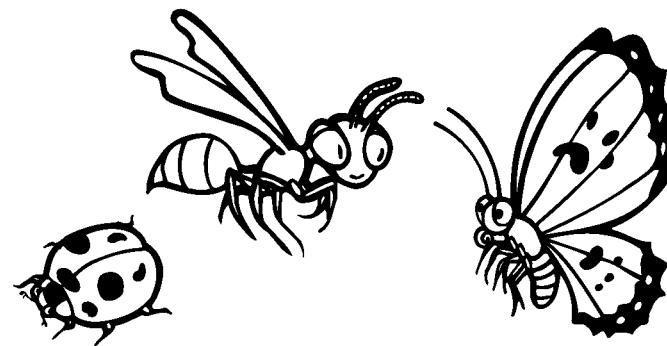
3



1

2

3



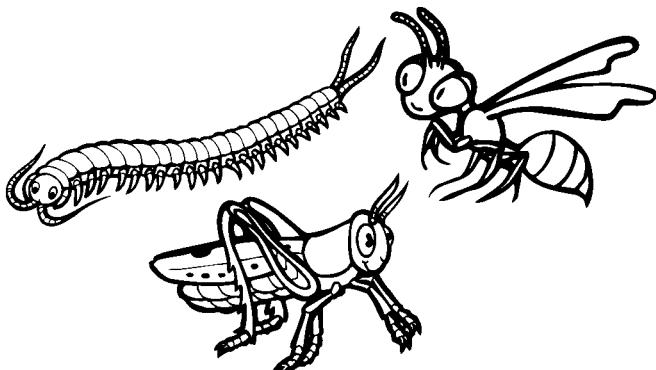
1

2

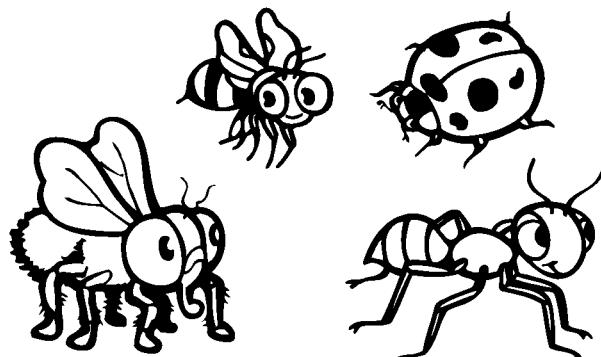
3

Name \_\_\_\_\_

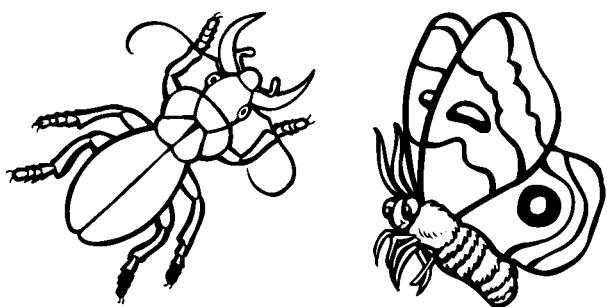
**INSTRUCTIONS:** Ask the student to count the insects in each section, then put an X through the correct number to show how many.



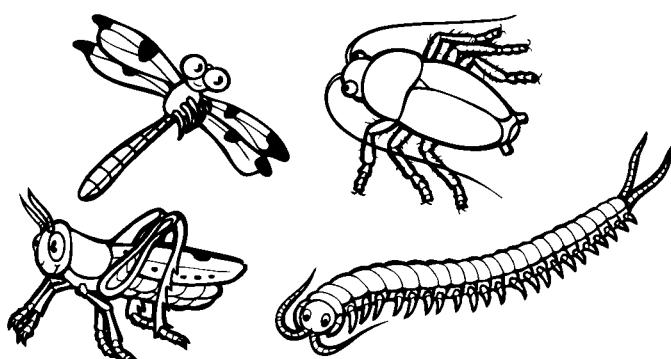
1	2	3	4
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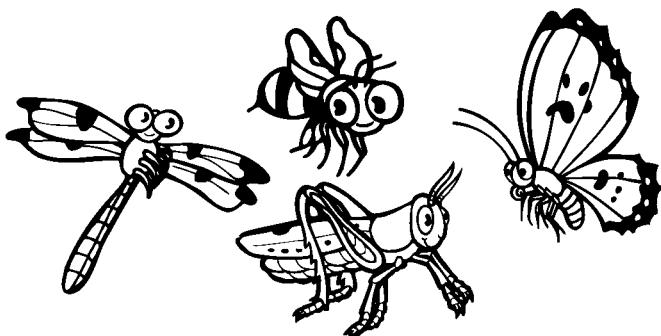
1	2	3	4
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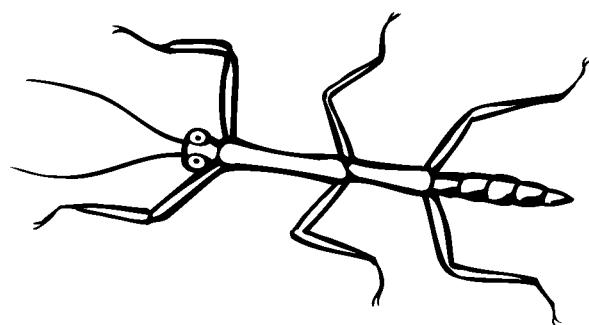
1	2	3	4
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1	2	3	4
---	---	---	---



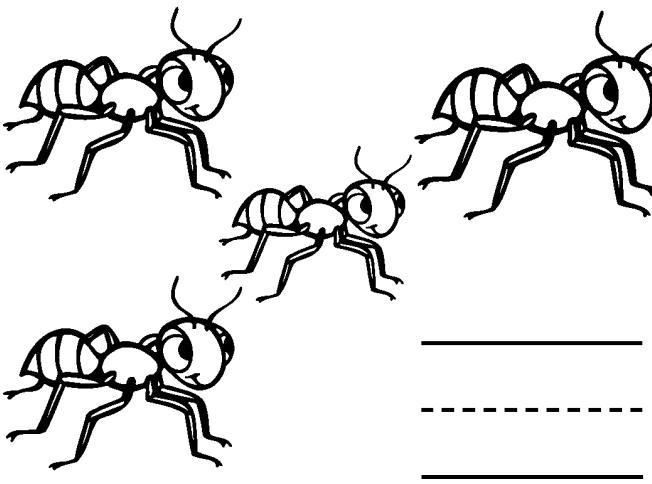
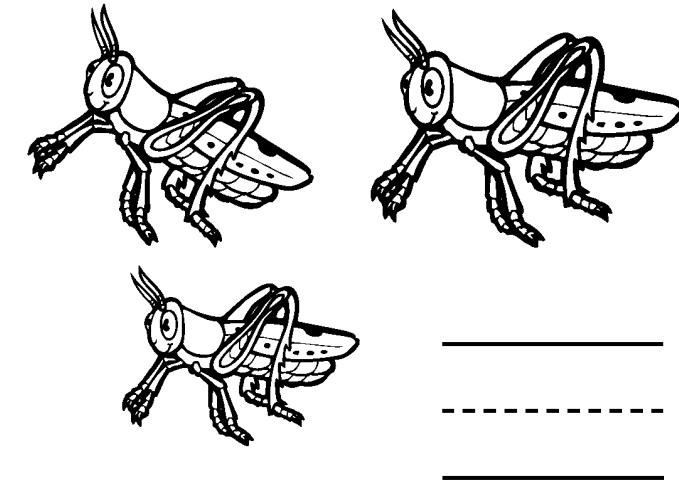
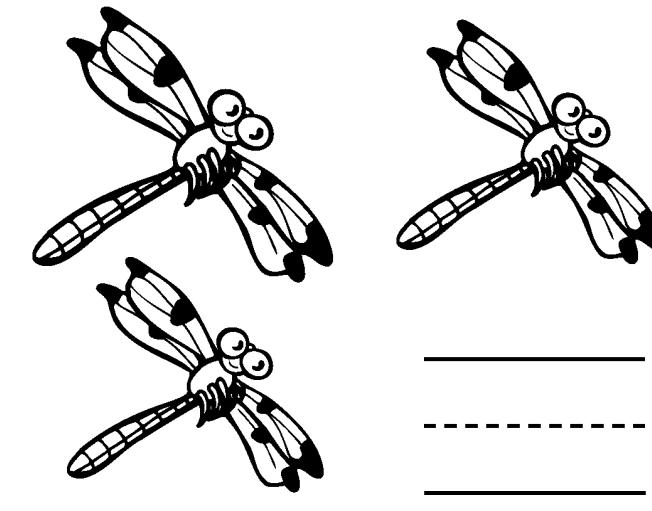
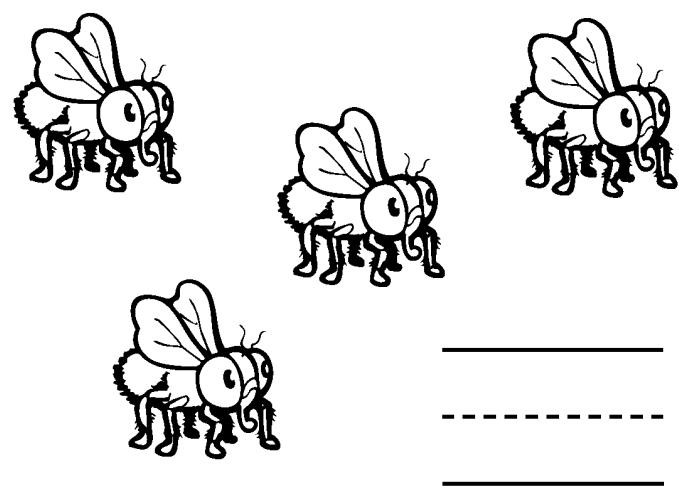
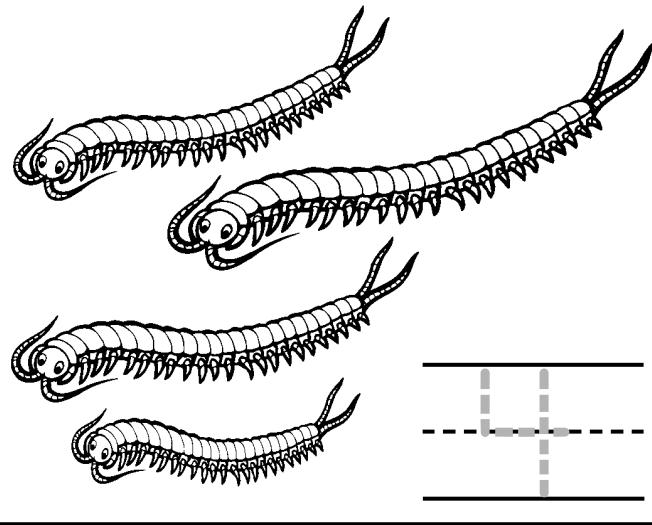
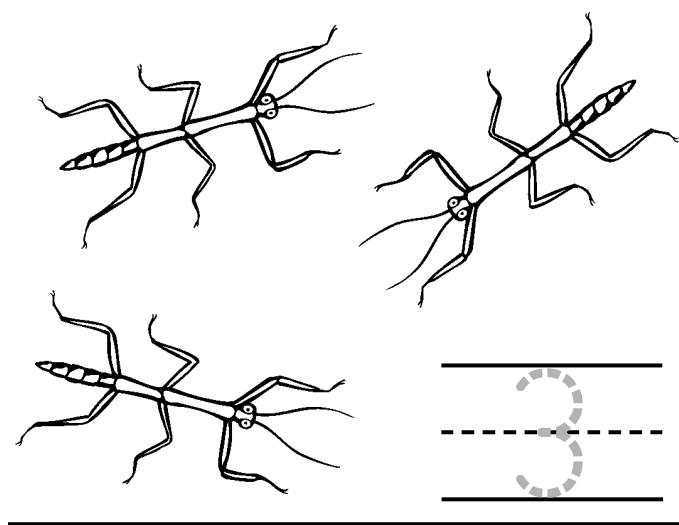
1	2	3	4
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1	2	3	4
---	---	---	---

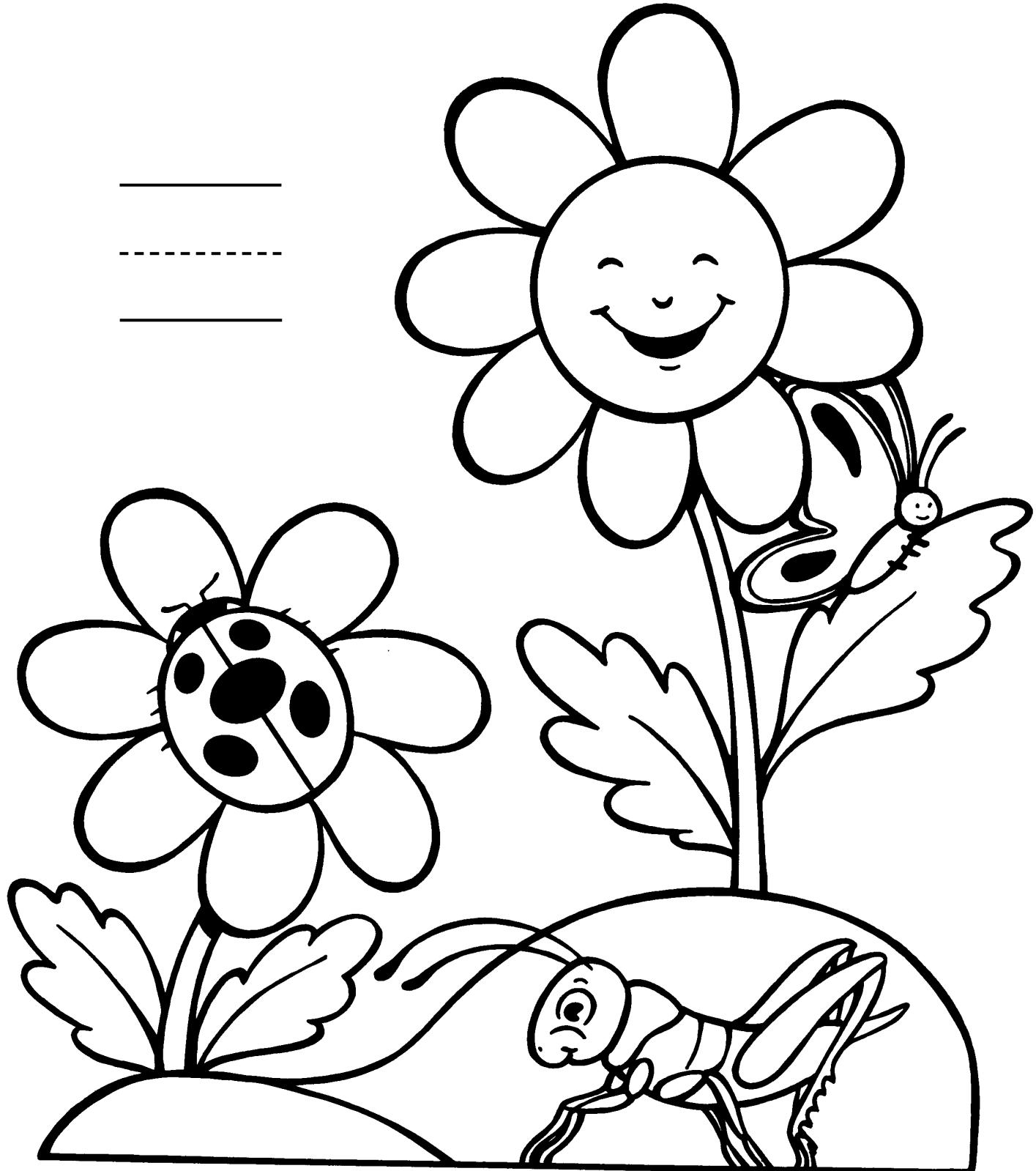
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to trace the numbers in the first two examples, then ask the student to count the insects in each block and write 3 or 4 to tell how many.



Name \_\_\_\_\_

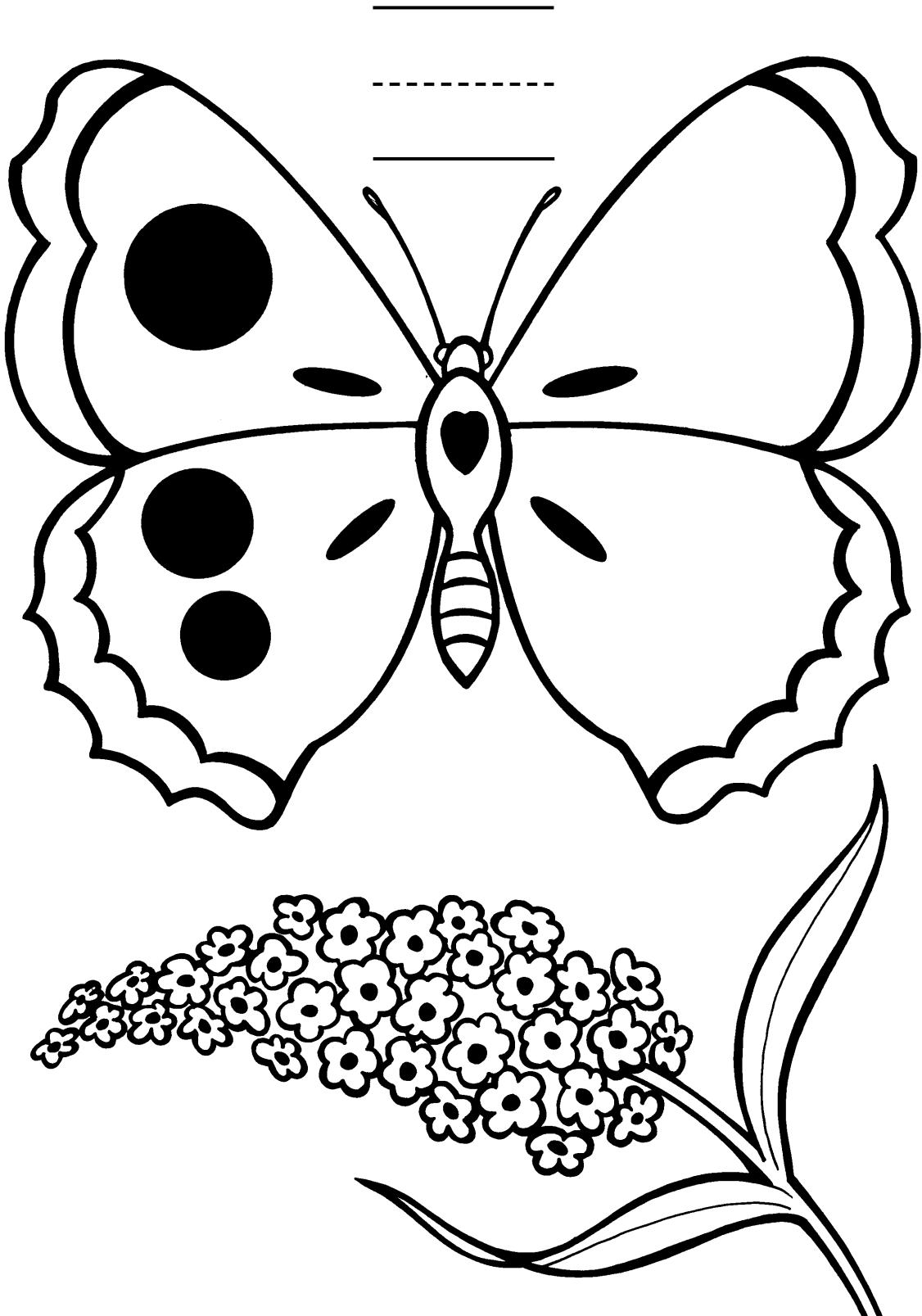
**INSTRUCTIONS:** Ask the student to find 3 insects. Then have the student write the number 3 in the space provided.



SKILL: IDENTIFY AND WRITE 3

Name \_\_\_\_\_

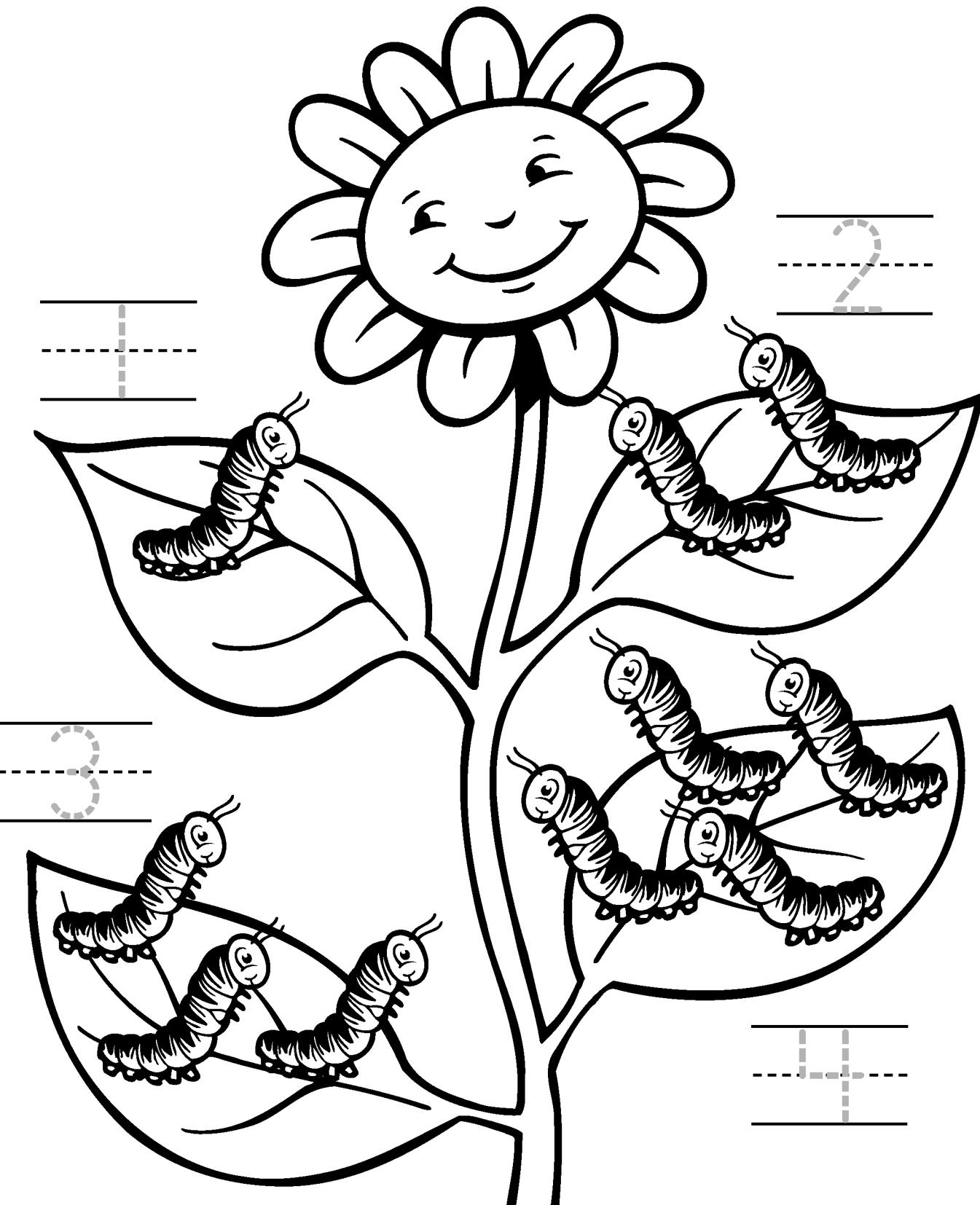
**INSTRUCTIONS:** Ask the student to draw what is missing on the butterfly. Then write how many spots were missing.



SKILL: COUNT TO THREE

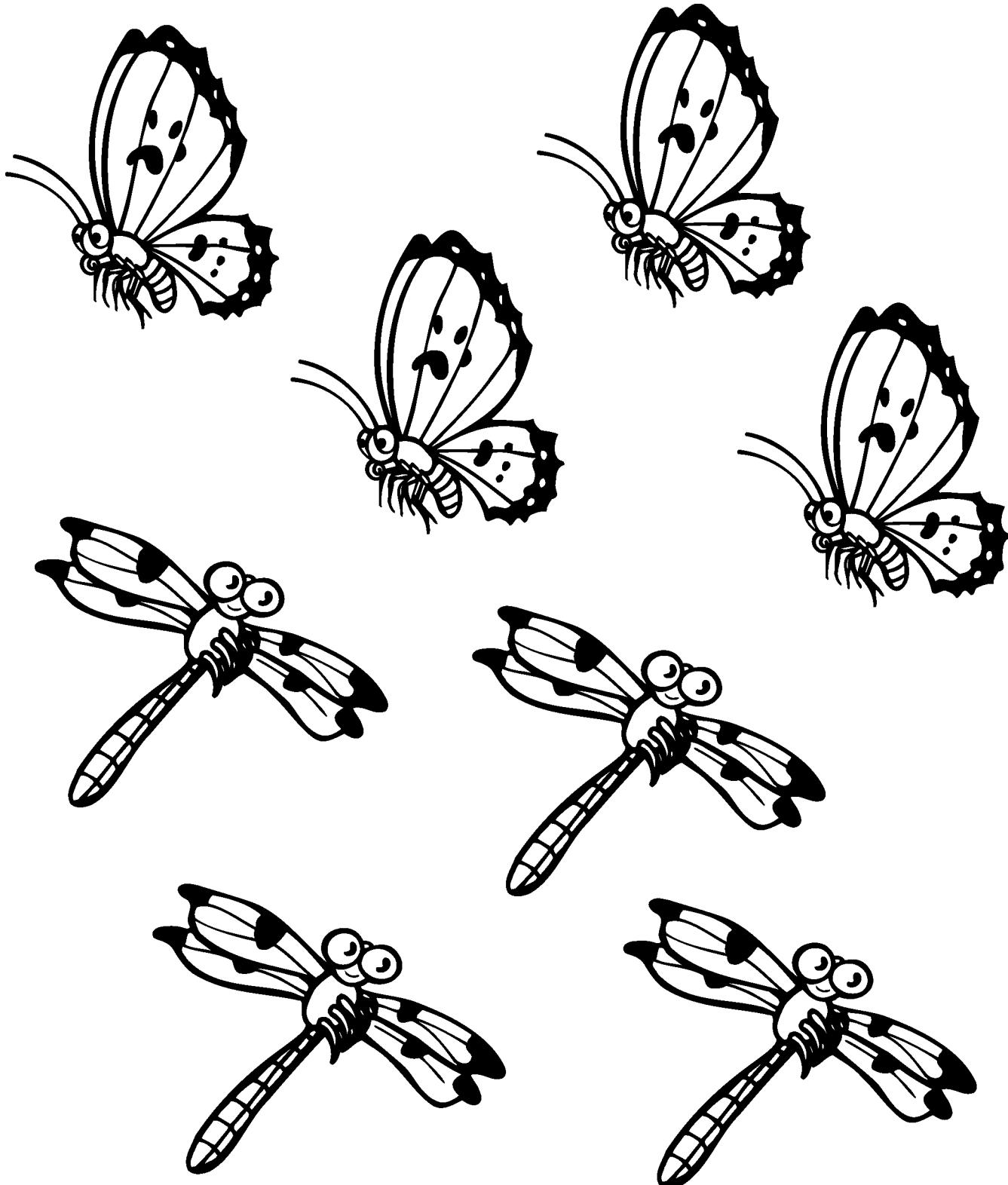
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to trace the number to count how many are on each leaf.



Name \_\_\_\_\_

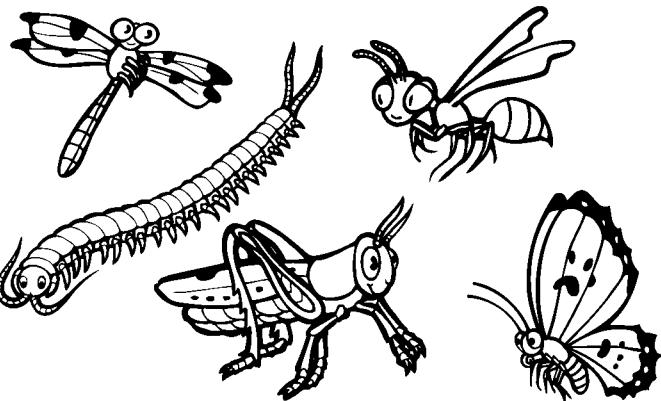
**INSTRUCTIONS:** Ask the student to color 2 of the butterflies. Then have the student color 3 of the dragonflies.



SKILL: COUNT TO THREE

Name \_\_\_\_\_

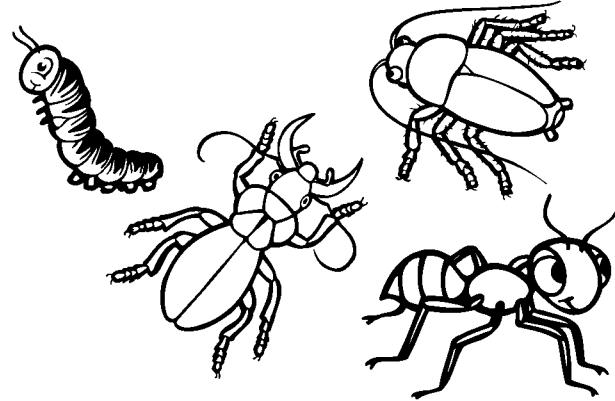
**INSTRUCTIONS:** Ask the student to count the insects in each section, then put an X through the correct number to show how many.



3

4

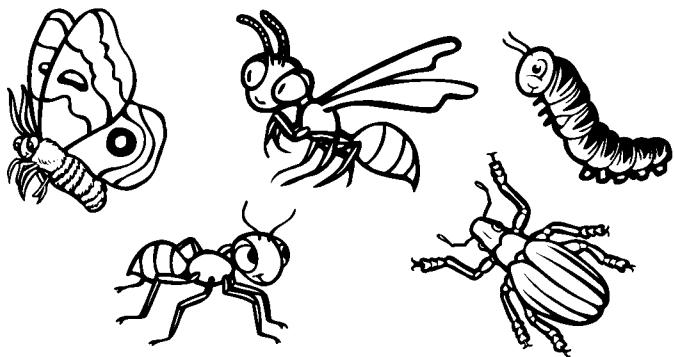
5



3

4

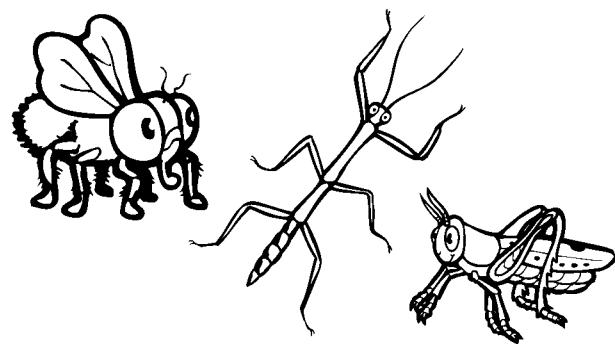
5



3

4

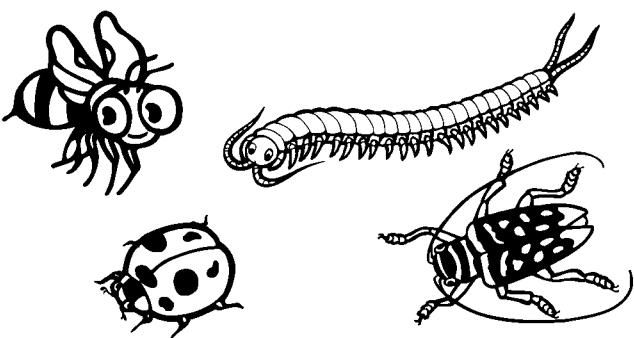
5



3

4

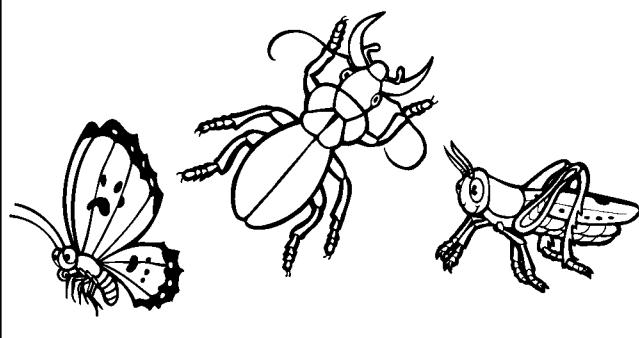
5



3

4

5



3

4

5

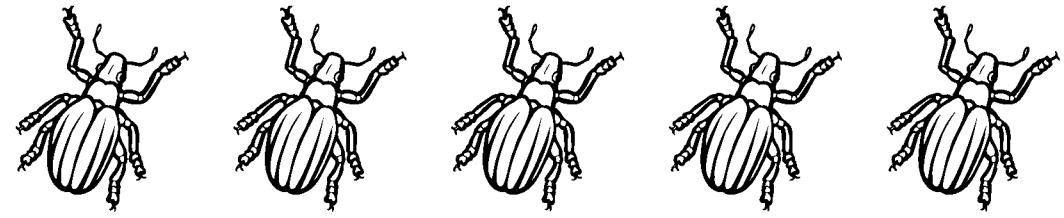
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to look at the numbers at the beginning of each row and circle the number of insects to show how many.

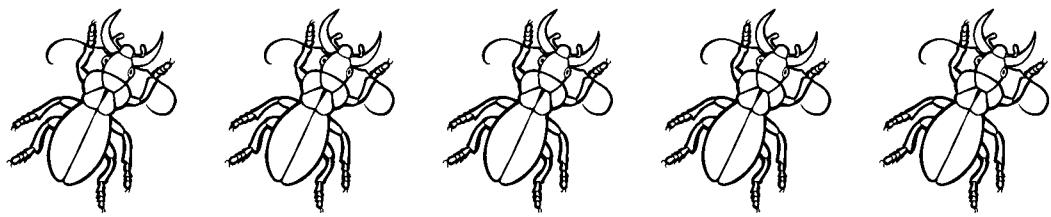
3



1



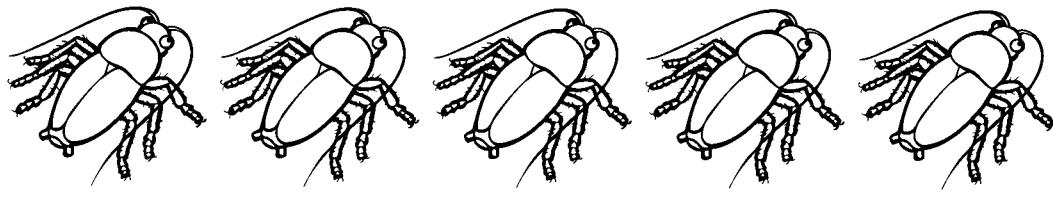
5



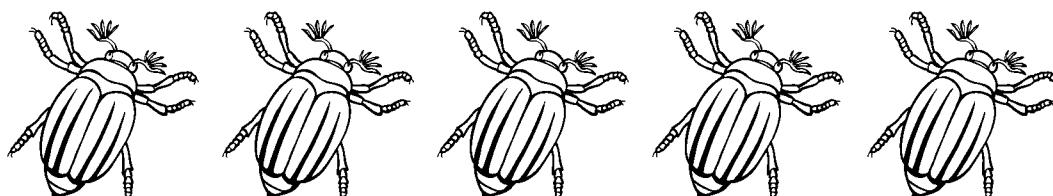
0



2

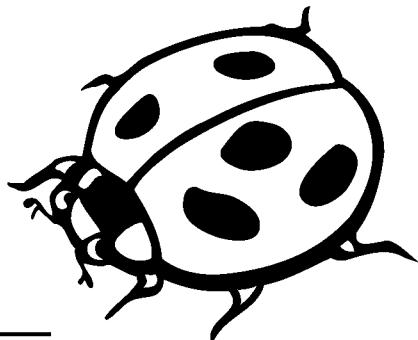


4

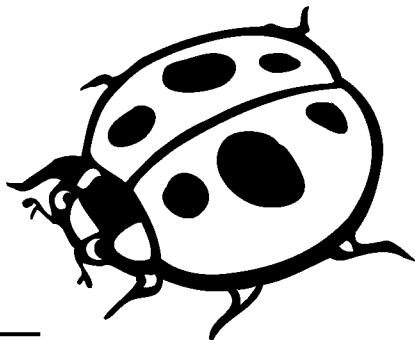


Name \_\_\_\_\_

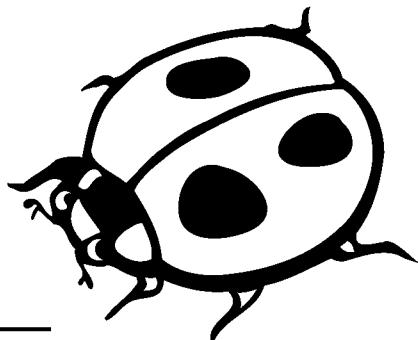
**INSTRUCTIONS:** Ask the student to count the number of spots each ladybug has, then write the number to tell how many.



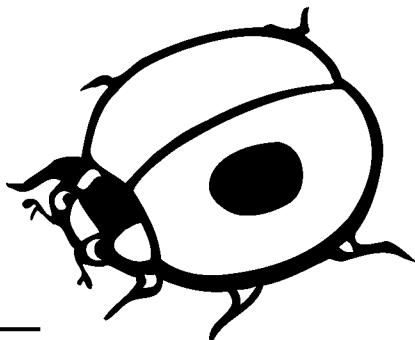
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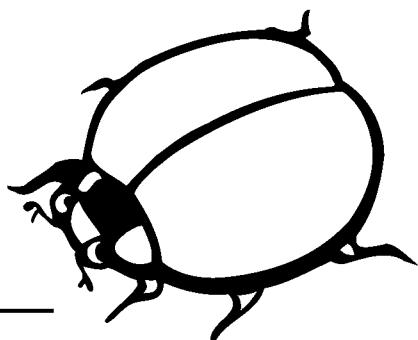
6



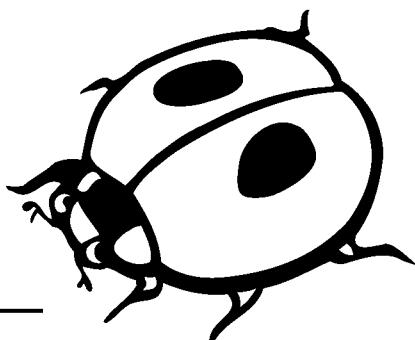
4



3



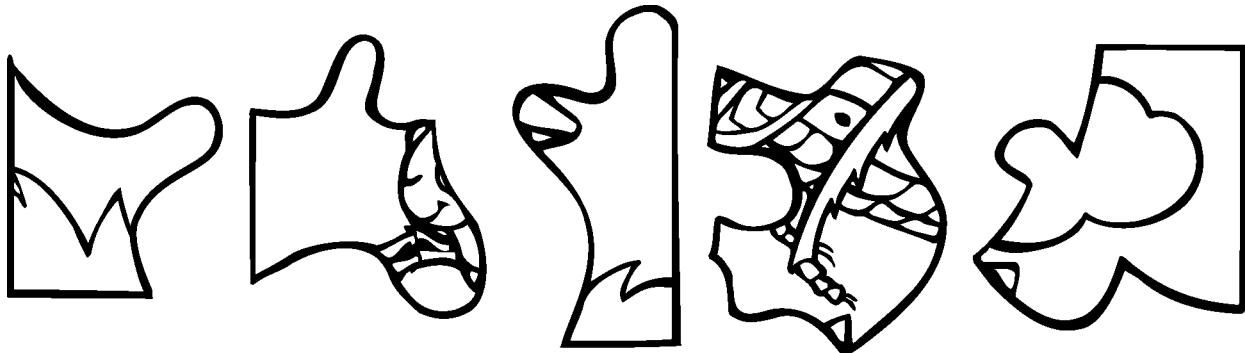
2



1

Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to look at the number under each puzzle piece and find out where that piece belongs in the puzzle.



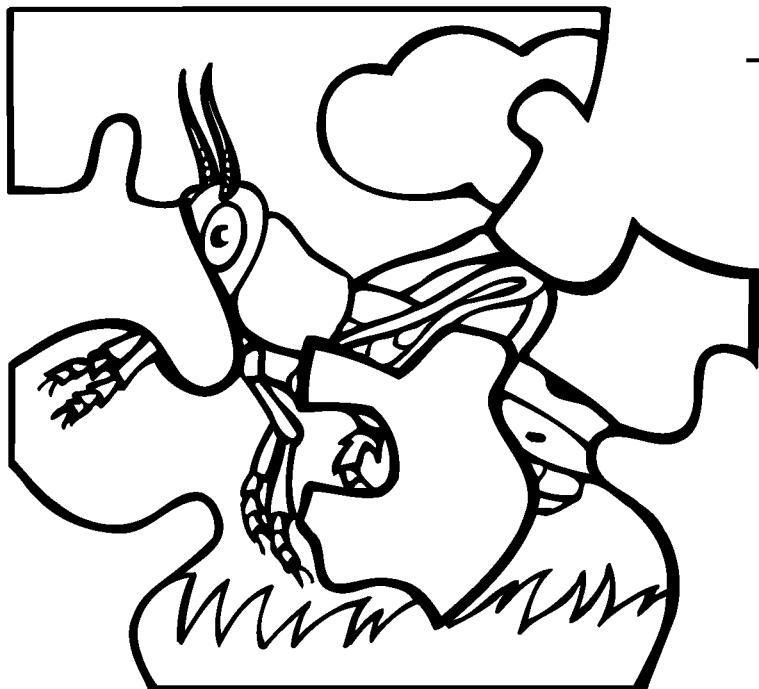
1

2

3

4

5



Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to find 5 bugs in this picture. Then color 2 of them green and 3 of them yellow.

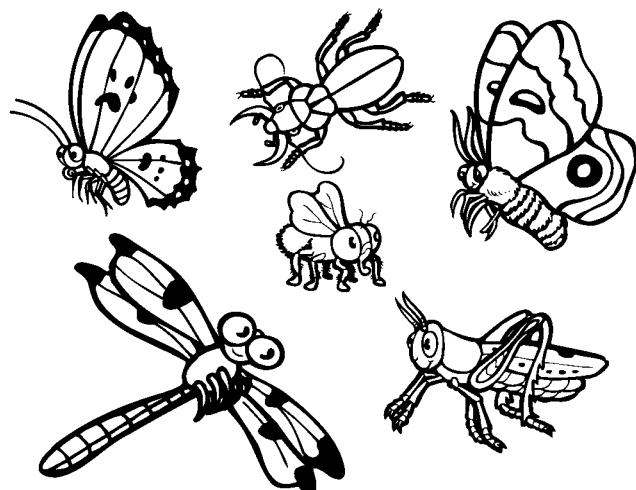
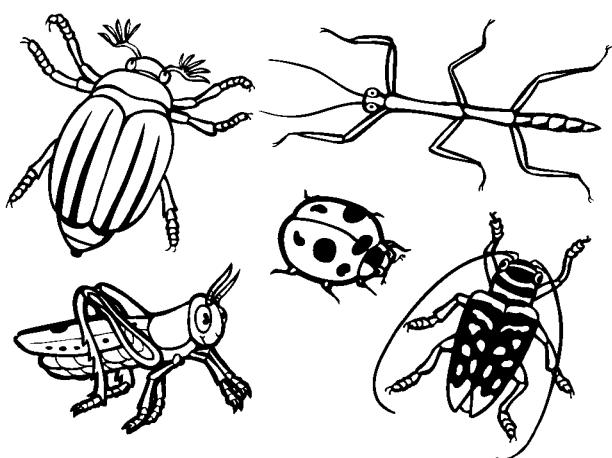
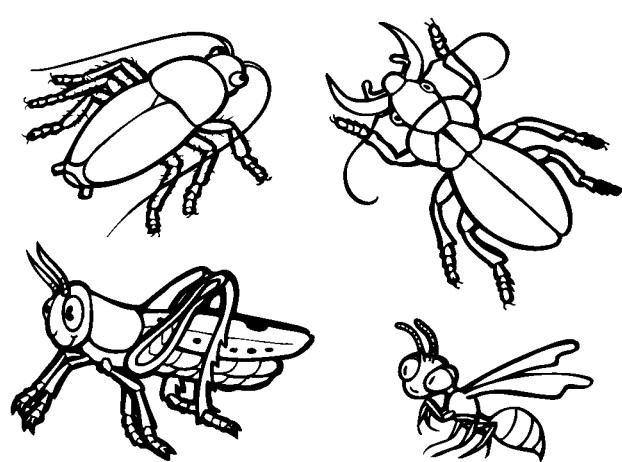
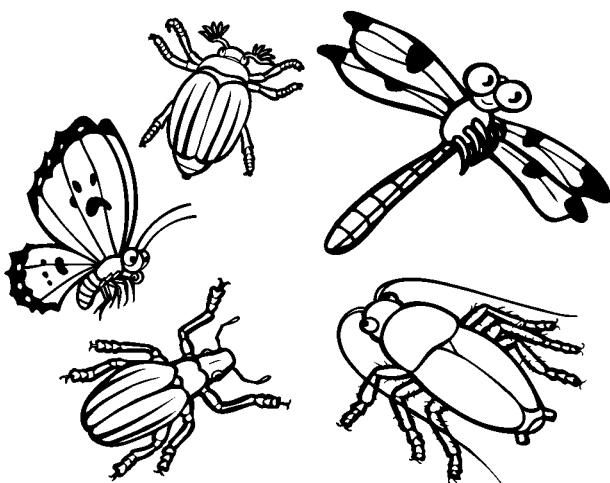
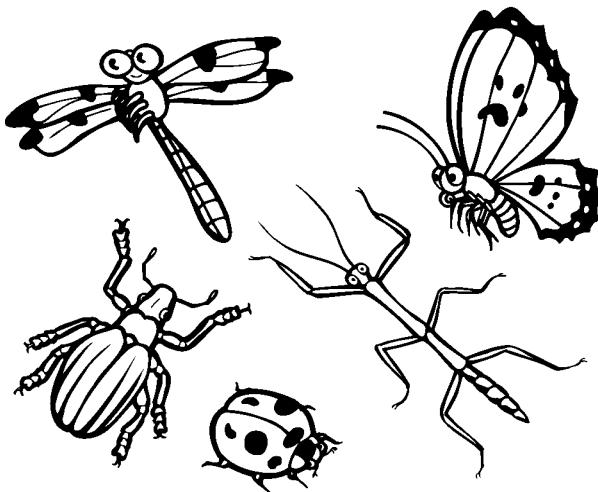
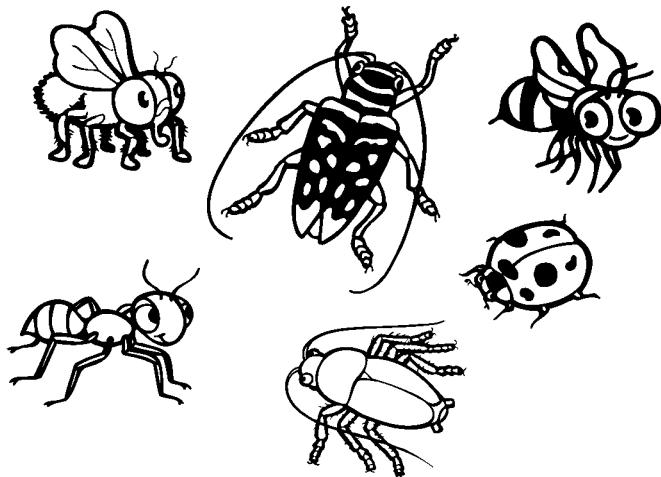


SKILL: COUNT TO FIVE

PRESCHOOL • INSECTS/SPIDERS • FUNDAMENTALS • 028

Name \_\_\_\_\_

INSTRUCTIONS: Ask the student to count the insects in each section, then circle the group if it has 6 objects.



Name \_\_\_\_\_

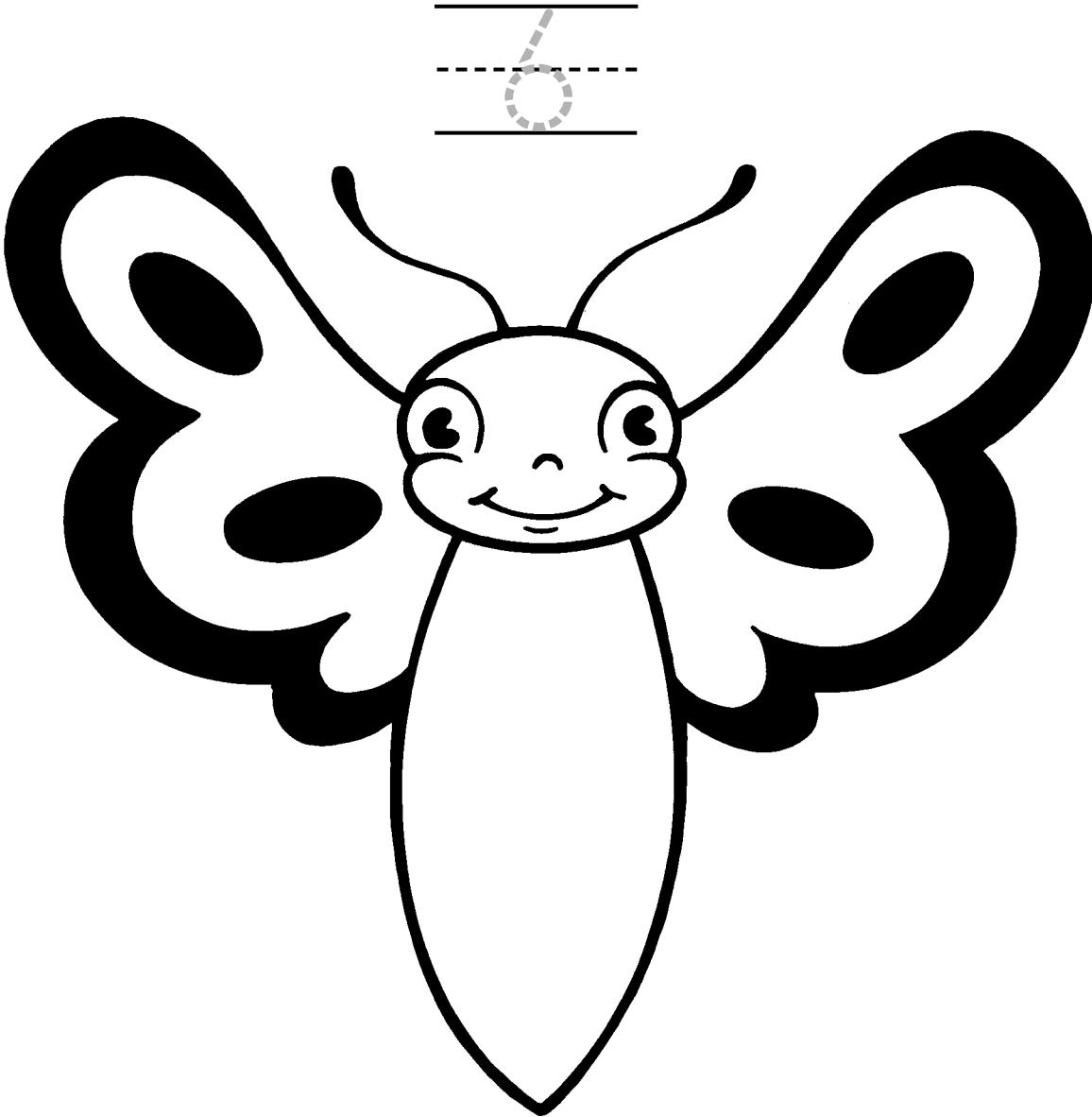
**INSTRUCTIONS:** Ask the student to draw six petals to finish the second flower. Then color the insect that is on top of the flower.



SKILL: IDENTIFY TOP TO BOTTOM AND COUNT TO SIX

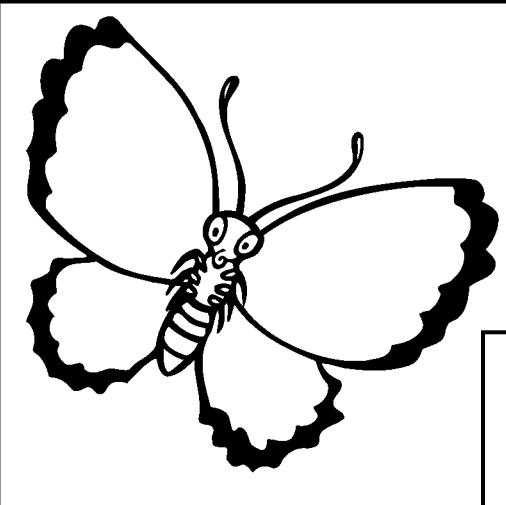
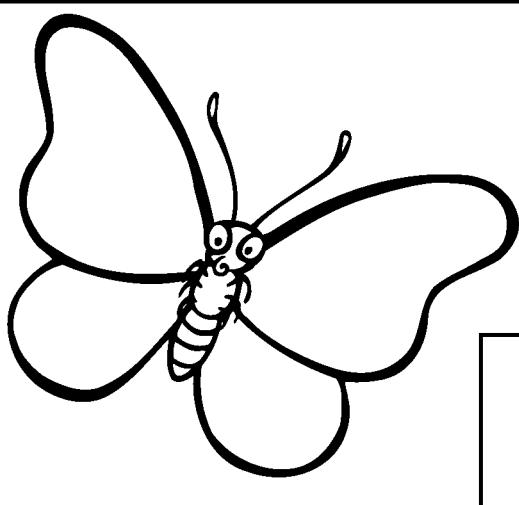
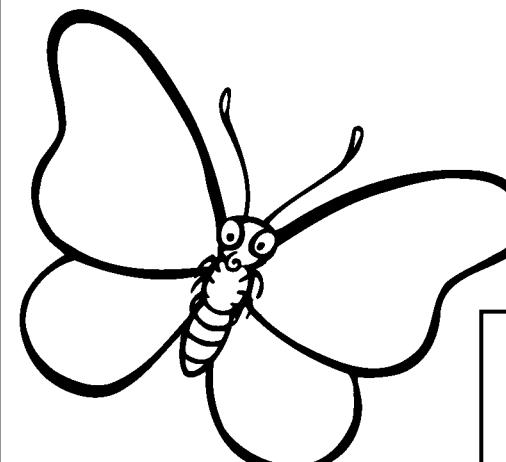
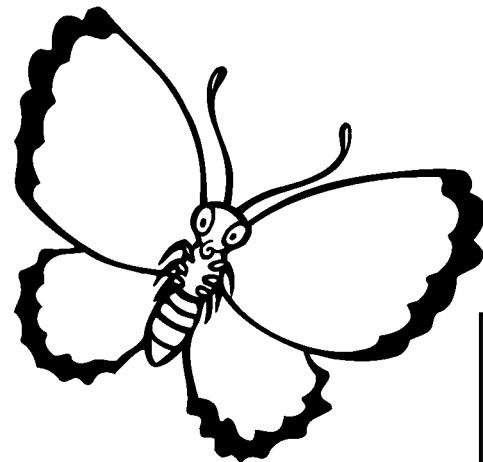
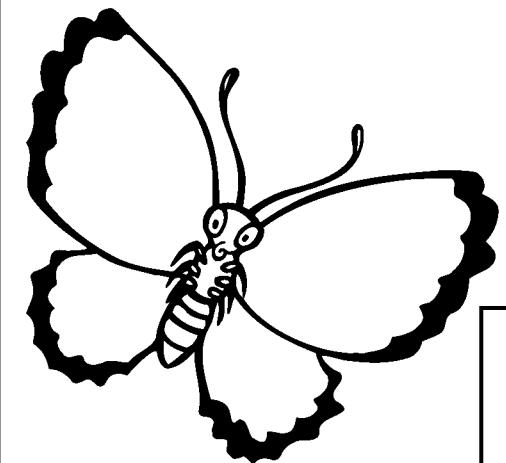
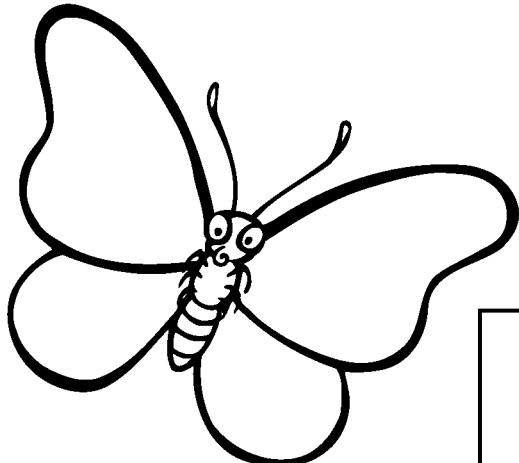
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to draw six legs on the butterfly, then trace the number 6.



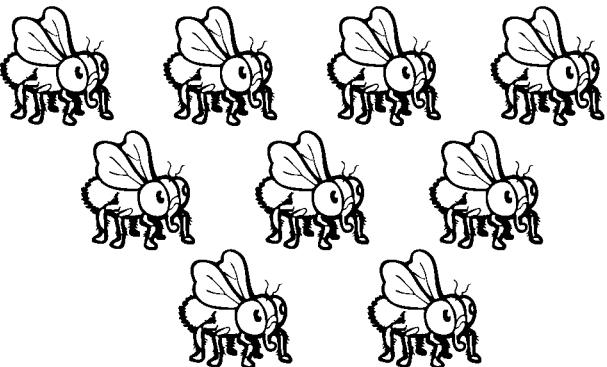
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to draw the correct number of spots on each butterfly. Then have the student color groups of 5 spots green, groups of 6 blue, groups of 7 yellow, and groups of 8 purple.



Name \_\_\_\_\_

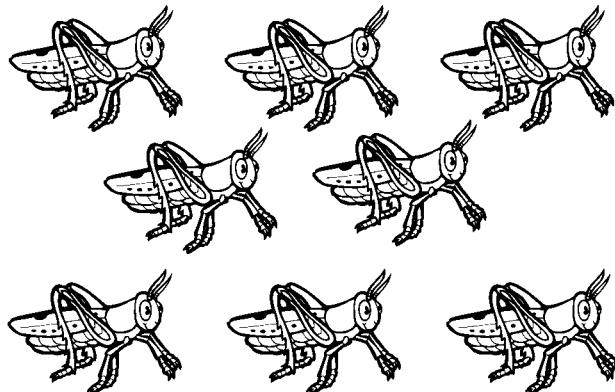
**INSTRUCTIONS:** Ask the student to count the insects in each section then put an X through the correct number to show how many.



7

8

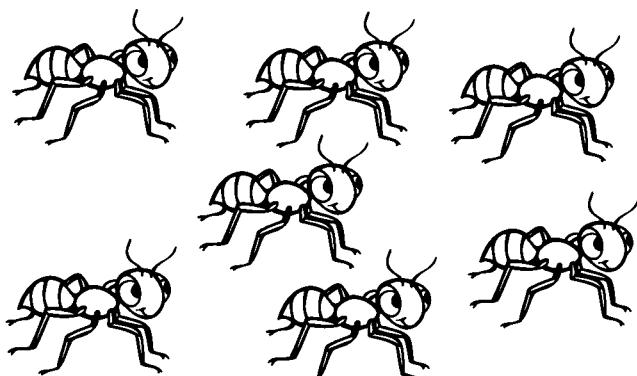
9



6

7

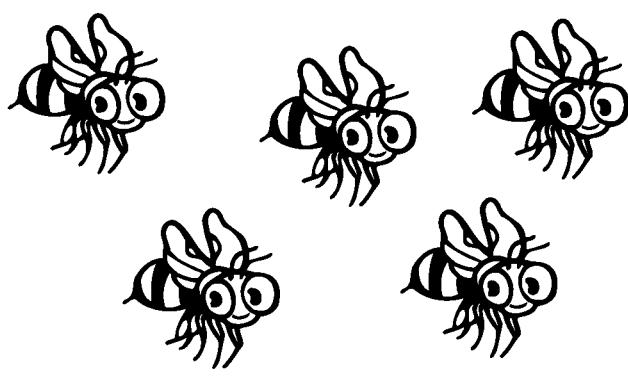
8



7

8

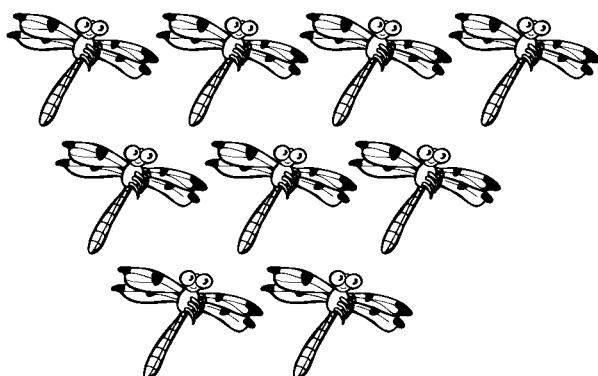
9



5

6

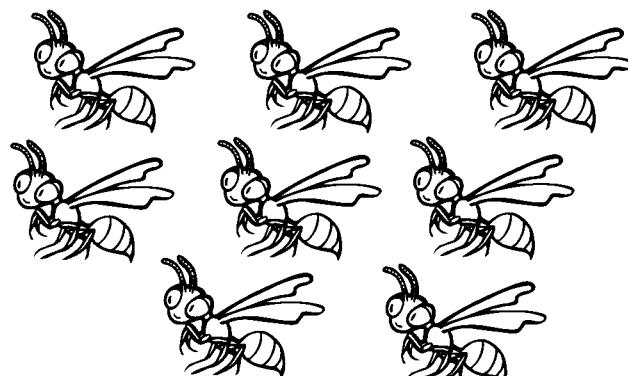
7



7

8

9



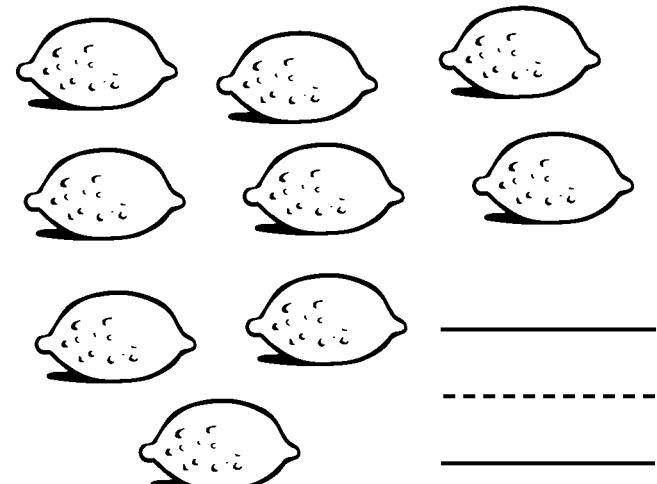
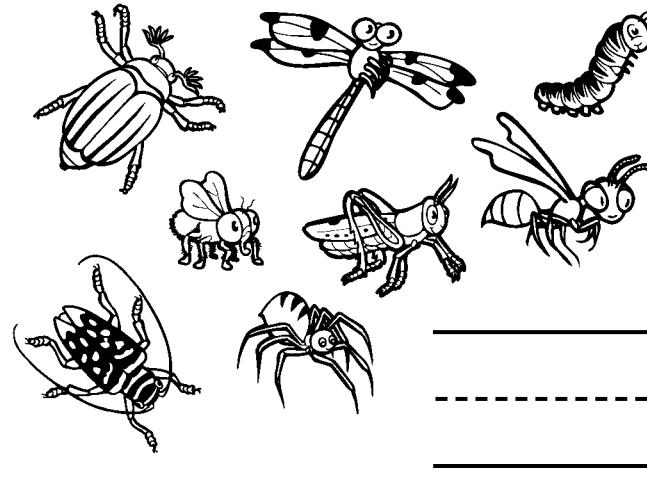
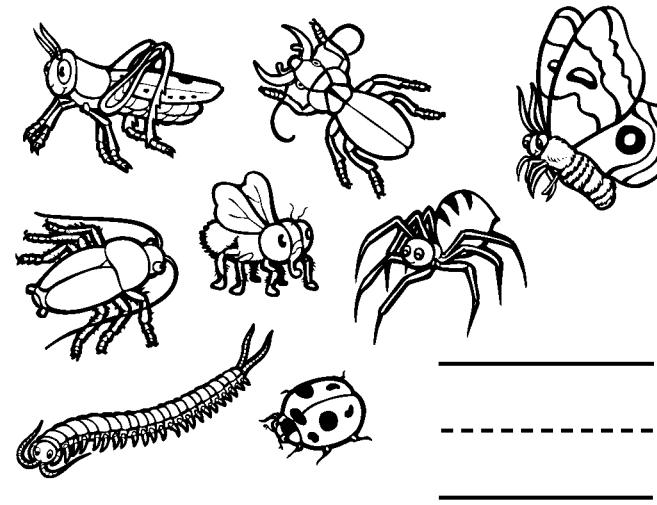
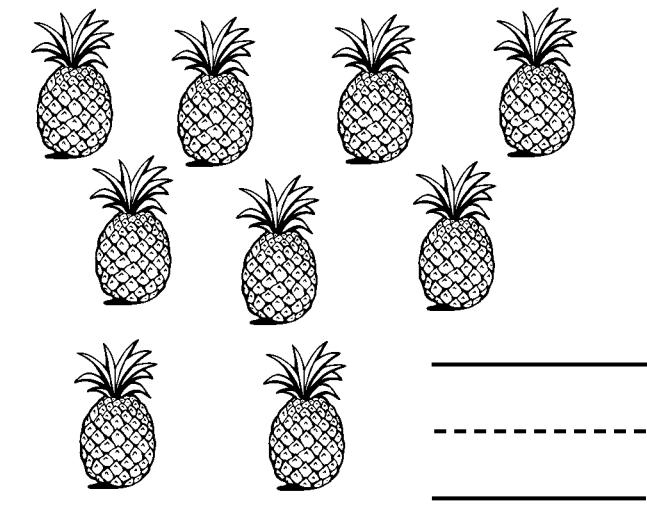
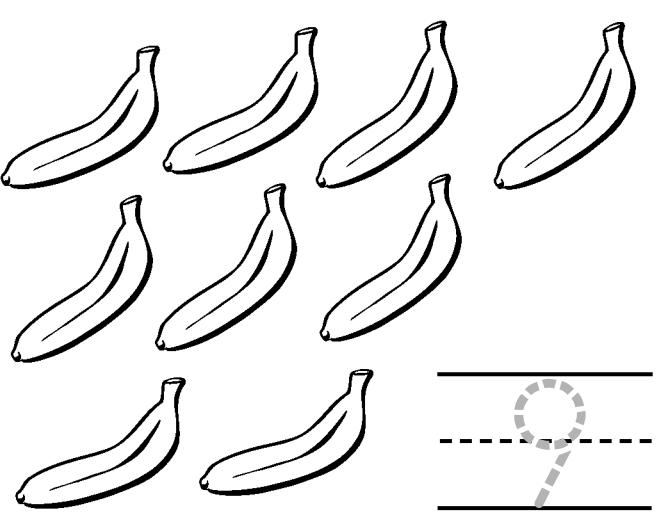
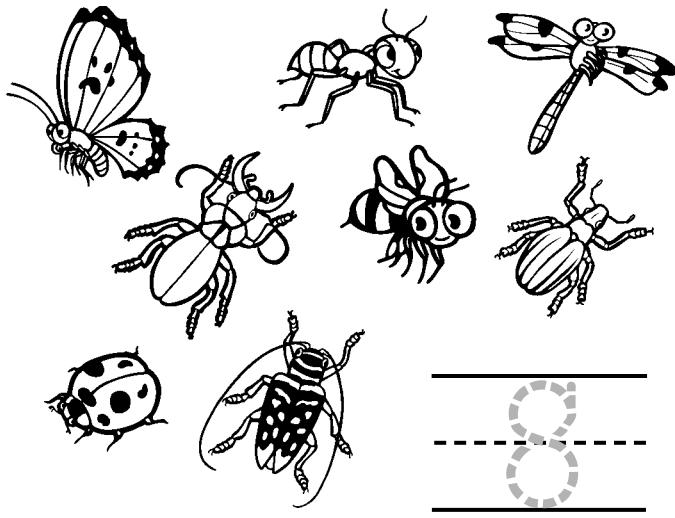
7

8

9

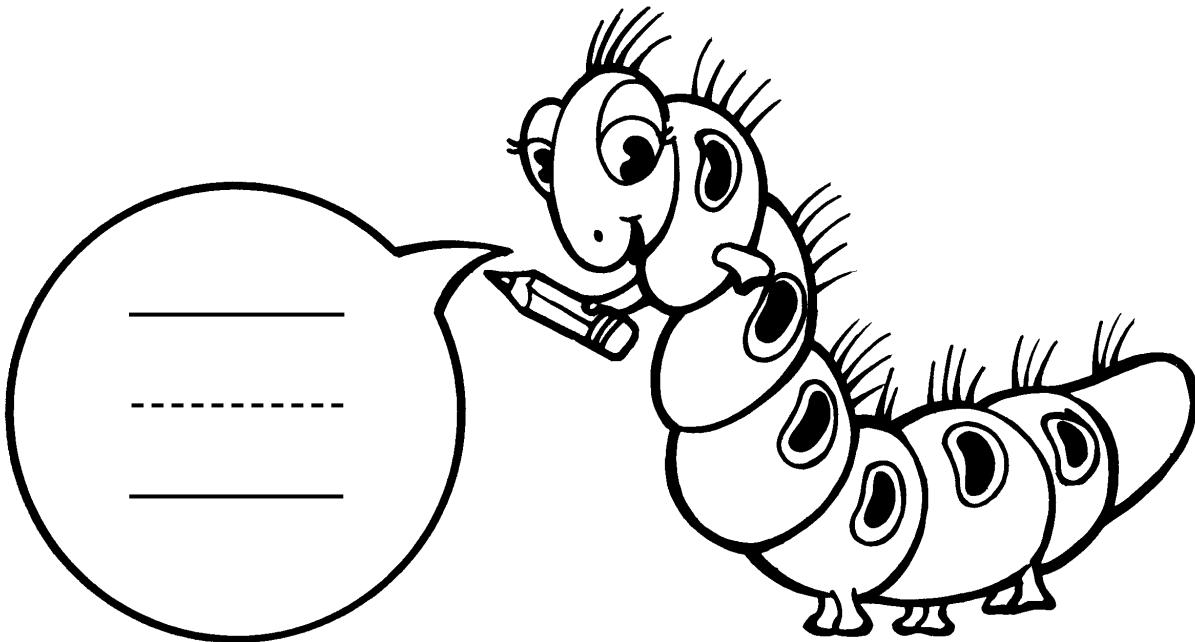
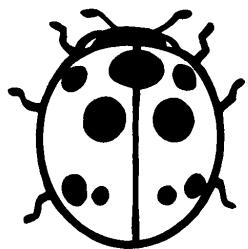
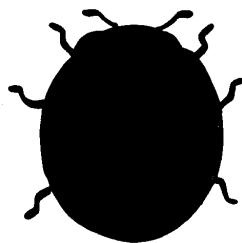
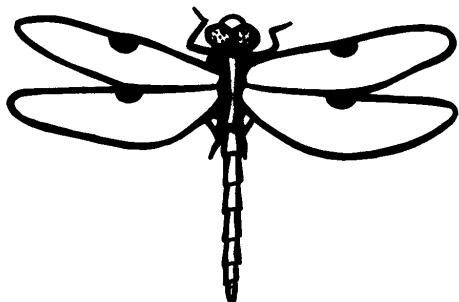
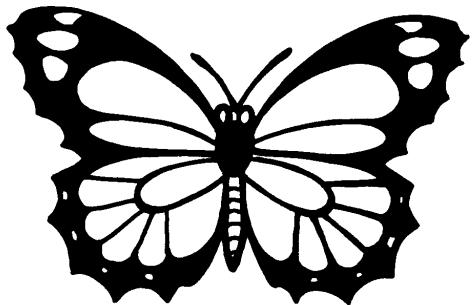
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to trace the numbers in the first two examples, then ask the student to count the objects in each block and write 8 or 9 to tell how many.



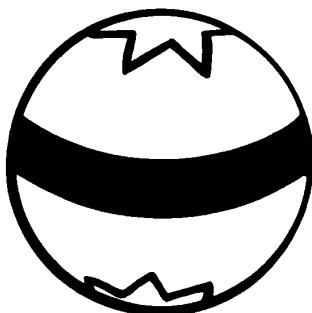
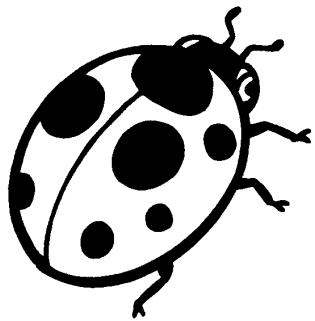
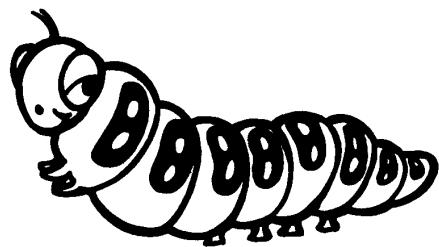
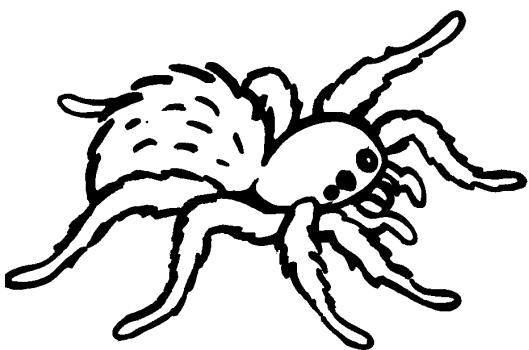
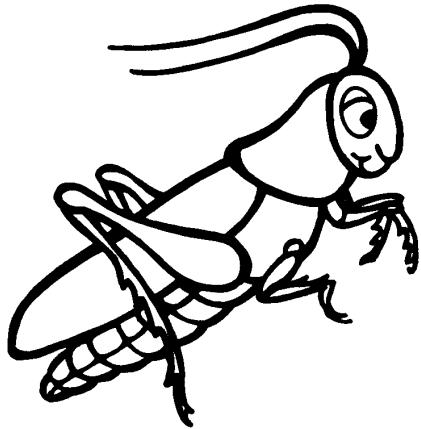
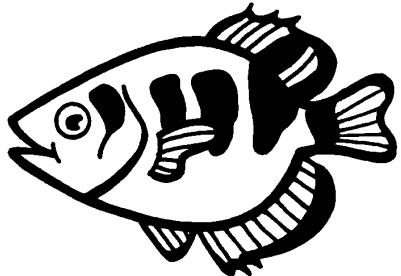
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to help the caterpillar draw a line to the matching shapes.  
Then write in how many black shapes are on the page.



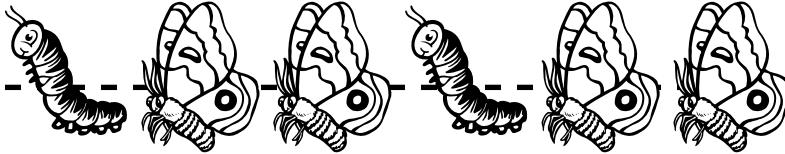
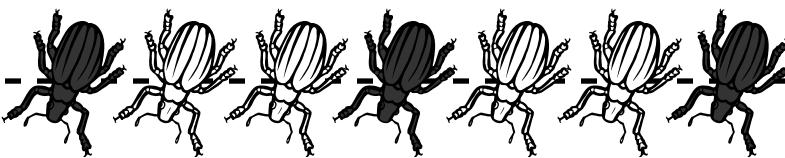
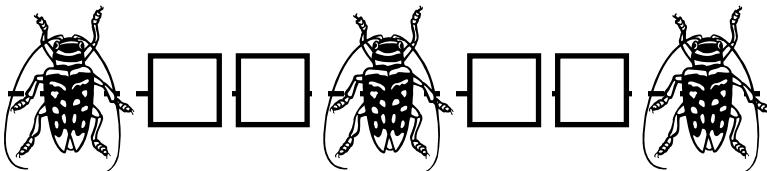
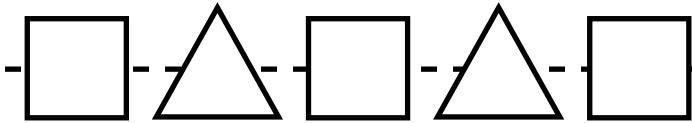
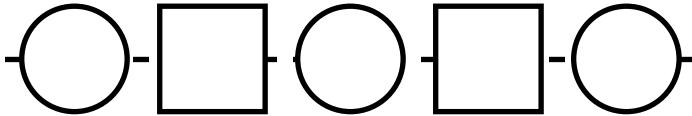
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to look at the pictures and draw a circle around the object that does not belong in each row.



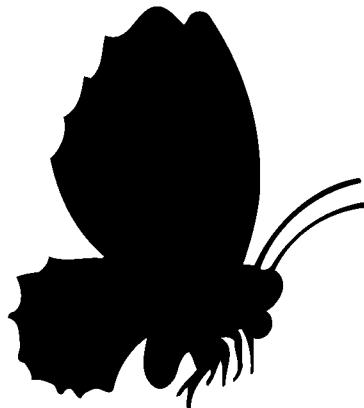
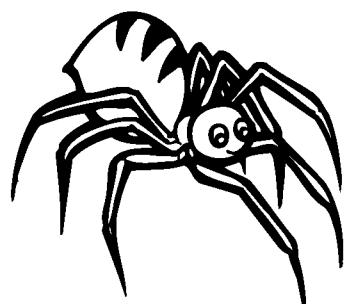
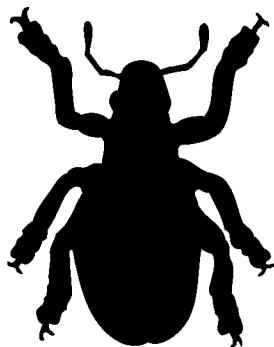
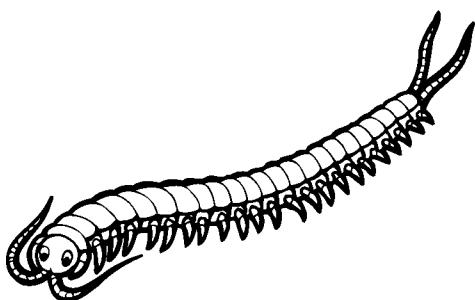
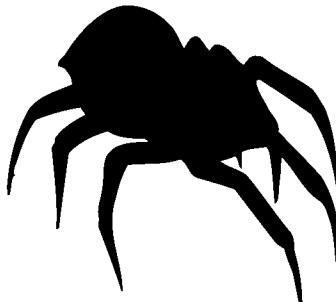
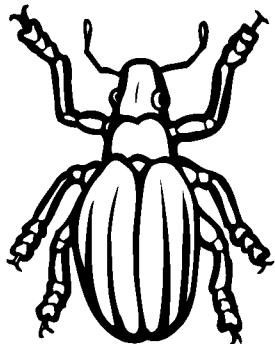
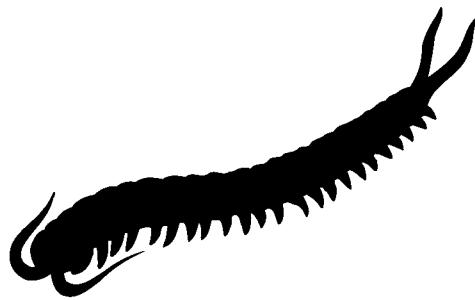
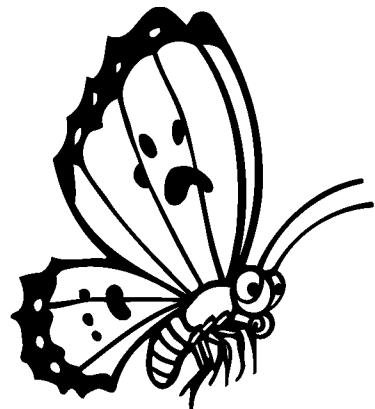
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to study the patterns in each row, then finish the patterns by filling the spaces with the correct shapes.



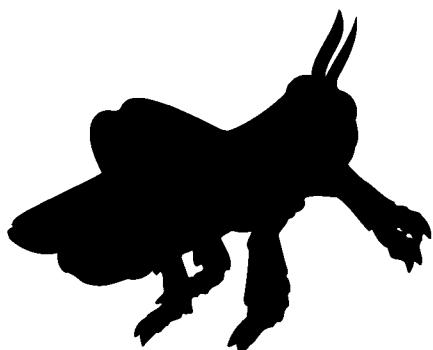
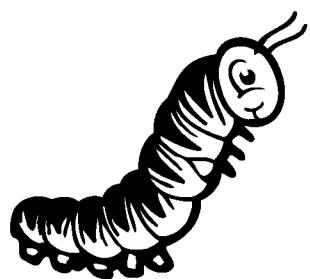
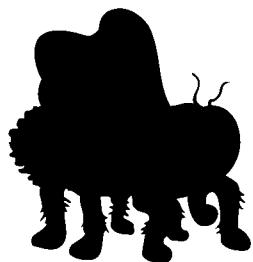
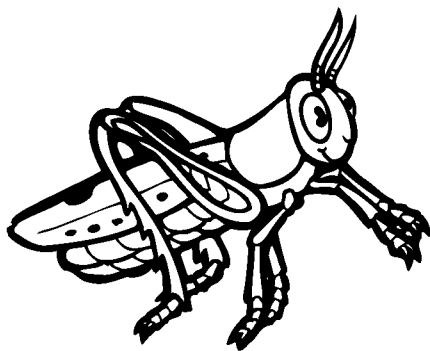
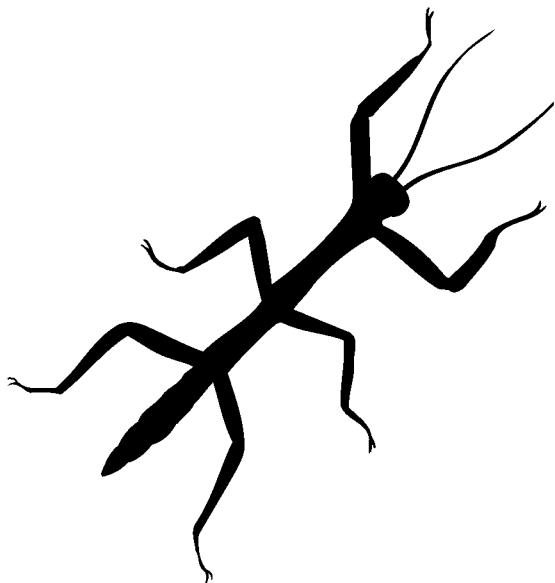
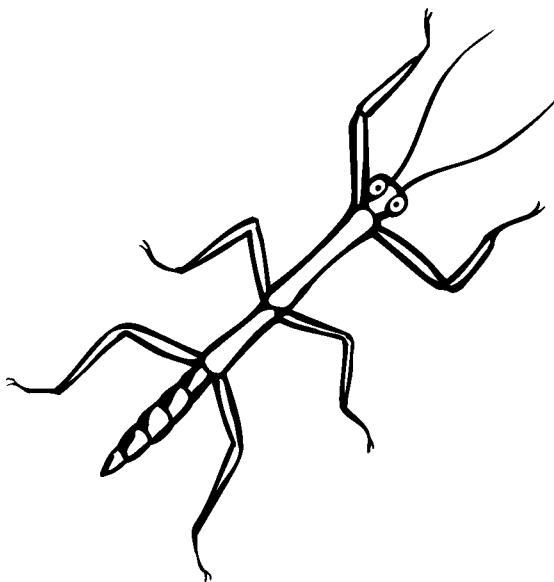
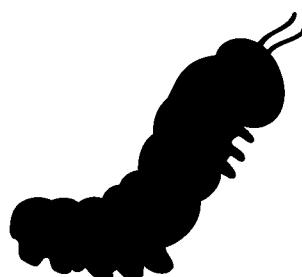
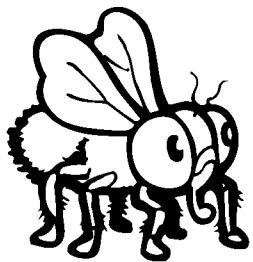
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to draw lines to the matching shapes.



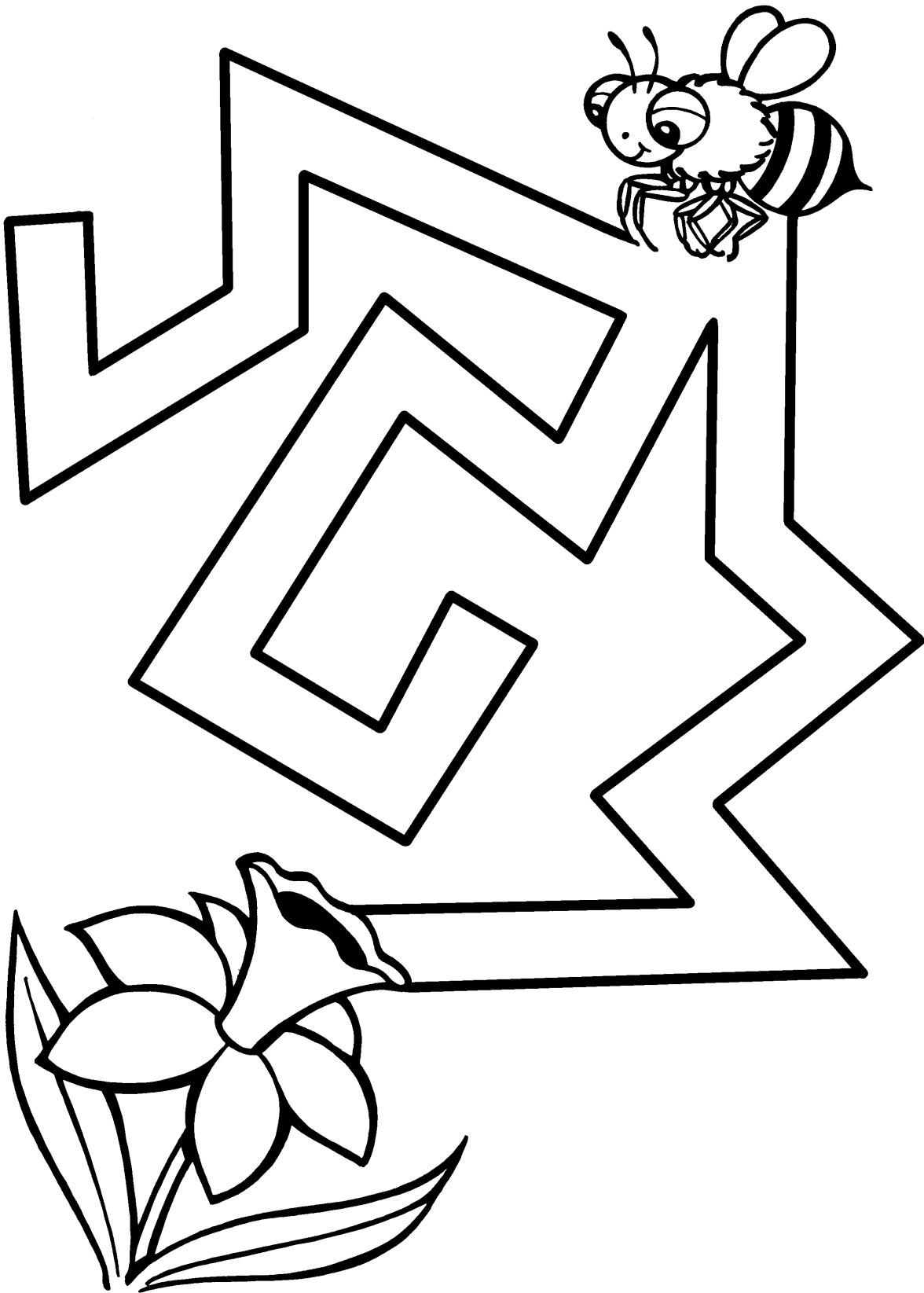
Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to draw lines to the matching shapes.



Name \_\_\_\_\_

**INSTRUCTIONS:** Ask the student to help the bee find the way to the flower.

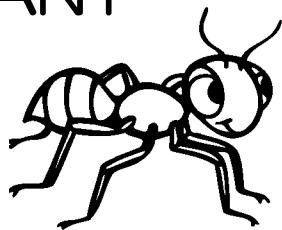


SKILL: VISUAL PERCEPTION

PRESCHOOL • INSECTS/SPIDERS • FUNDAMENTALS • 040

Name \_\_\_\_\_

ANT



BEE



CAT



A B C D E E G

H I J K L M N

O P Q R S T U

V W X Y Z

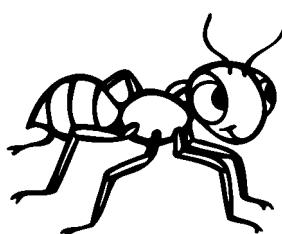
Name \_\_\_\_\_

a b c d e f g

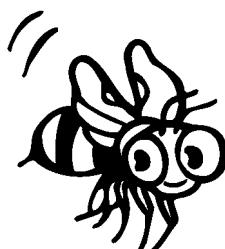
h i j k l m n

o p q r s t u

v w x y z



ant



bee

Name \_\_\_\_\_

Trace the letter Mm. Then say the words and color the pictures that begin with Mm.

M m

M m

M m

M m

M m



SKILL: BEGINNING SOUND M

Name \_\_\_\_\_

Trace the letter Dd. Then say the words and color the pictures that begin with Dd.

D d

D d

D d

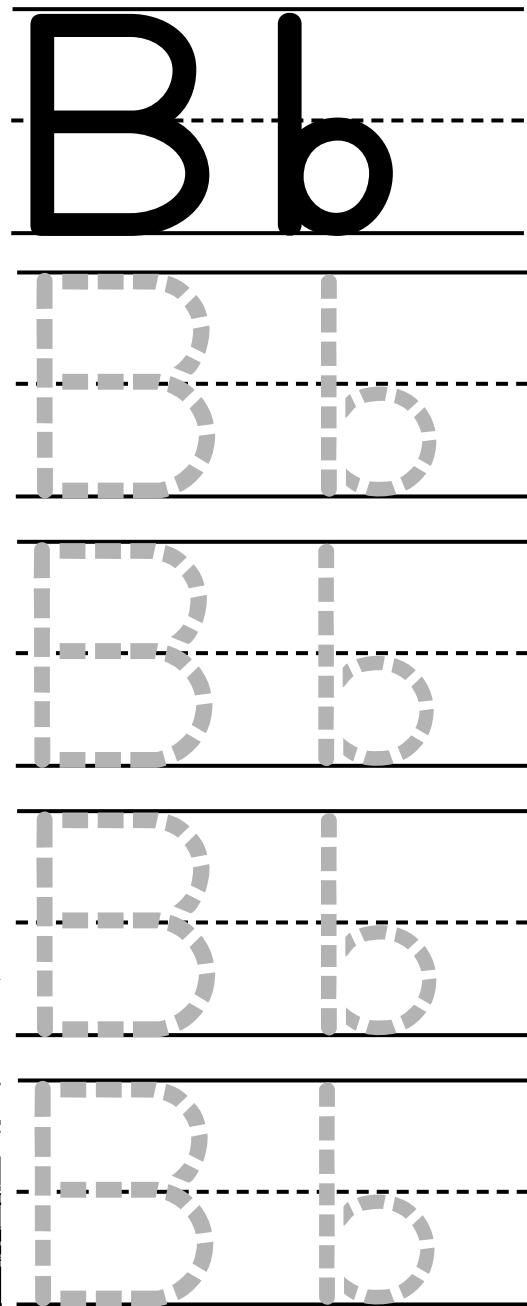
D d

D d



Name \_\_\_\_\_

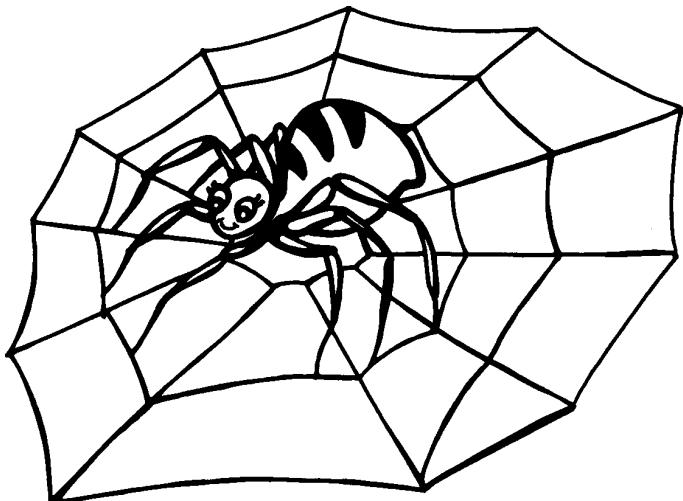
Trace the letter Bb. Then say the words and color the pictures that begin with Bb.



SKILL: BEGINNING SOUND B

Name \_\_\_\_\_

Trace the letter Ss. Then say the words and color the pictures that begin with Ss.



S s

S s

S s

S s

S s

Name \_\_\_\_\_

Fill in the missing letters. Then  
write the word again, by yourself.

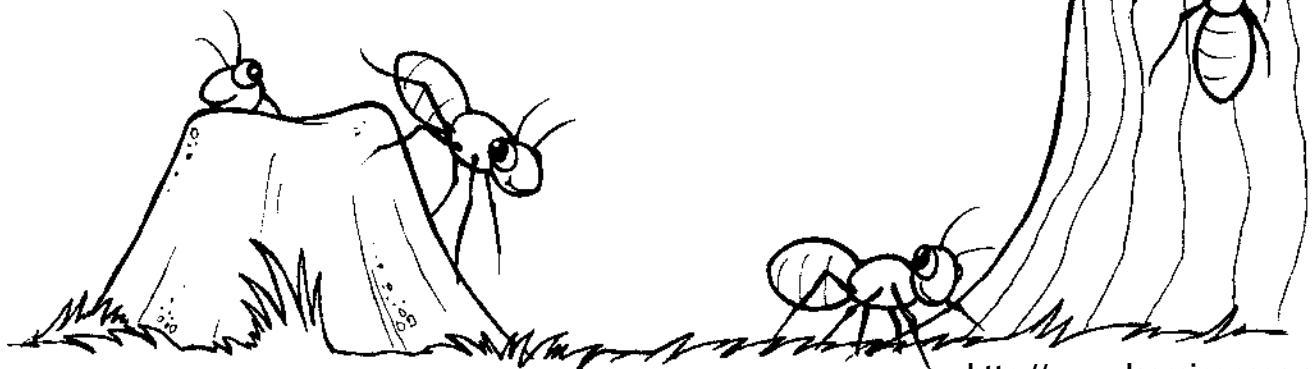
ant

ant

fly

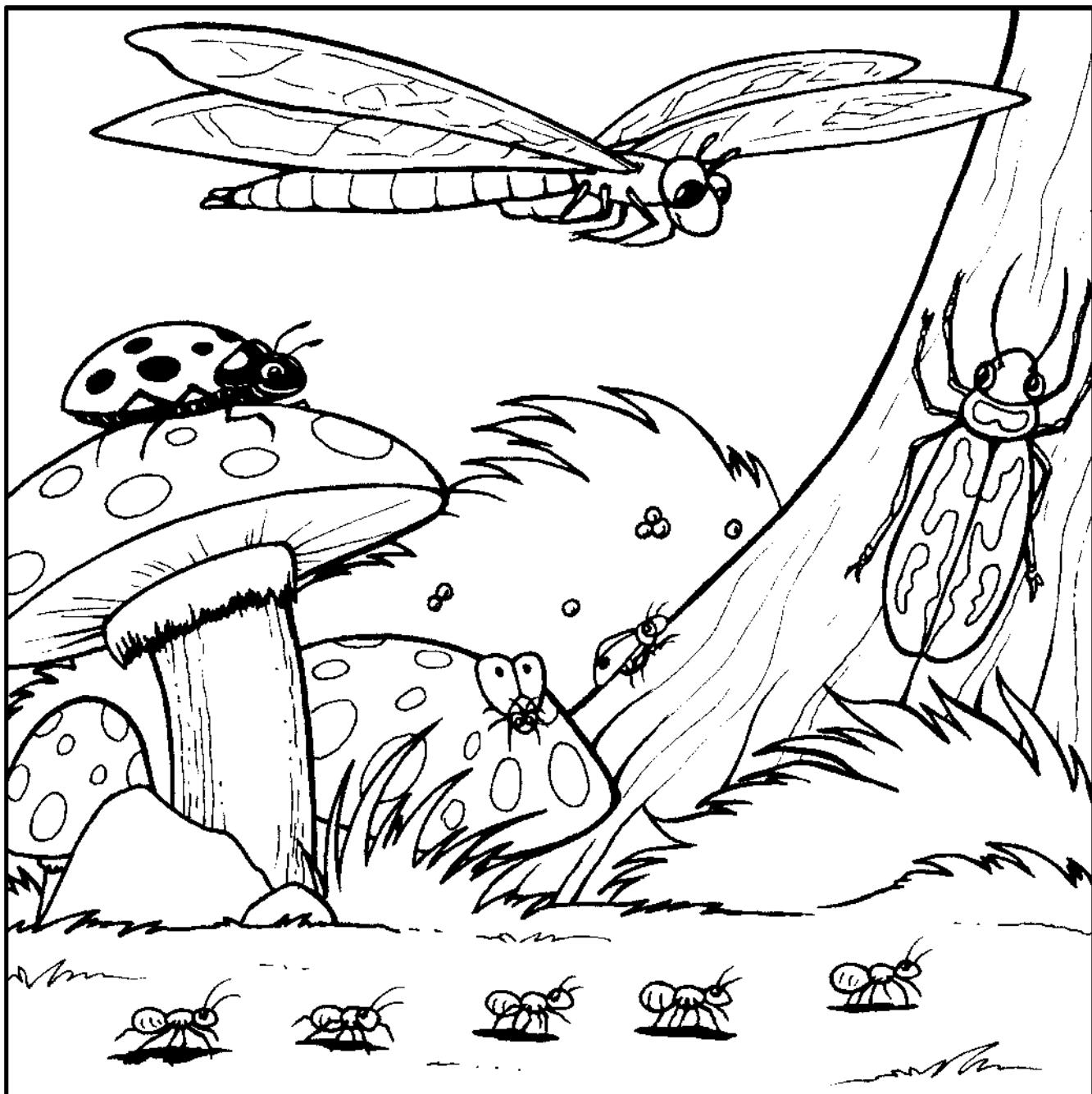
moth

b ee



Name \_\_\_\_\_

Insects come in many shapes and sizes. Circle the small insects and color the large insects.

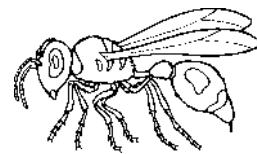
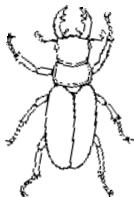


SKILL: BIGGER/SMALLER

Name \_\_\_\_\_

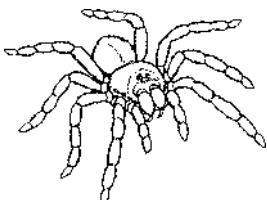
Which insect is the first in this row?

Circle it.



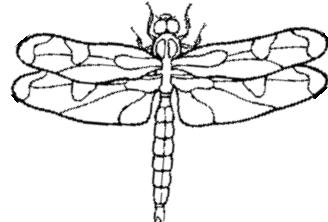
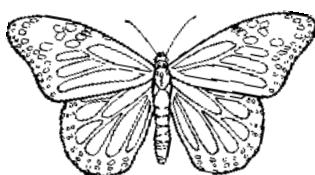
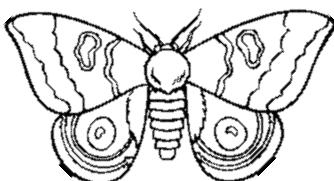
Which spider is in the middle of this row?

Circle it.



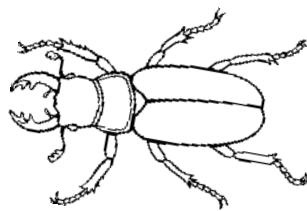
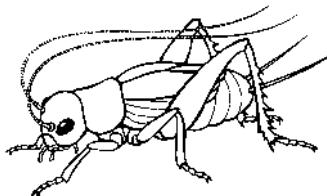
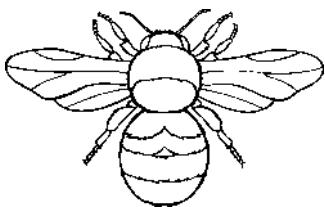
Which insect is the last in this row?

Circle it.



Which insect is the last in this row?

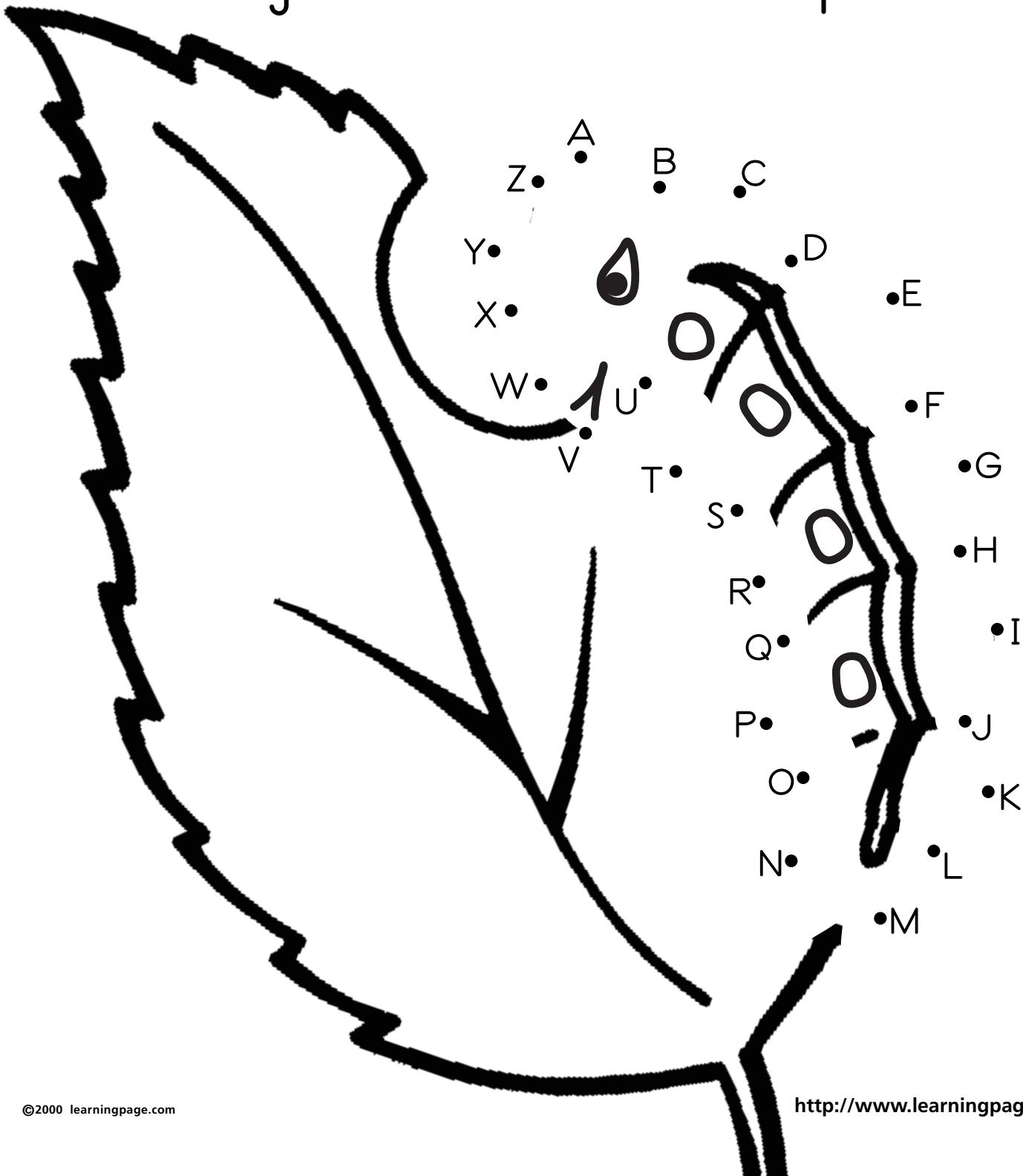
Circle it.



Name \_\_\_\_\_

A B C D E F G H I J K L M N O P  
Q R S T U V W X Y Z

Connect the dots from A to Z to see what is eating the leaf. Then color the picture.



Name \_\_\_\_\_

Connect the letter on the left with  
the word on the right that begins with the  
same letter, using a different color for each.

L

spider

F

ant

G

web

A

ladybug

S

fly

W

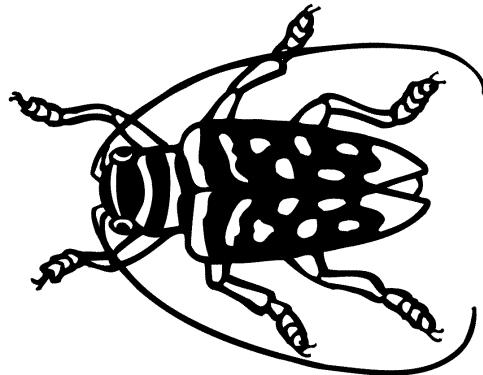
grasshopper

Name \_\_\_\_\_

Write the letters below. Draw a line from the letter to the insect with the same beginning sound.

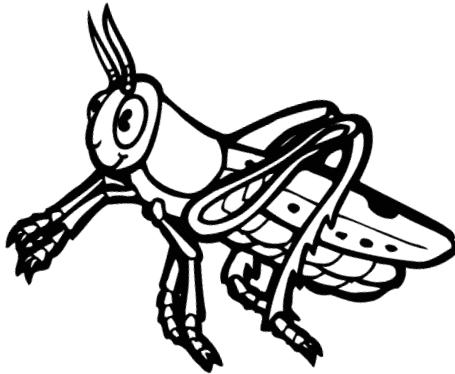
C  
c

C  
c



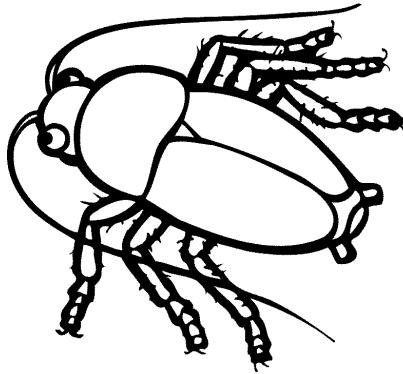
B  
b

B  
b

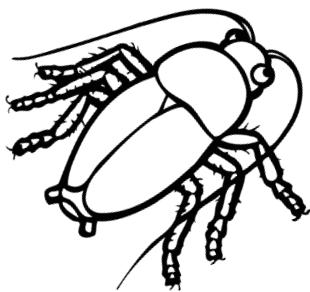


G  
g

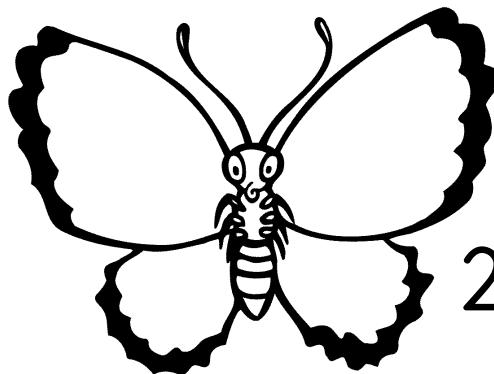
G  
g



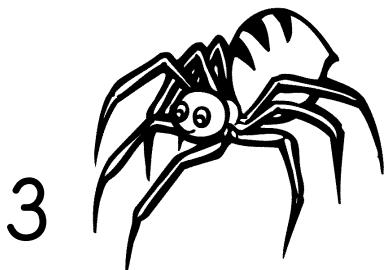
Name \_\_\_\_\_



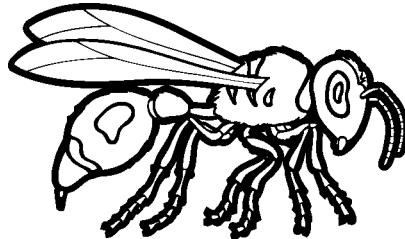
1



2



3



4

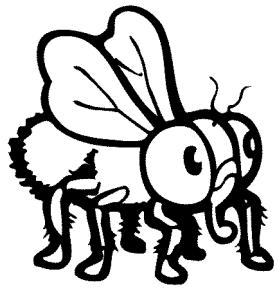
Which picture has the same beginning sound as bee? \_\_\_\_\_

Which picture has the same beginning sound as caterpillar? \_\_\_\_\_

Which picture has the same beginning sound as weevil? \_\_\_\_\_

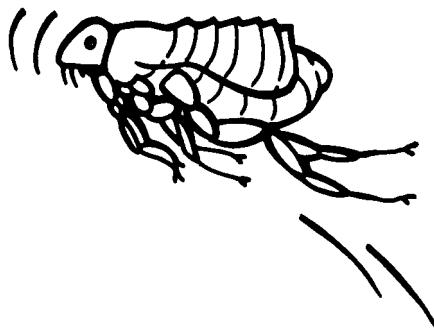
Which picture has the same beginning sound as scorpion? \_\_\_\_\_

Name \_\_\_\_\_

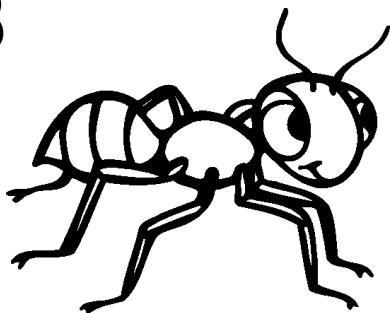


1

2



3



4



Which picture rhymes with tree? \_\_\_\_\_

Which picture rhymes with sky? \_\_\_\_\_

Which picture rhymes with plant? \_\_\_\_\_

Which picture rhymes with cloth? \_\_\_\_\_

Name \_\_\_\_\_

Connect the letter on the left with  
the same letter on the right, using a  
different color for each.

G

I

T

R

R

K

B

g

K

t

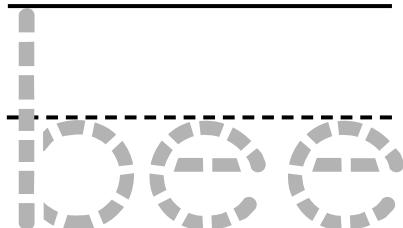
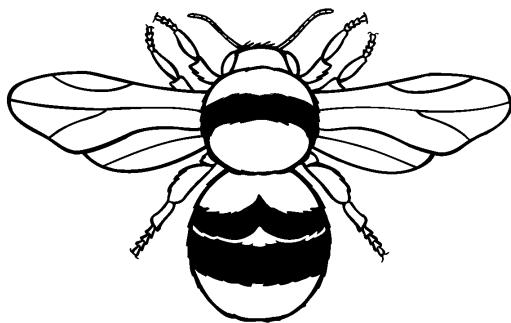
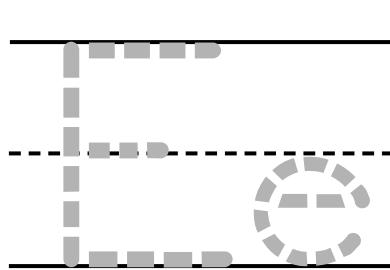
L

b

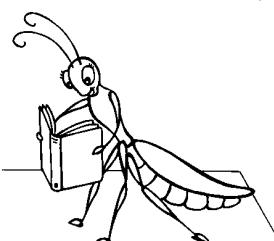
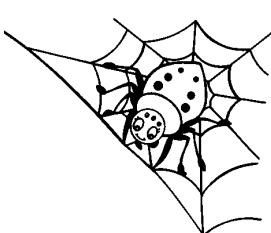
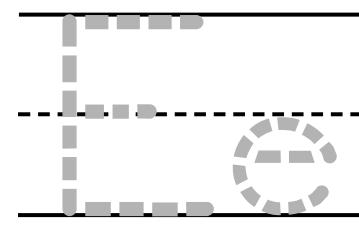
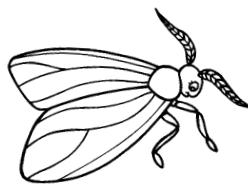
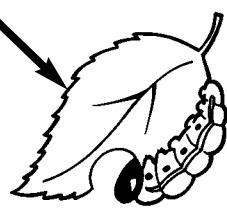
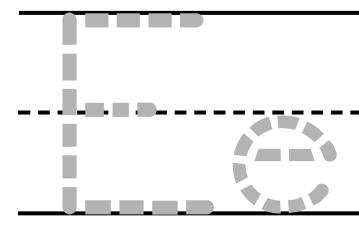
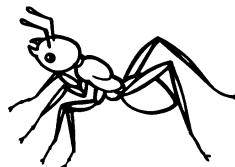
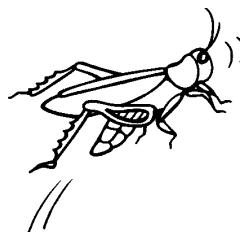
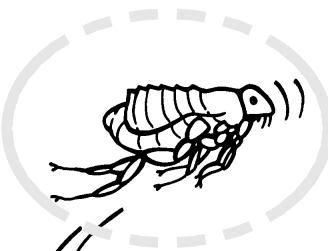
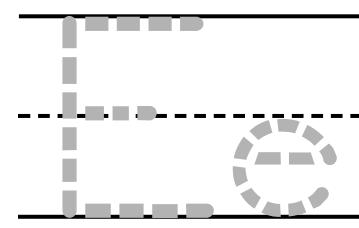


Name \_\_\_\_\_

Trace the Ee at the beginning of each row. A BEE is a kind of insect. Say the word “bee” and listen for the long “e” sound.



Now name the pictures and circle the ones that have the long “e” sound (as in “bee”).

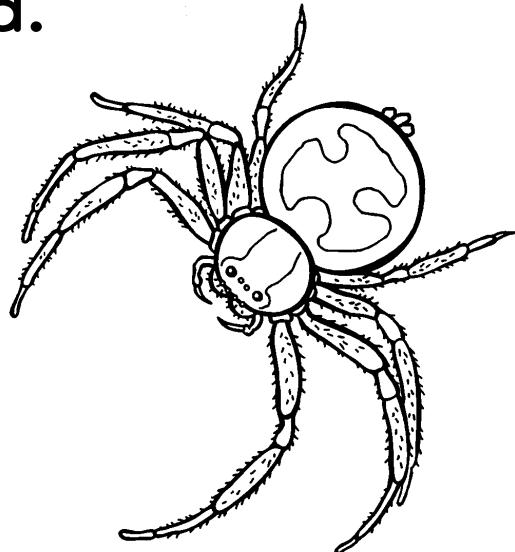


Name \_\_\_\_\_

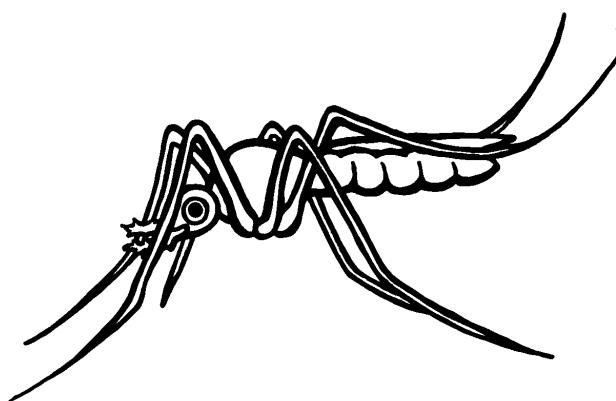
Draw a line from each picture

to its ending letter sound.

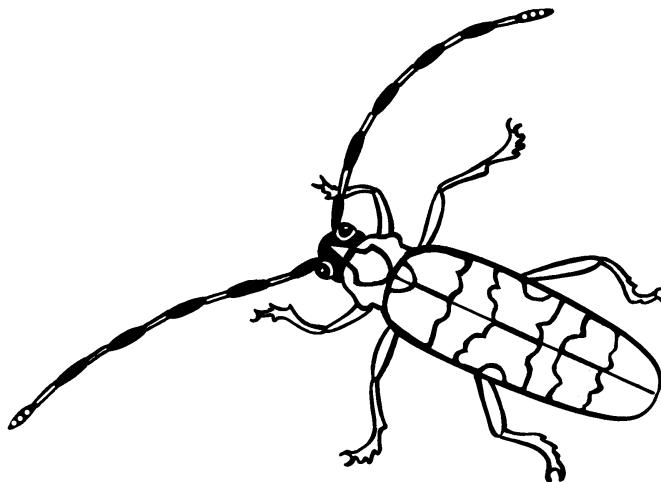
Oo



Ll

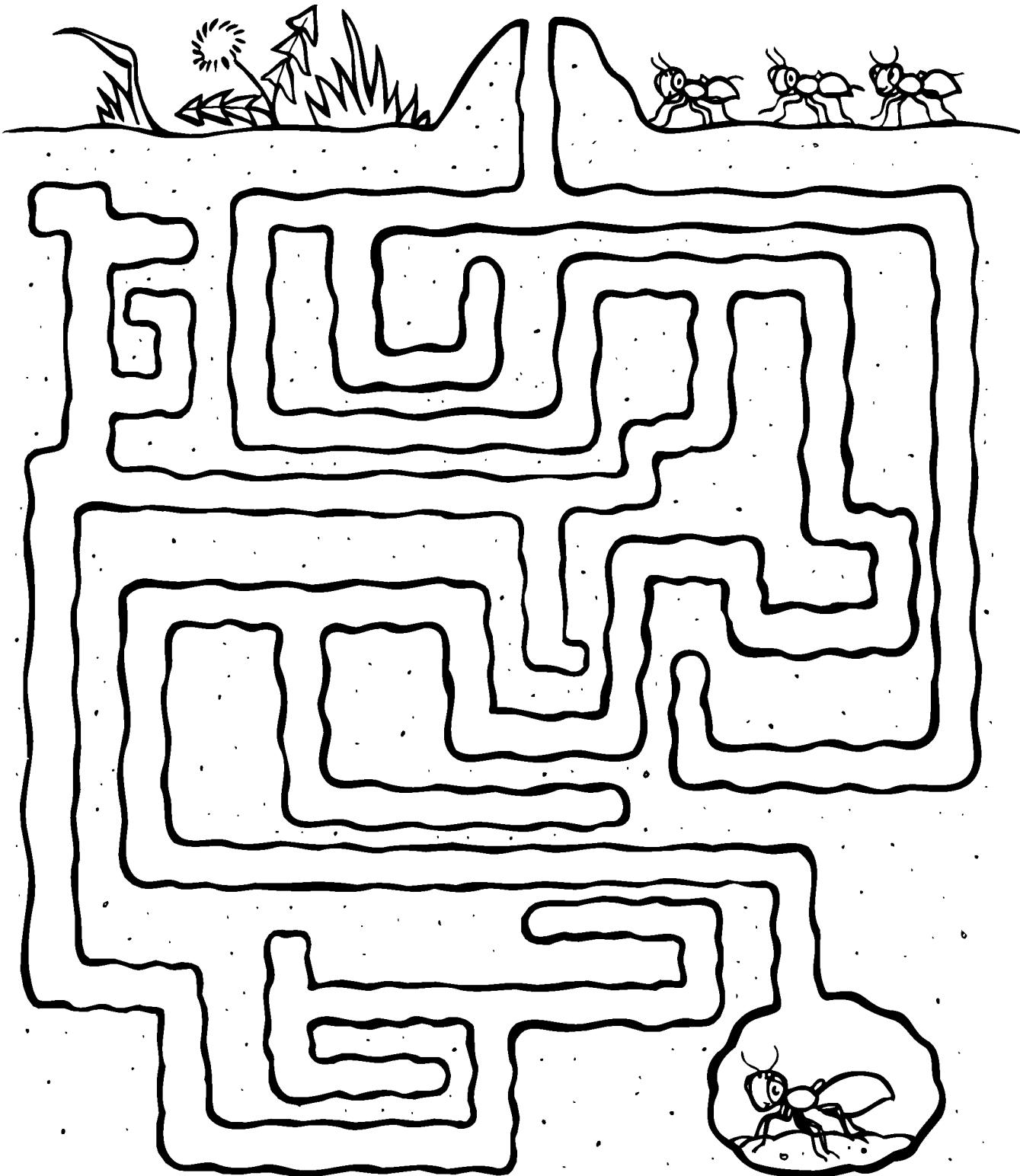


Rr



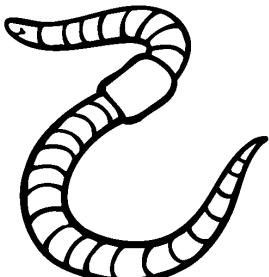
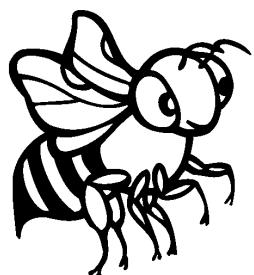
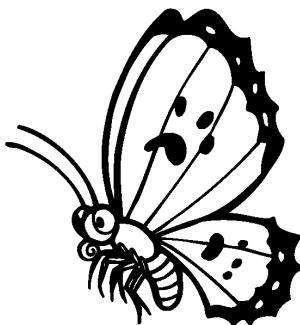
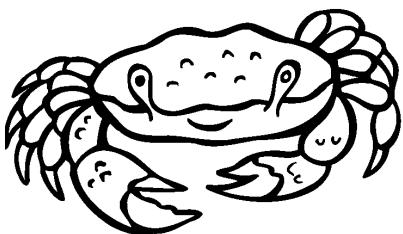
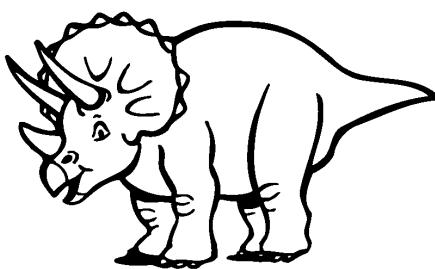
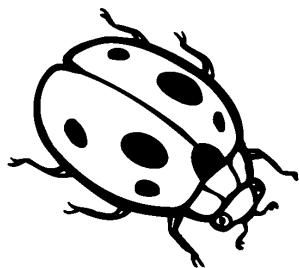
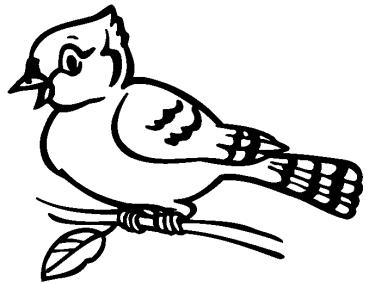
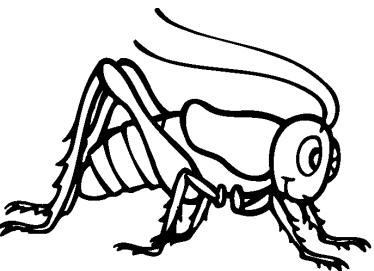
Name \_\_\_\_\_

Ants live underground. Draw a line  
from the anthill to their home underground.



Name \_\_\_\_\_

Insects have six legs, and most adult insects have wings. Color the animals that are insects, and put an X through the animals that are not insects.

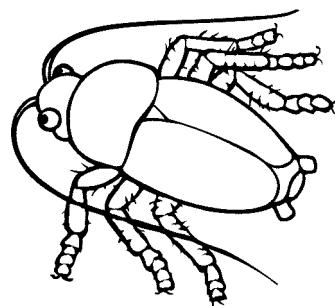
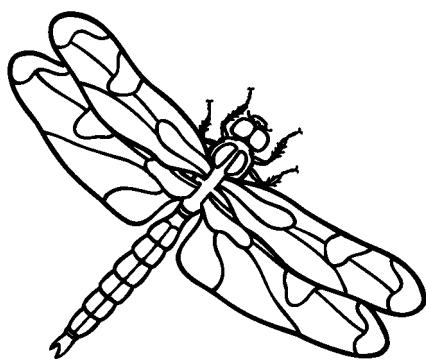
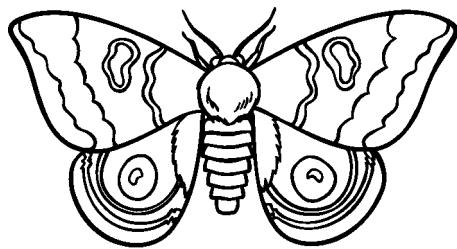
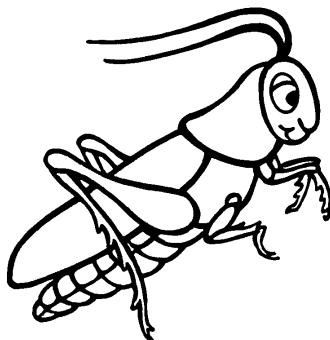
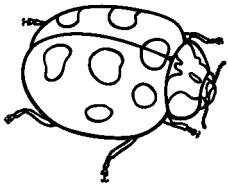
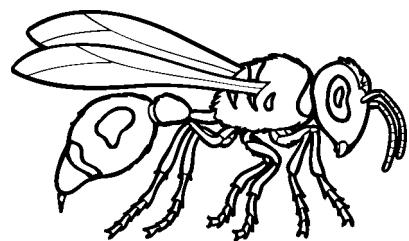
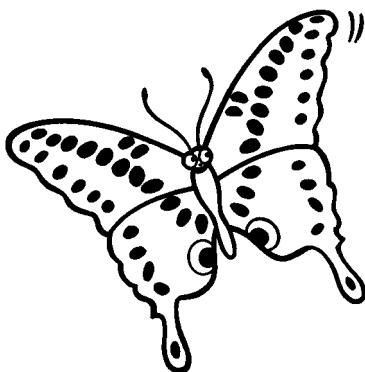
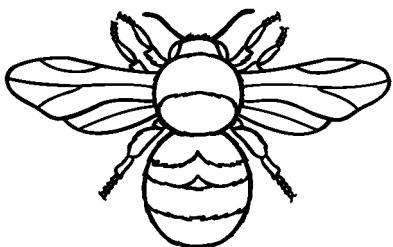


Name \_\_\_\_\_

Some insects can sting you if they

think you are going to hurt them.

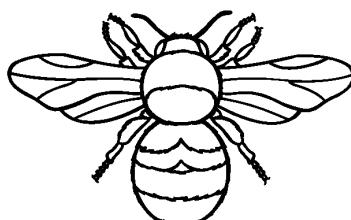
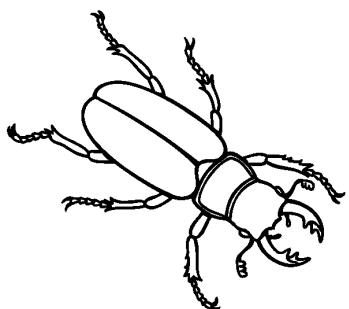
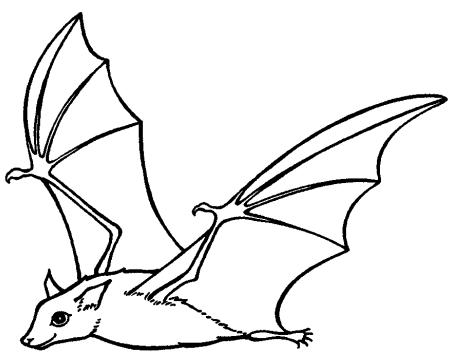
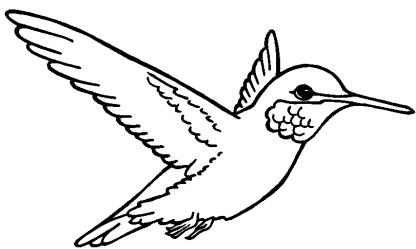
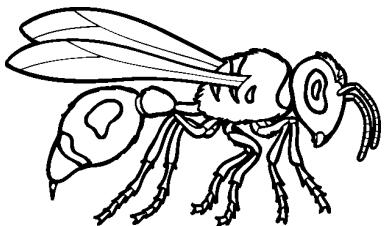
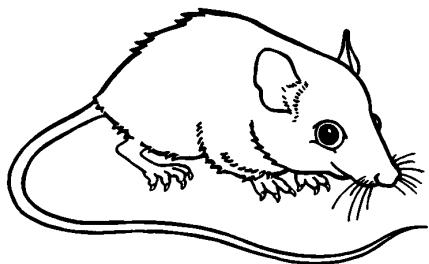
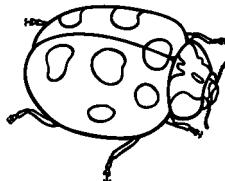
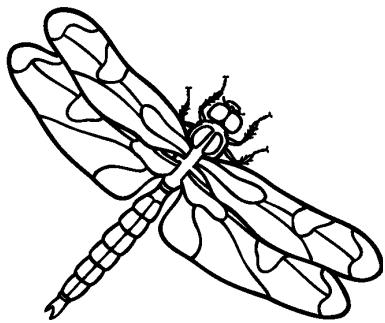
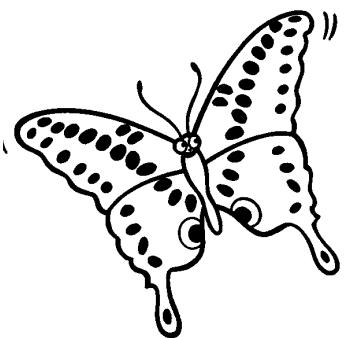
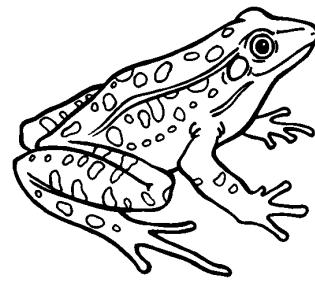
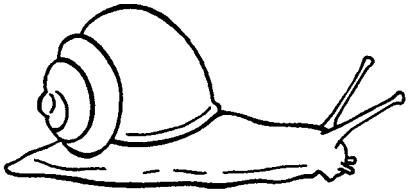
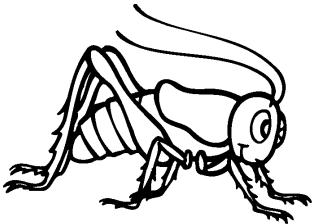
Circle the insects that sting.



Name \_\_\_\_\_

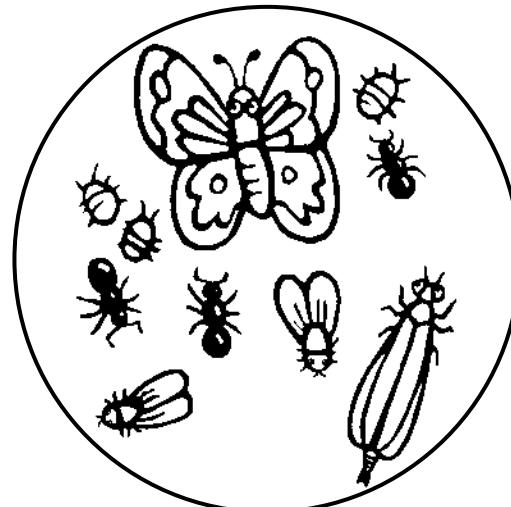
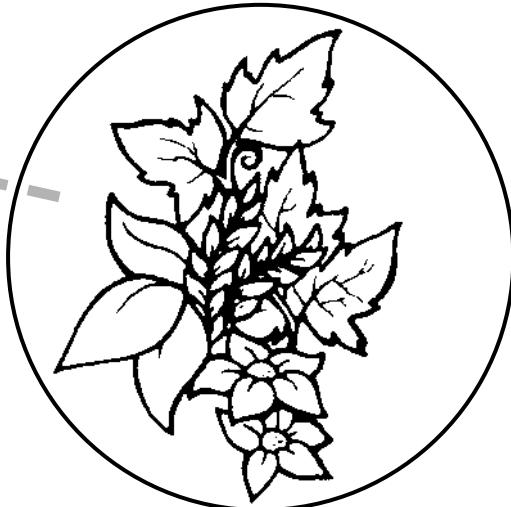
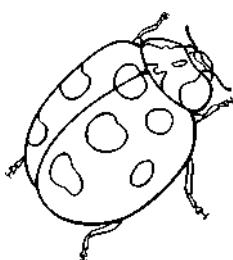
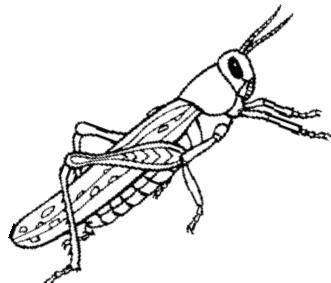
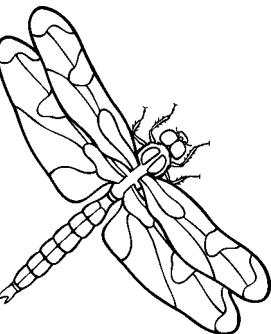
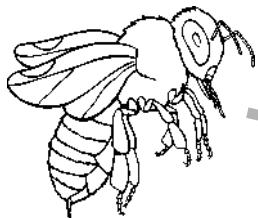
Color the insects. Draw an X on

those which are not insects.



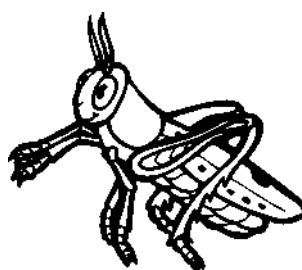
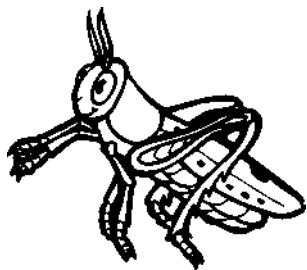
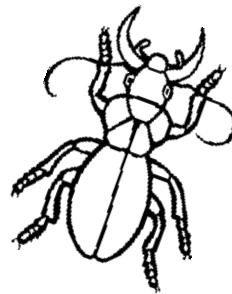
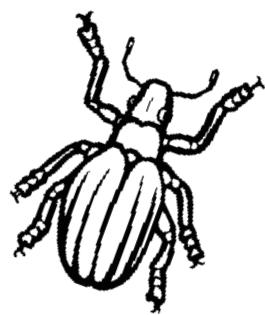
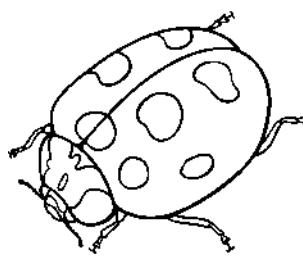
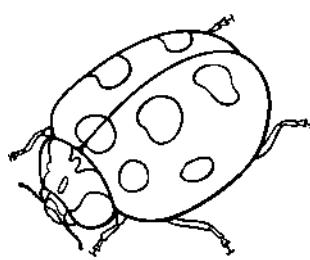
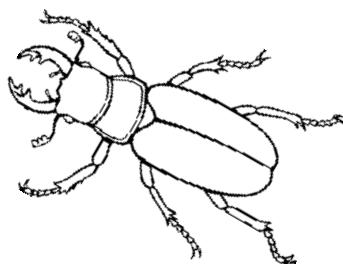
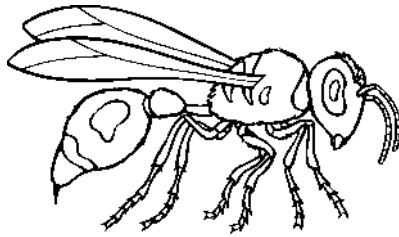
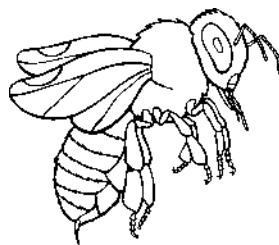
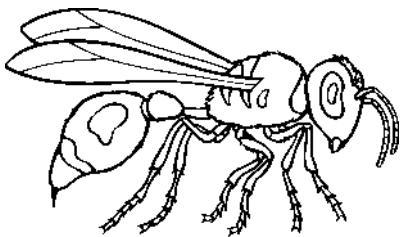
Name \_\_\_\_\_

Some insects are carnivores (meat eaters) and some are herbivores (plant eaters). Look at your fact files and draw a line from the insect to its food.



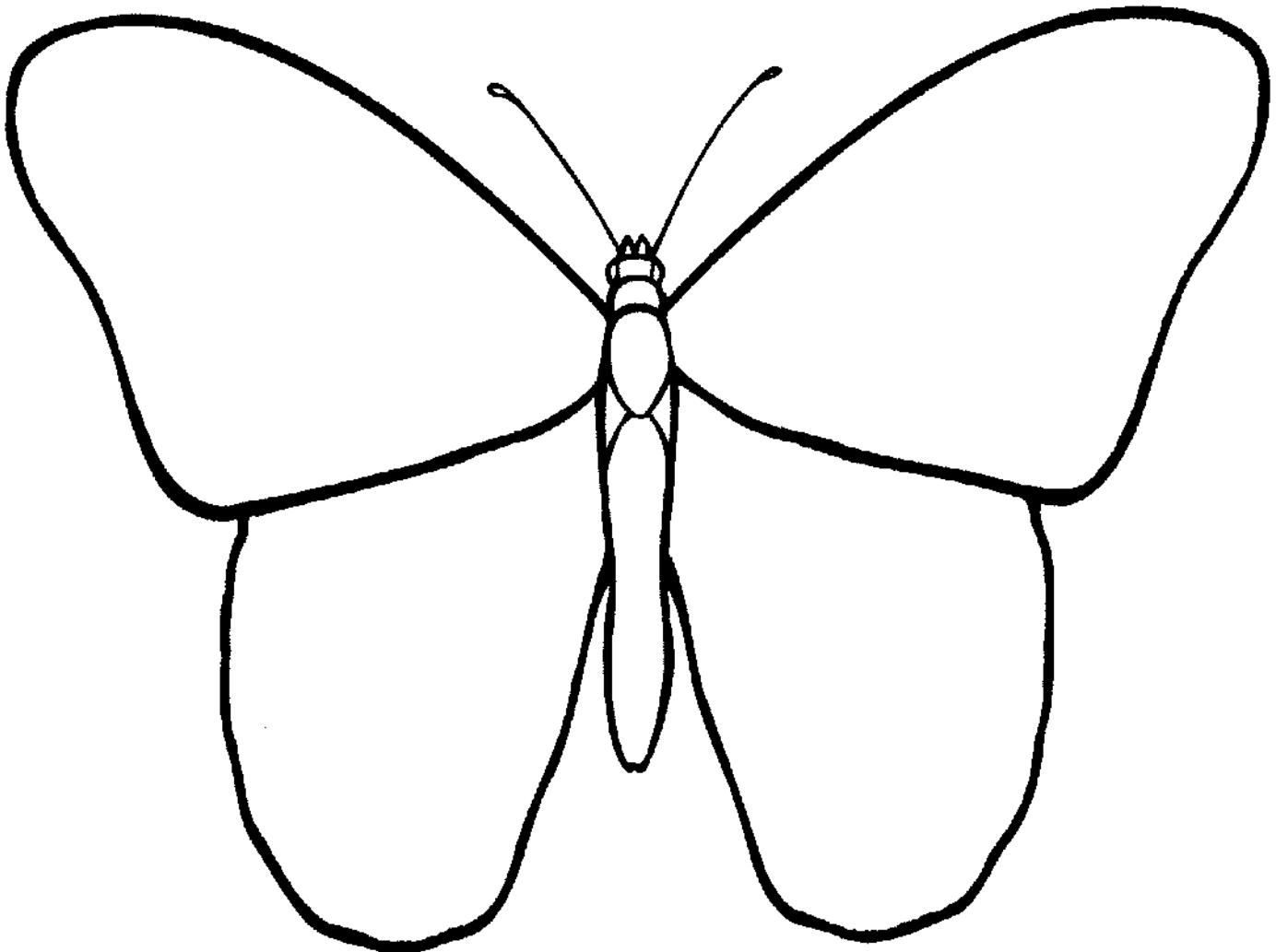
Name \_\_\_\_\_

There are millions of different kinds of insects. Draw an X through the image in each row that does not match. Color the others.



Name \_\_\_\_\_

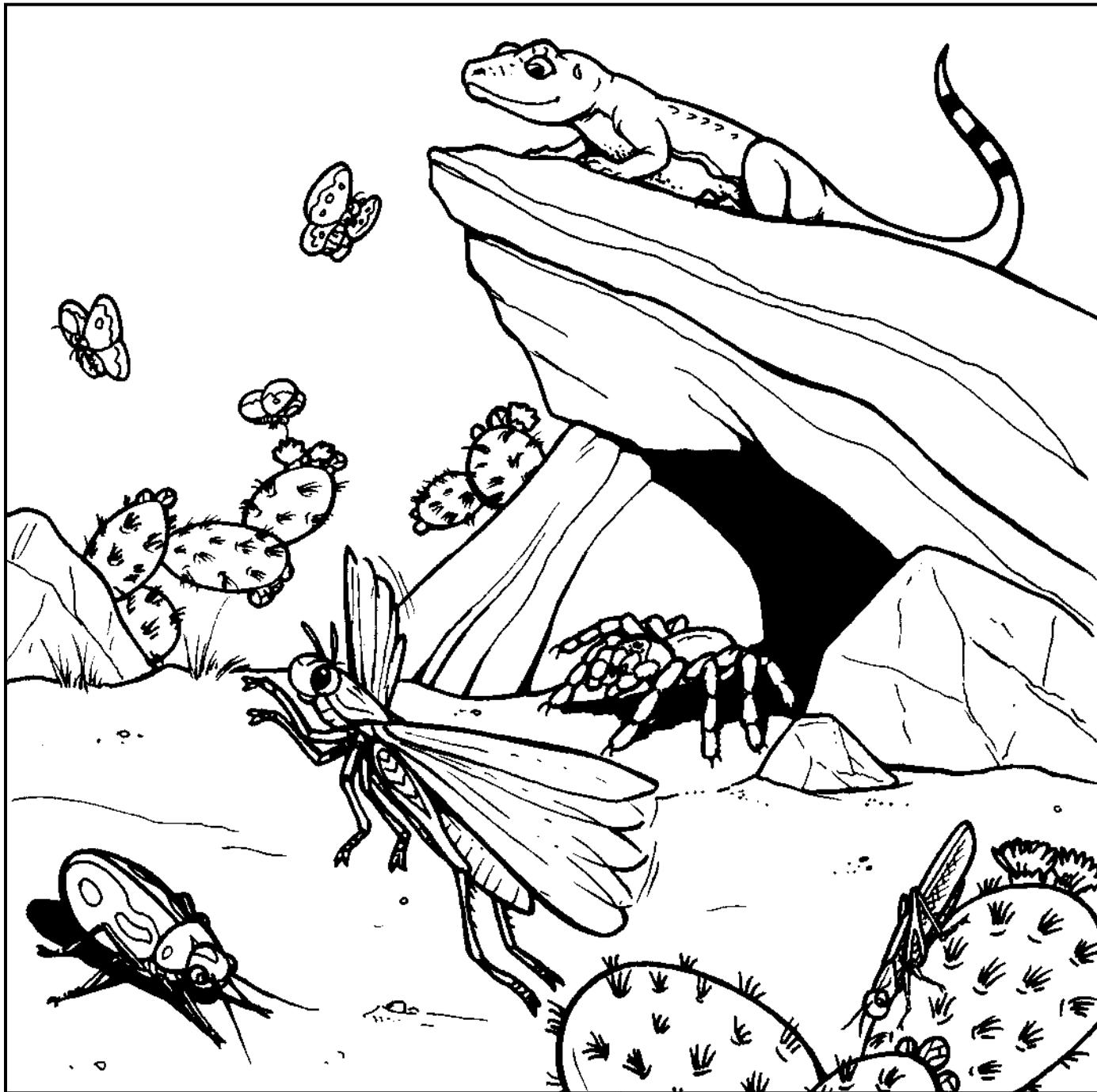
Butterflies have many brightly colored markings on their wings. Use your imagination and draw a design on this butterfly's wings. Then color the butterfly.



Name \_\_\_\_\_

All insects have six legs and antennae.

Draw an X through all of the animals that are not insects. Then color the picture.

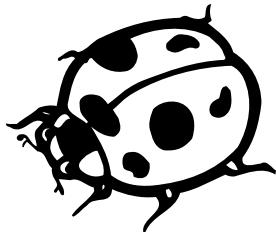


SKILL: WHAT IS AN INSECT?

Name \_\_\_\_\_

Color the ladybug red, the wasp  
yellow, and the butterfly blue.

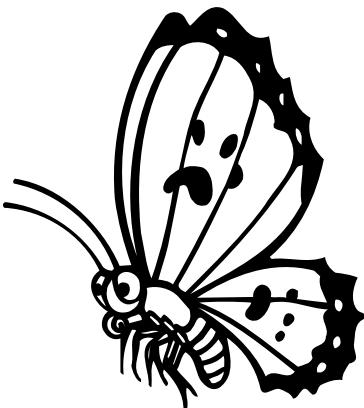
Then write the words.



Red



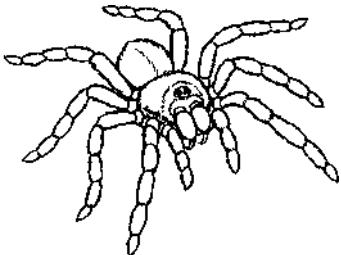
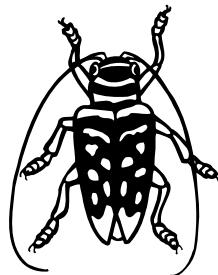
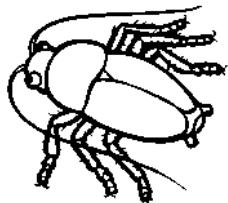
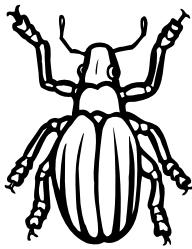
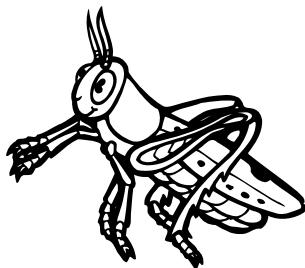
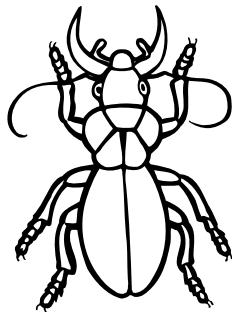
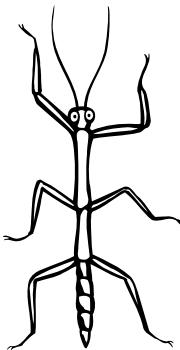
Yellow



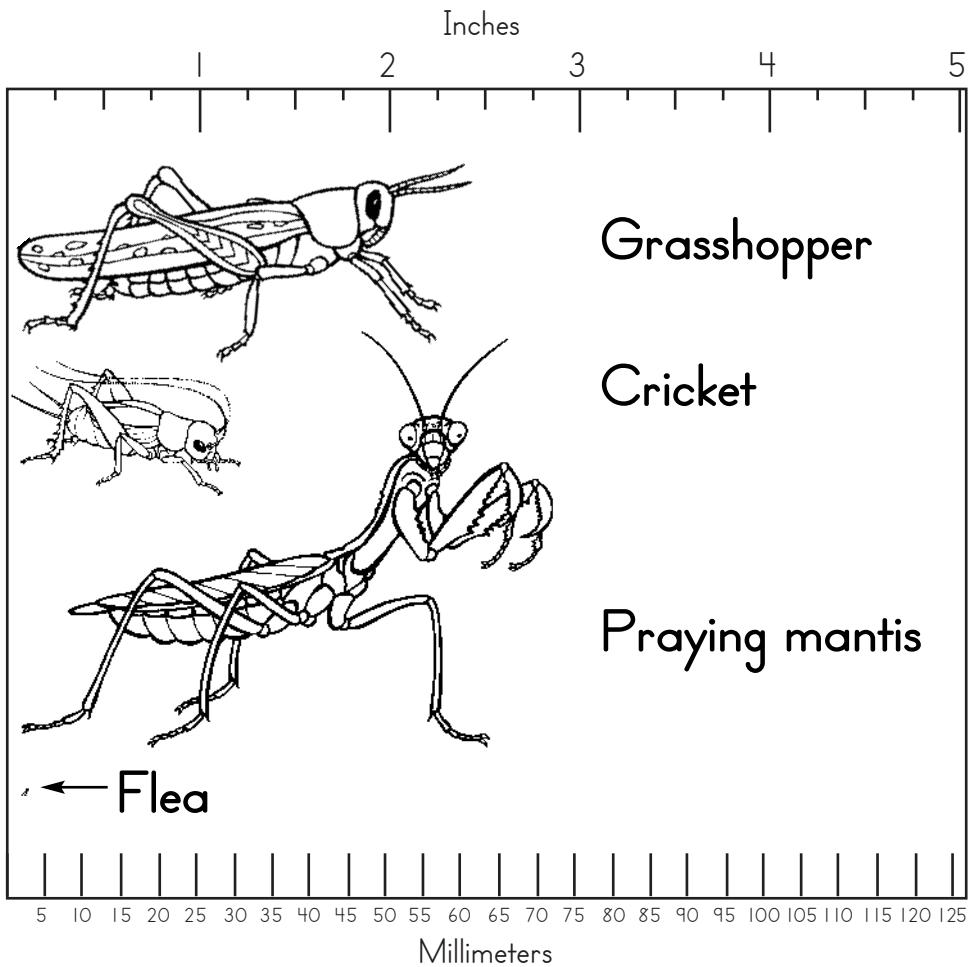
Blue

Name \_\_\_\_\_

Insects have six legs. Spiders have eight legs. Put a blue circle around the insects and a red circle around the spiders.



Name \_\_\_\_\_



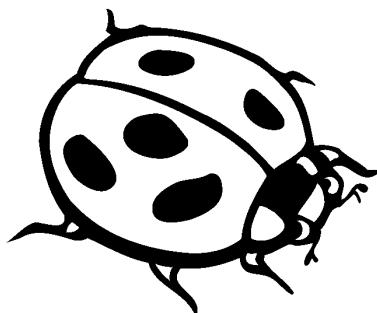
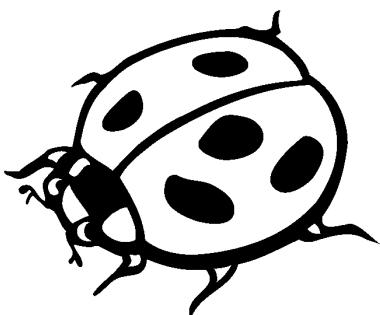
Which insect is longest? \_\_\_\_\_

Which insect is the closest to 2 inches?  
\_\_\_\_\_

Which insect is less than 5 millimeters?  
\_\_\_\_\_

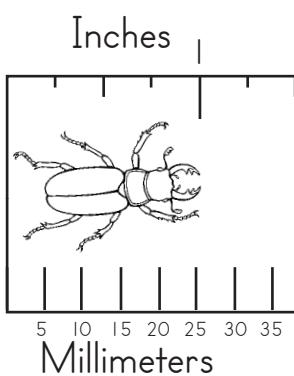
Name \_\_\_\_\_

Draw a line between the matching  
insects and spiders.



SKILL: THINGS THAT ARE THE SAME

Name \_\_\_\_\_

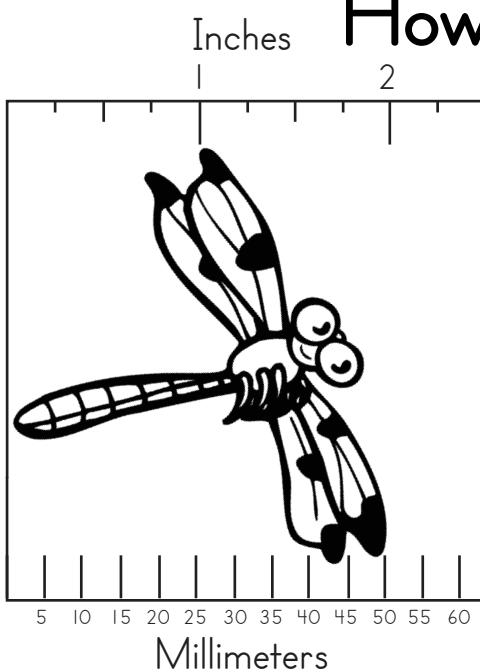


## How long is the beetle?

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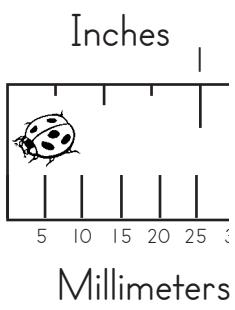


## How long is the dragonfly?

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## How long is the ladybug?

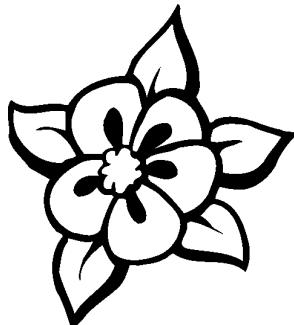
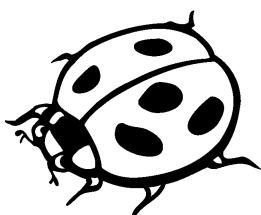
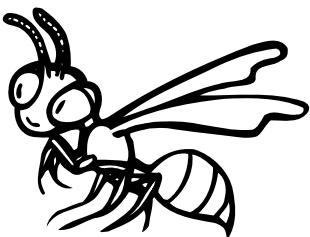
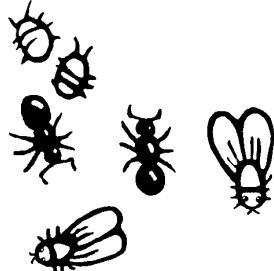
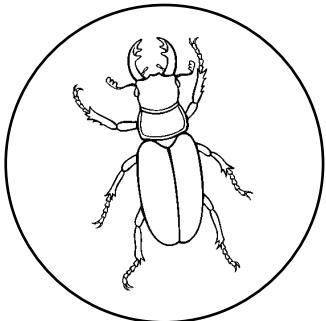
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Name \_\_\_\_\_

Draw a circle around the beetle  
and the food that it eats. Draw a square  
around the ladybug and the food that it  
eats. Draw a triangle around the wasp  
and the food that it eats.

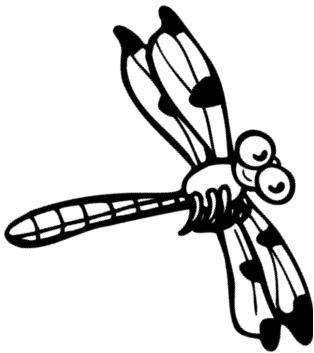
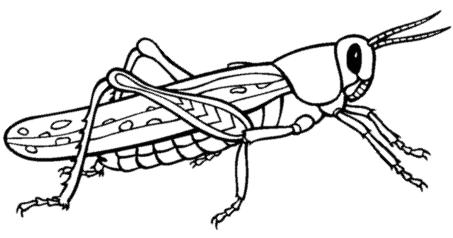


Name \_\_\_\_\_

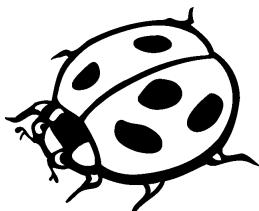
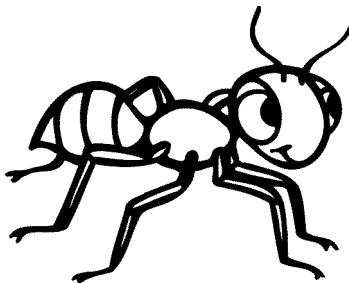
Write fly next to the insects that fly.

Write jump next to the insects that jump.

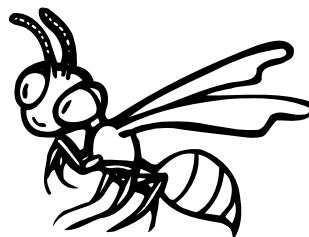
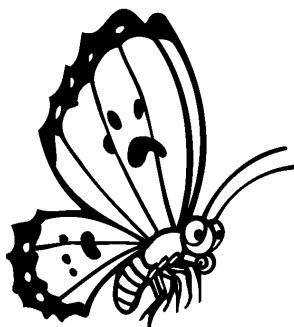
Write crawl next to the insects that crawl.



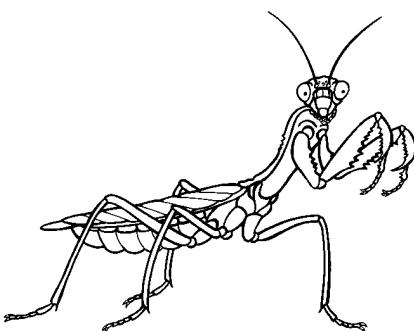
jump



crawl



fly



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

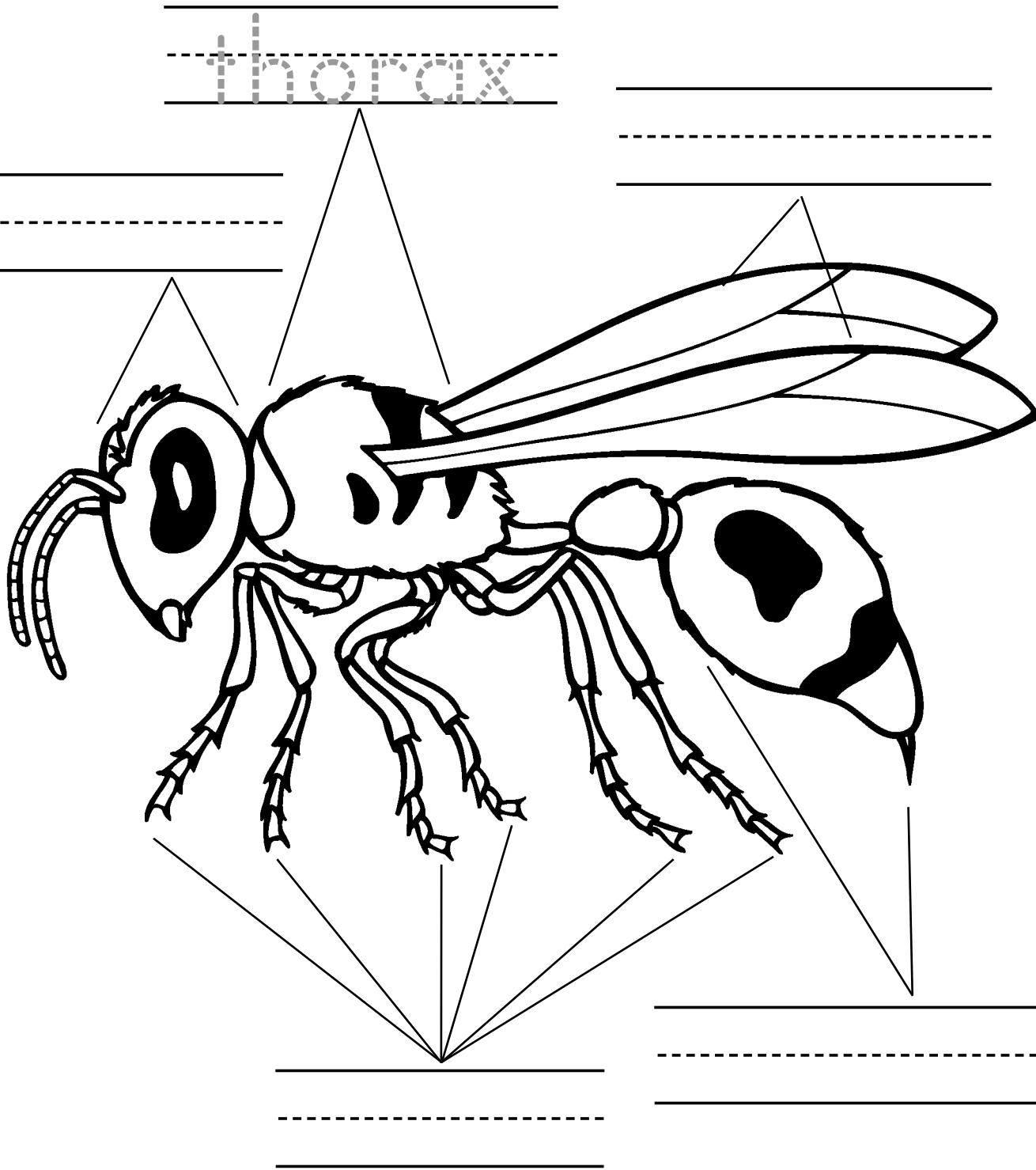
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

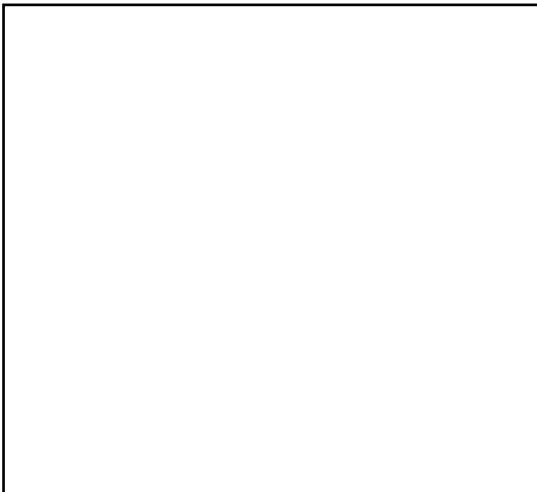
Name \_\_\_\_\_

Write down three parts of the wasp,  
then color it in.



Name \_\_\_\_\_

Draw a picture of the largest insect  
you have seen in the box.



What insect was it?

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Draw a picture of the smallest insect  
you have seen in the box.



What insect was it?

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Name \_\_\_\_\_

I grasshopper

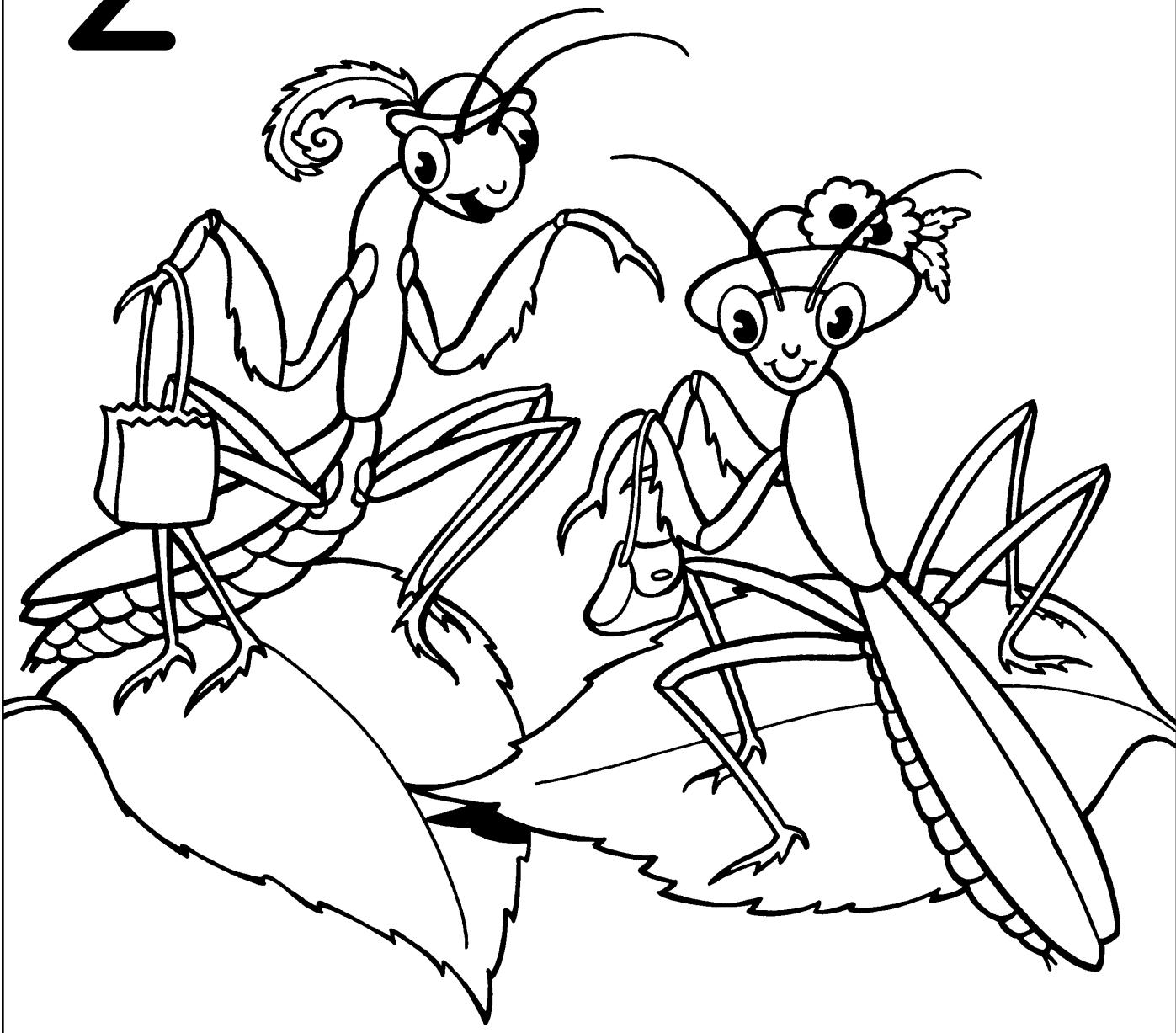


SKILL: COUNT AND WRITE 1

KINDERGARTEN • INSECTS/SPIDERS • MATH • 001

Name \_\_\_\_\_

2 praying mantis



2

2

2

2

2

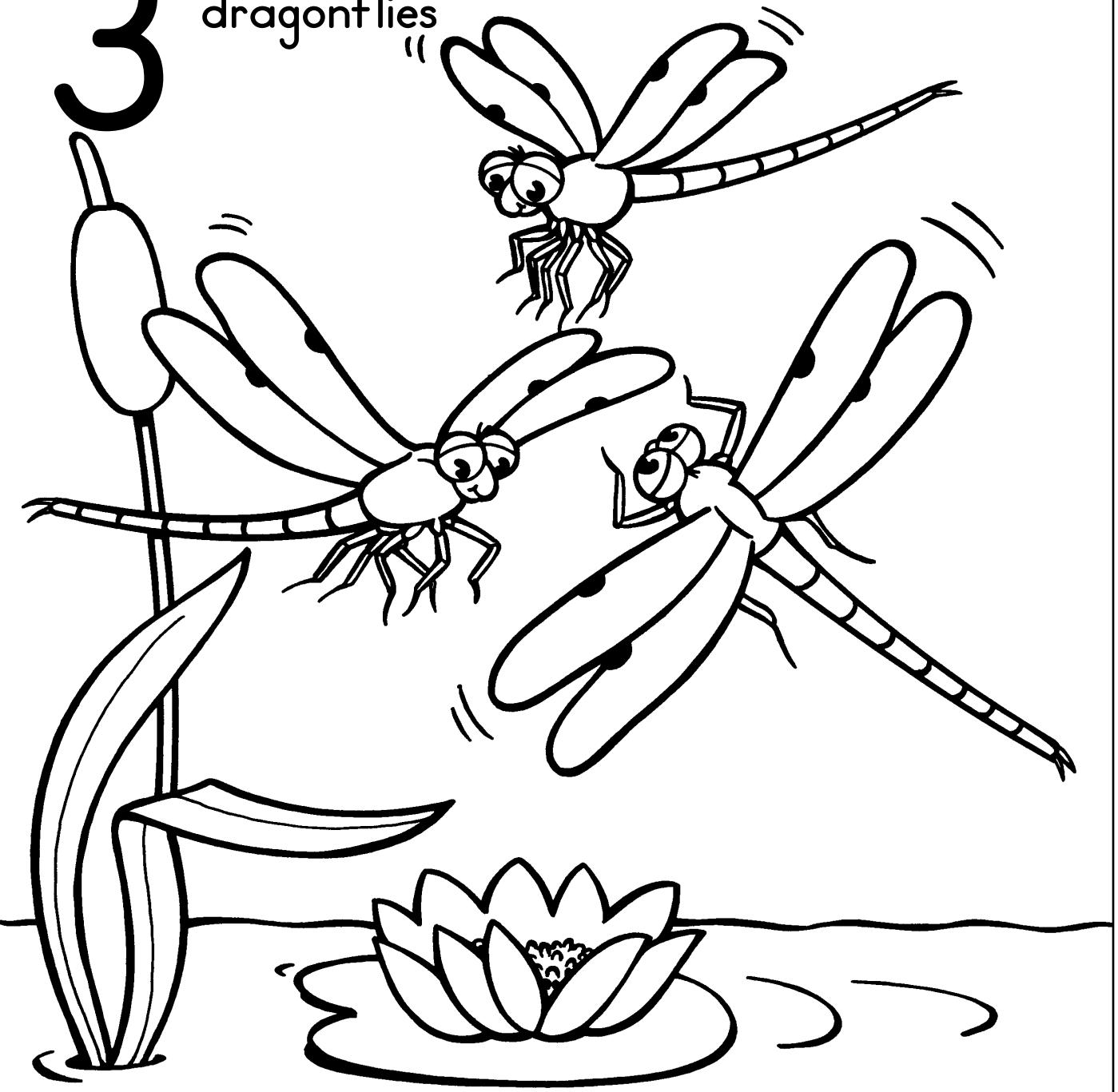
2

2

Name \_\_\_\_\_

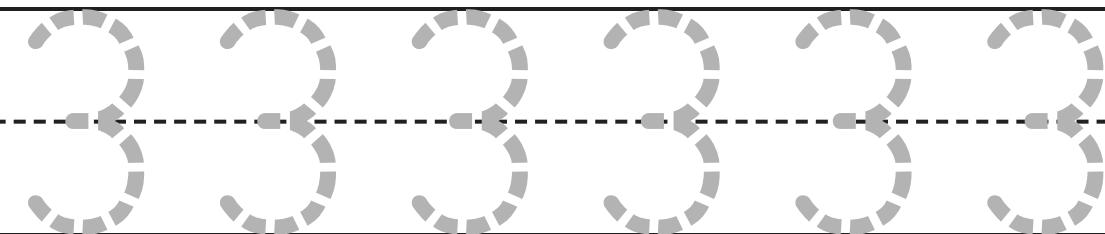
3

dragonflies



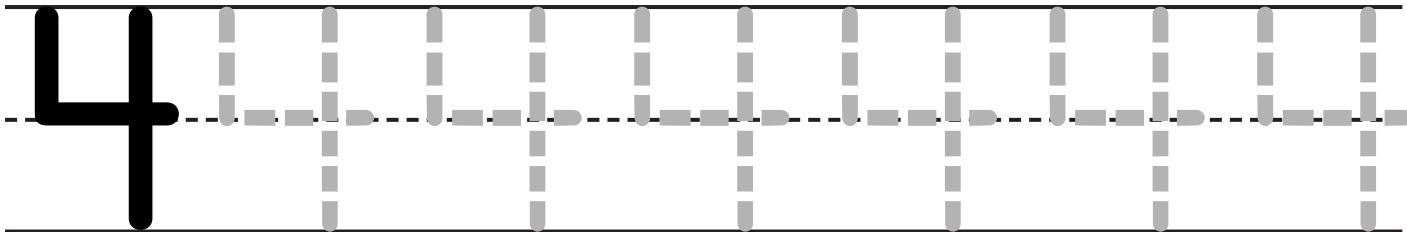
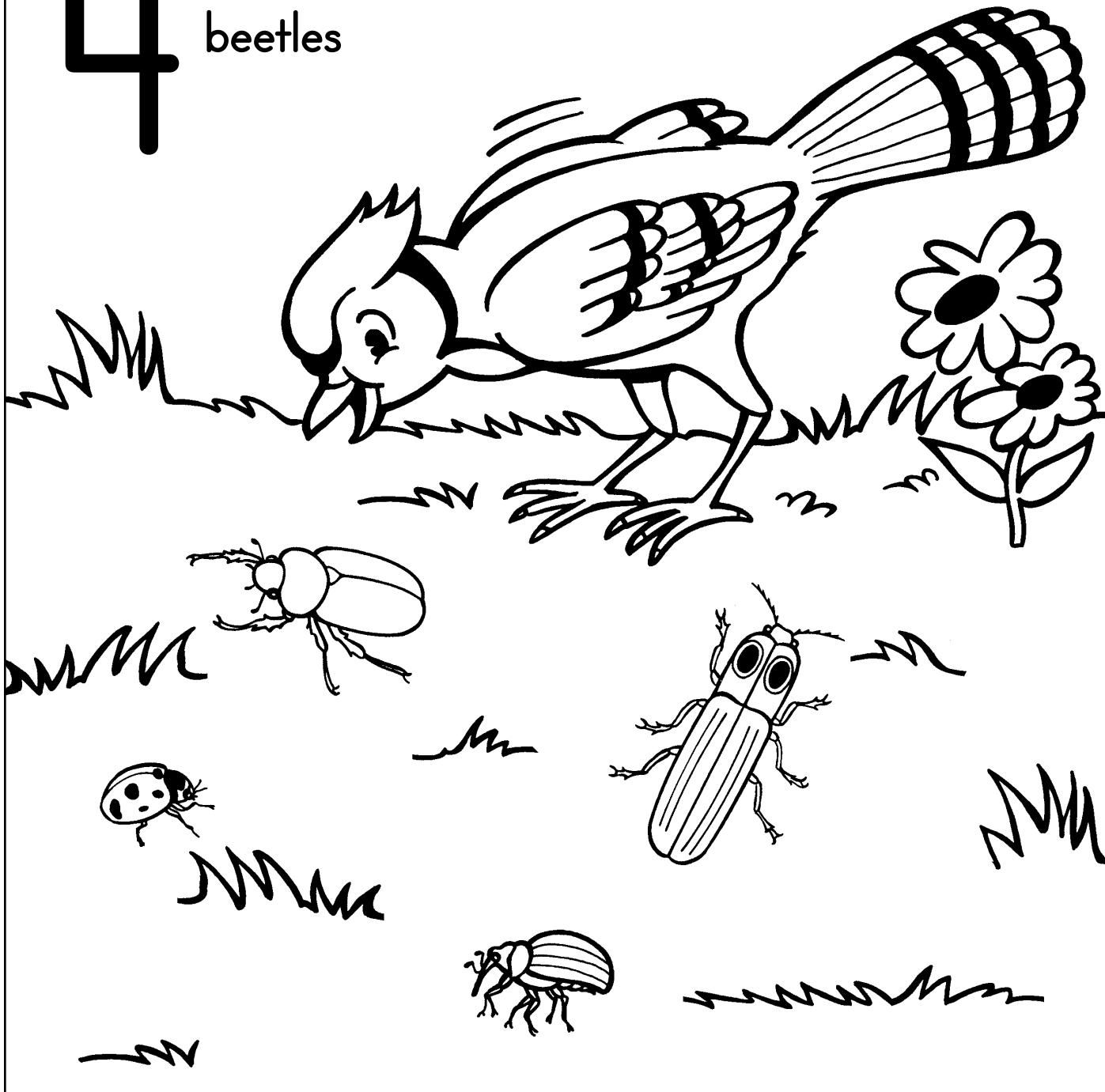
SKILL: COUNT AND WRITE 3

3



Name \_\_\_\_\_

4 beetles



Name \_\_\_\_\_

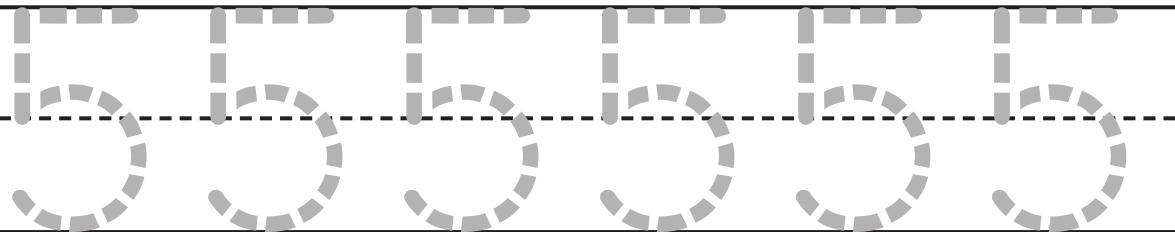
5

butterflies

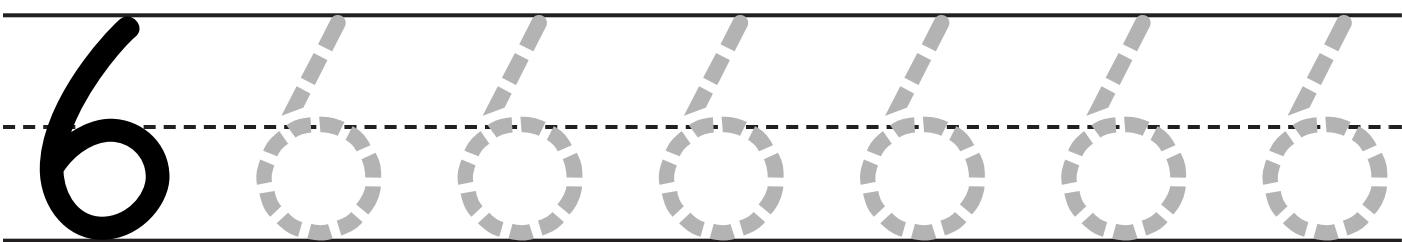
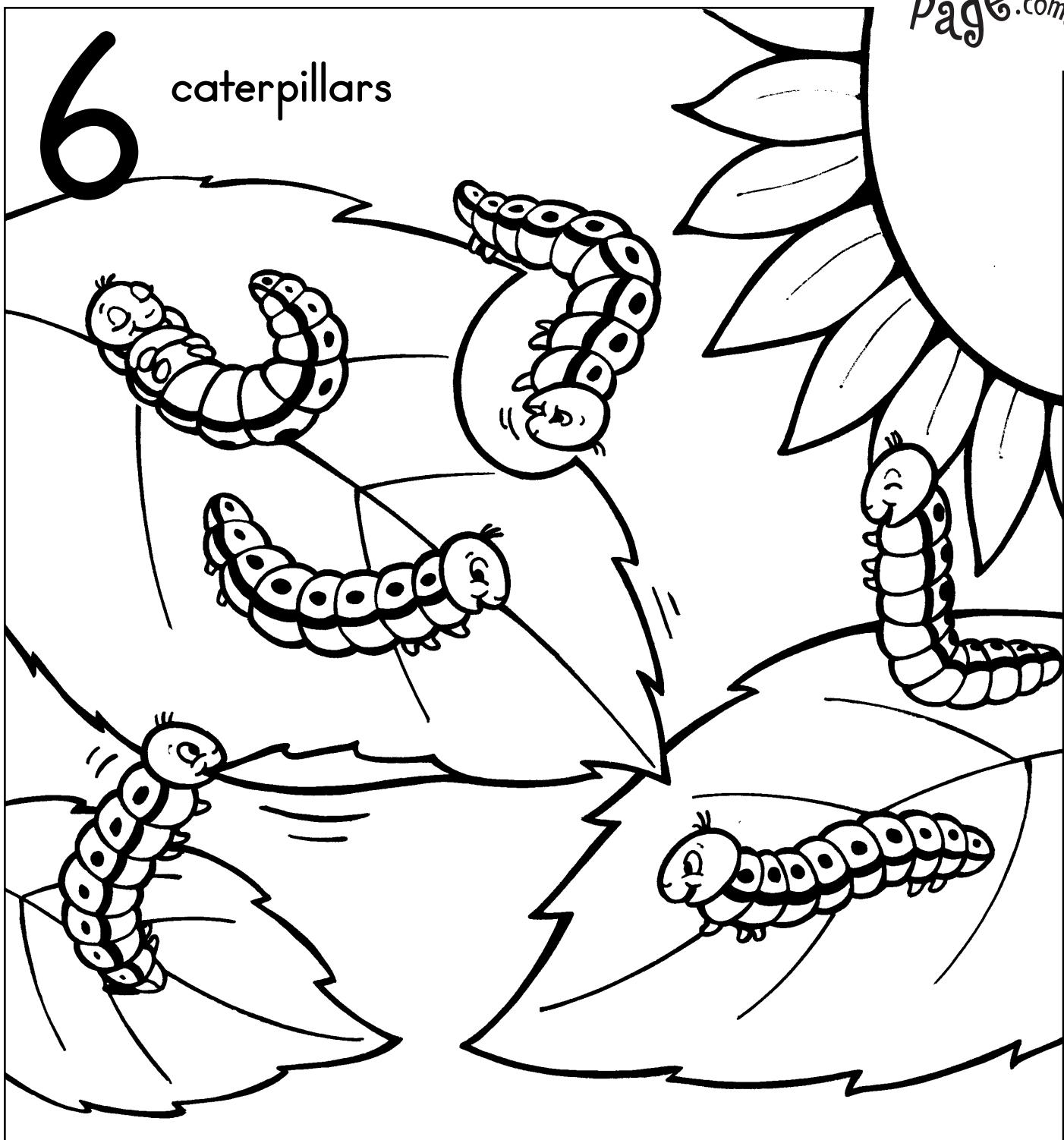


SKILL: COUNT AND WRITE 5

5



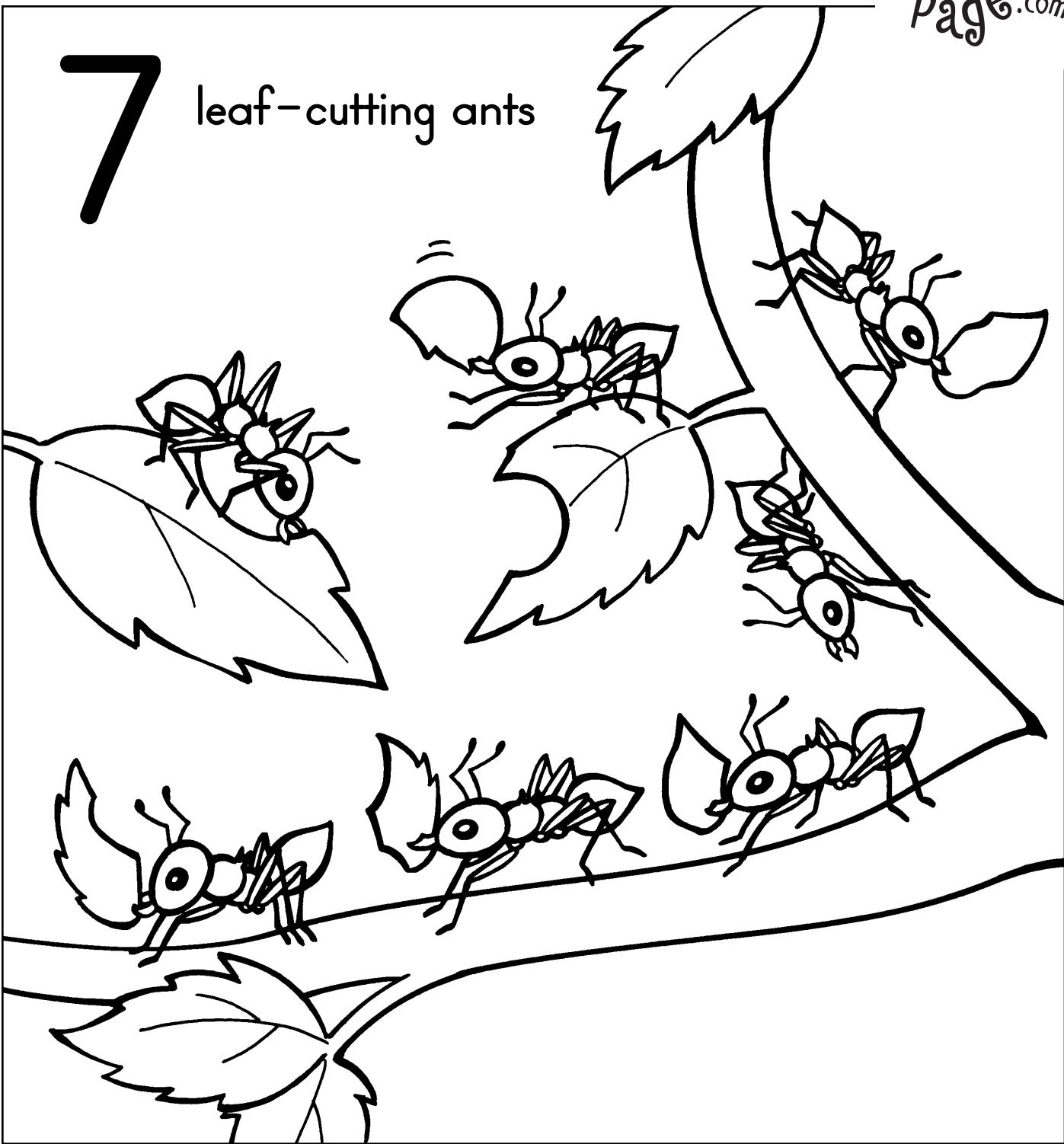
Name \_\_\_\_\_



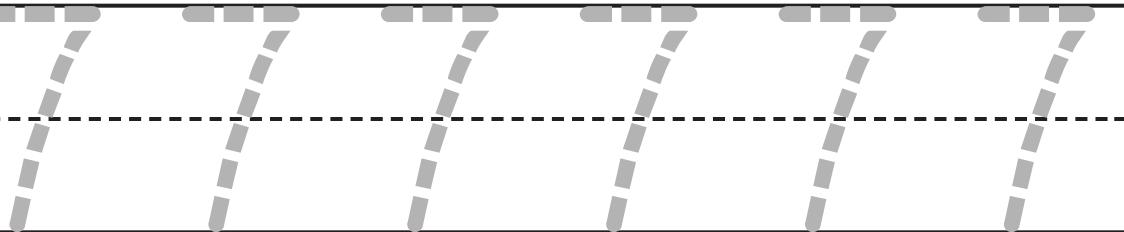
Name \_\_\_\_\_

7

leaf-cutting ants

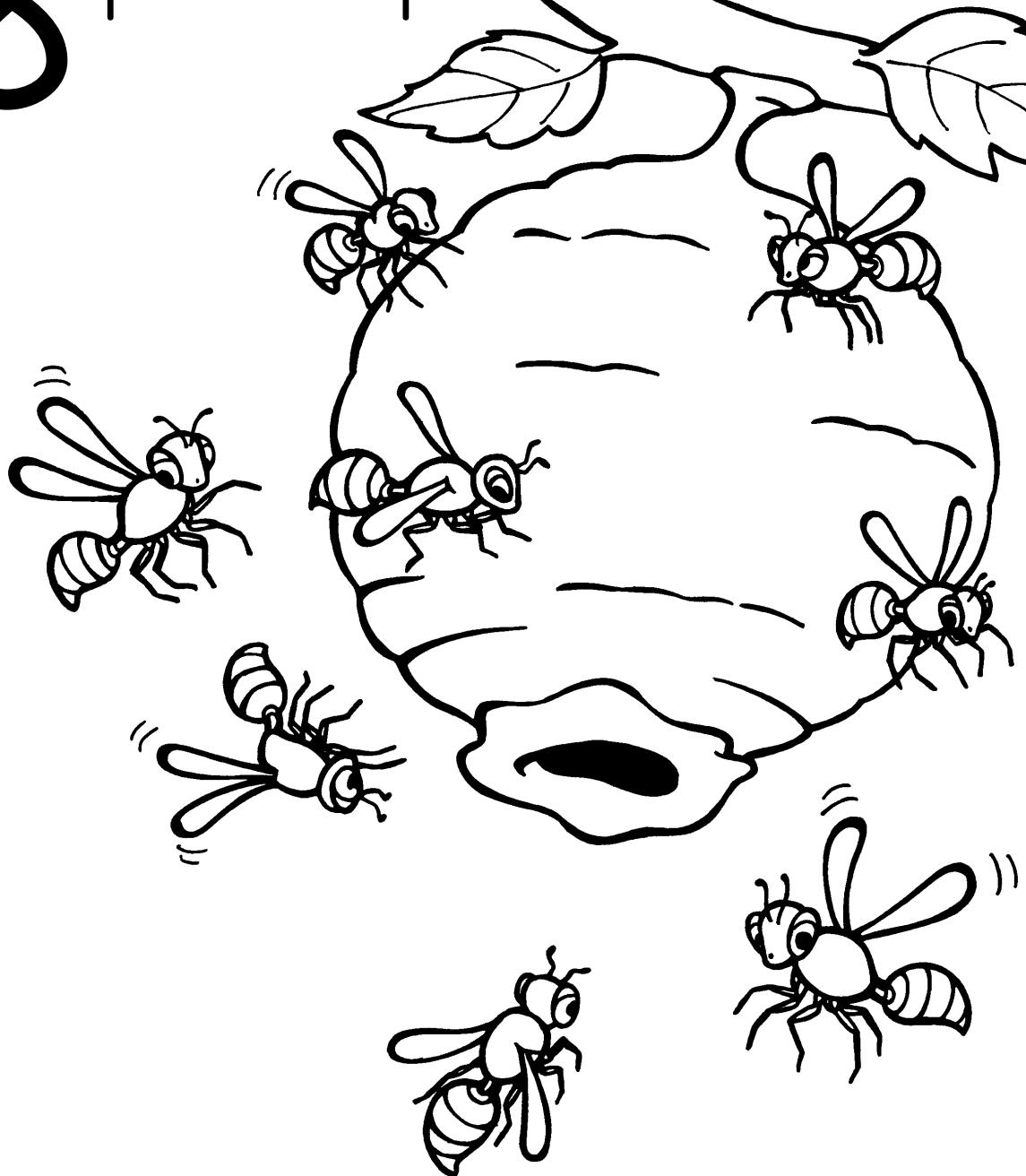


7

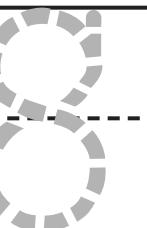
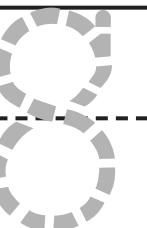
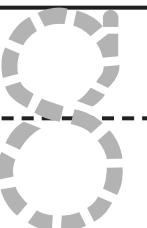
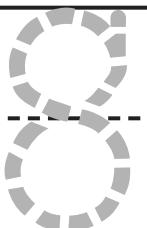
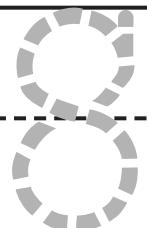


Name \_\_\_\_\_

8 potter wasps



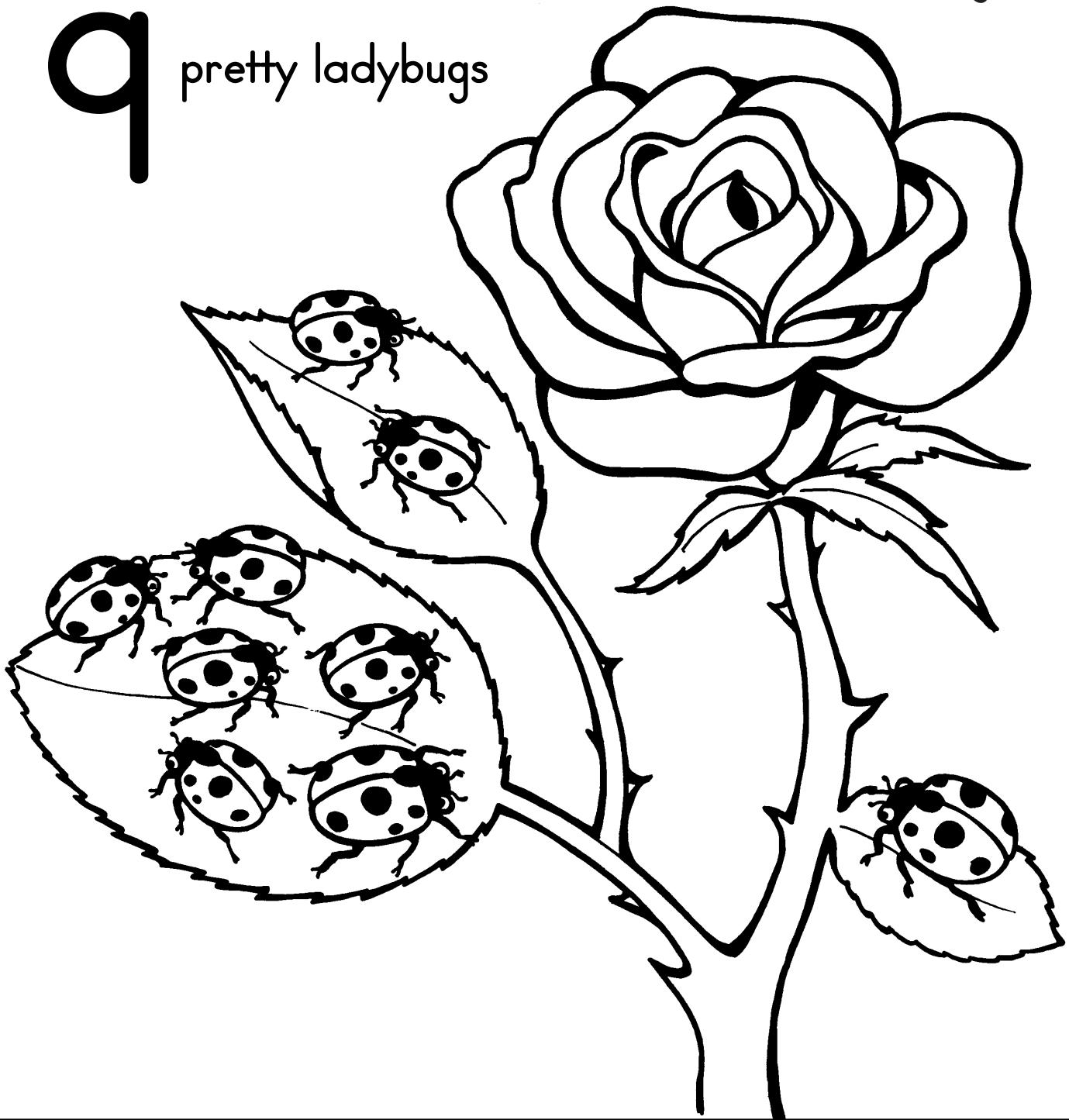
8



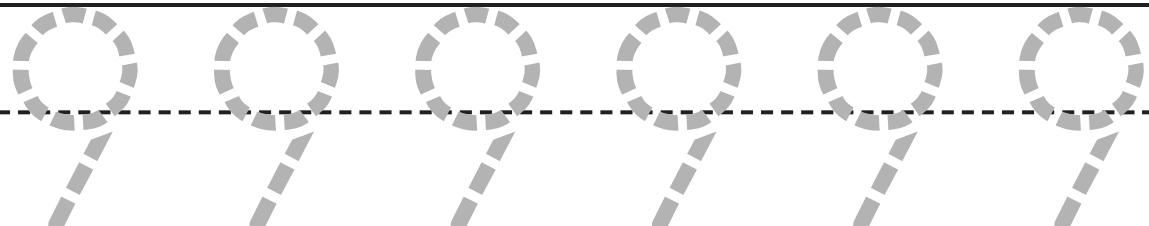
Name \_\_\_\_\_

q

pretty ladybugs



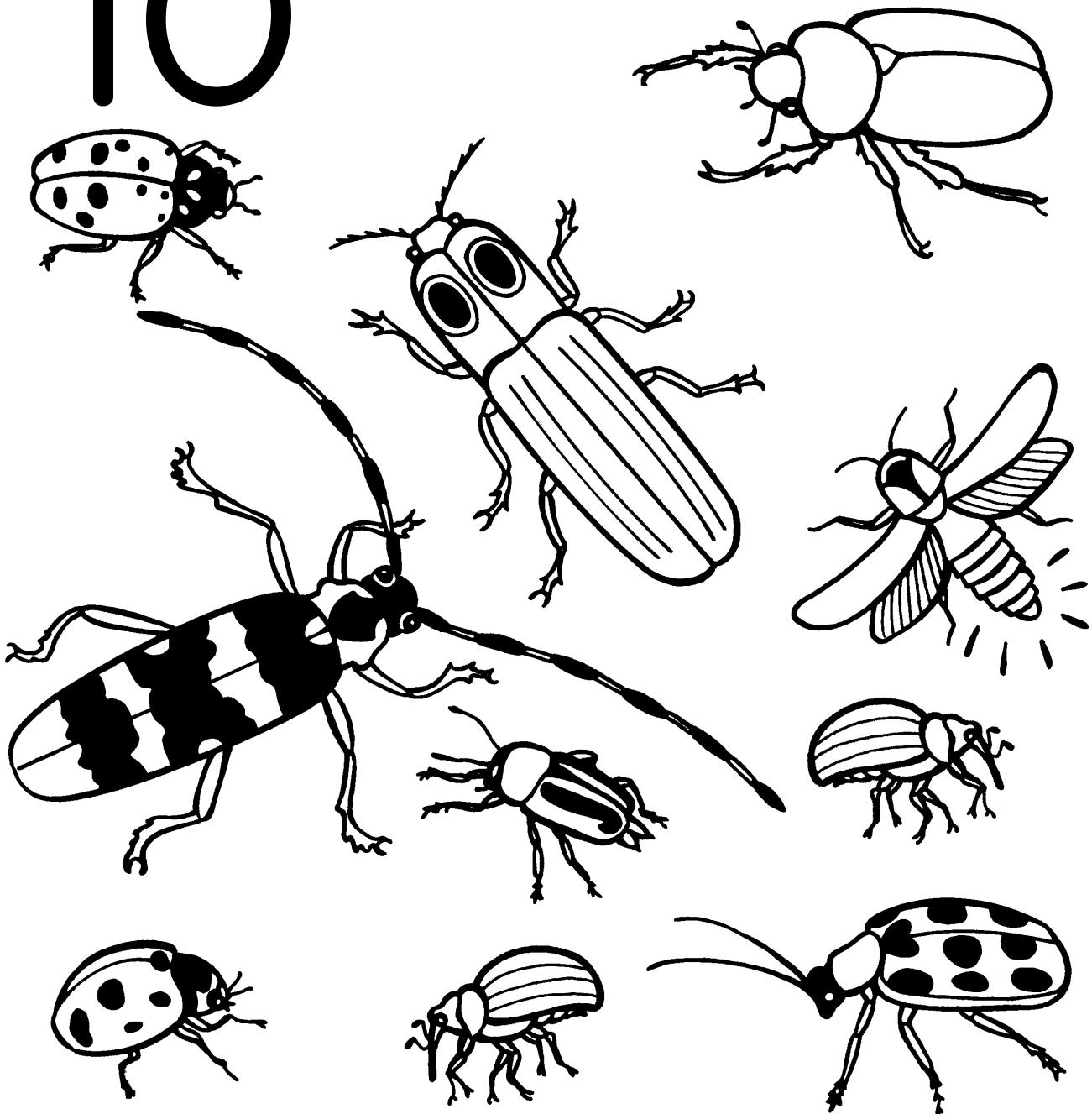
q



Name \_\_\_\_\_

10

beetles



10

10

10

10

Name \_\_\_\_\_

# Find 5 hidden insects. Color them.

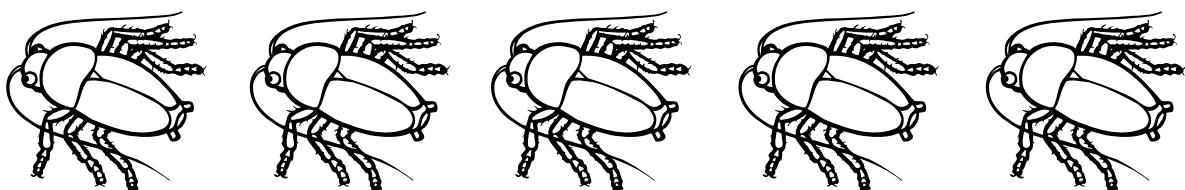
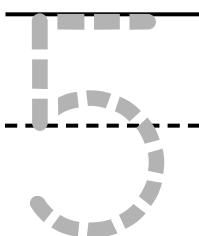
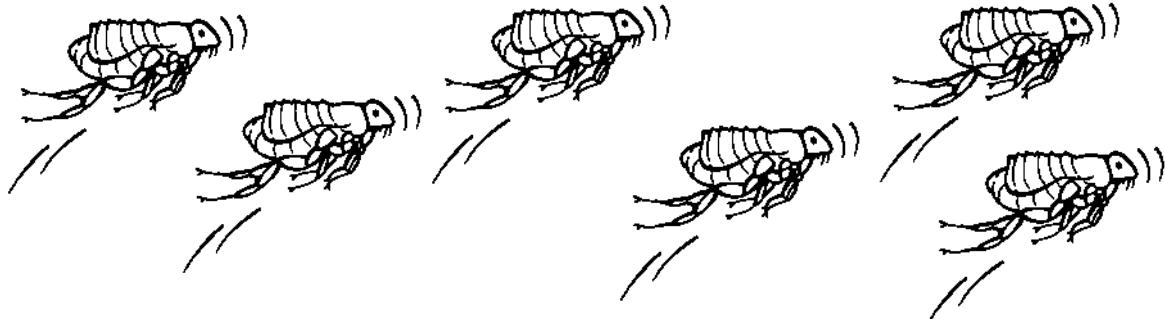
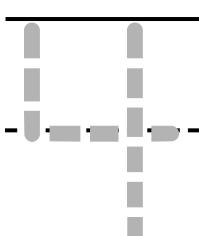
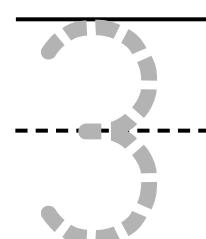
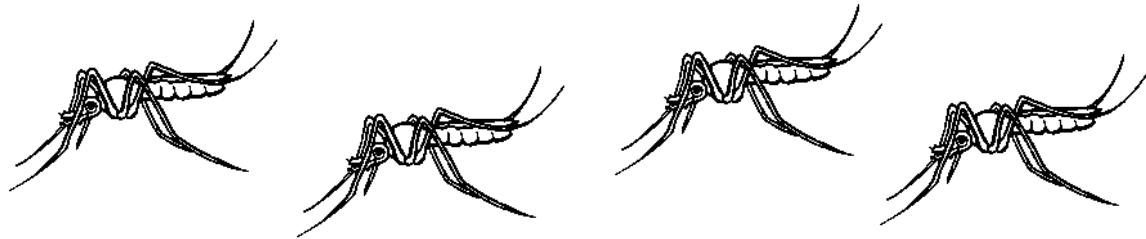
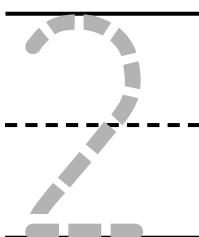
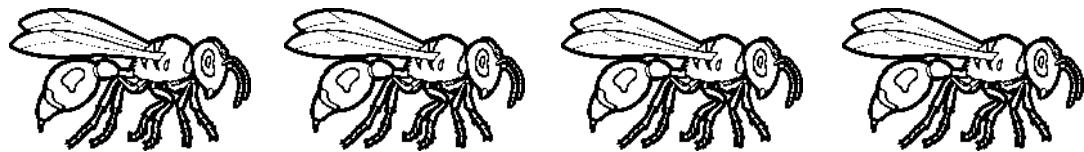
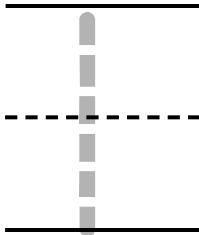


SKILL: HIDDEN PICTURE

Name \_\_\_\_\_

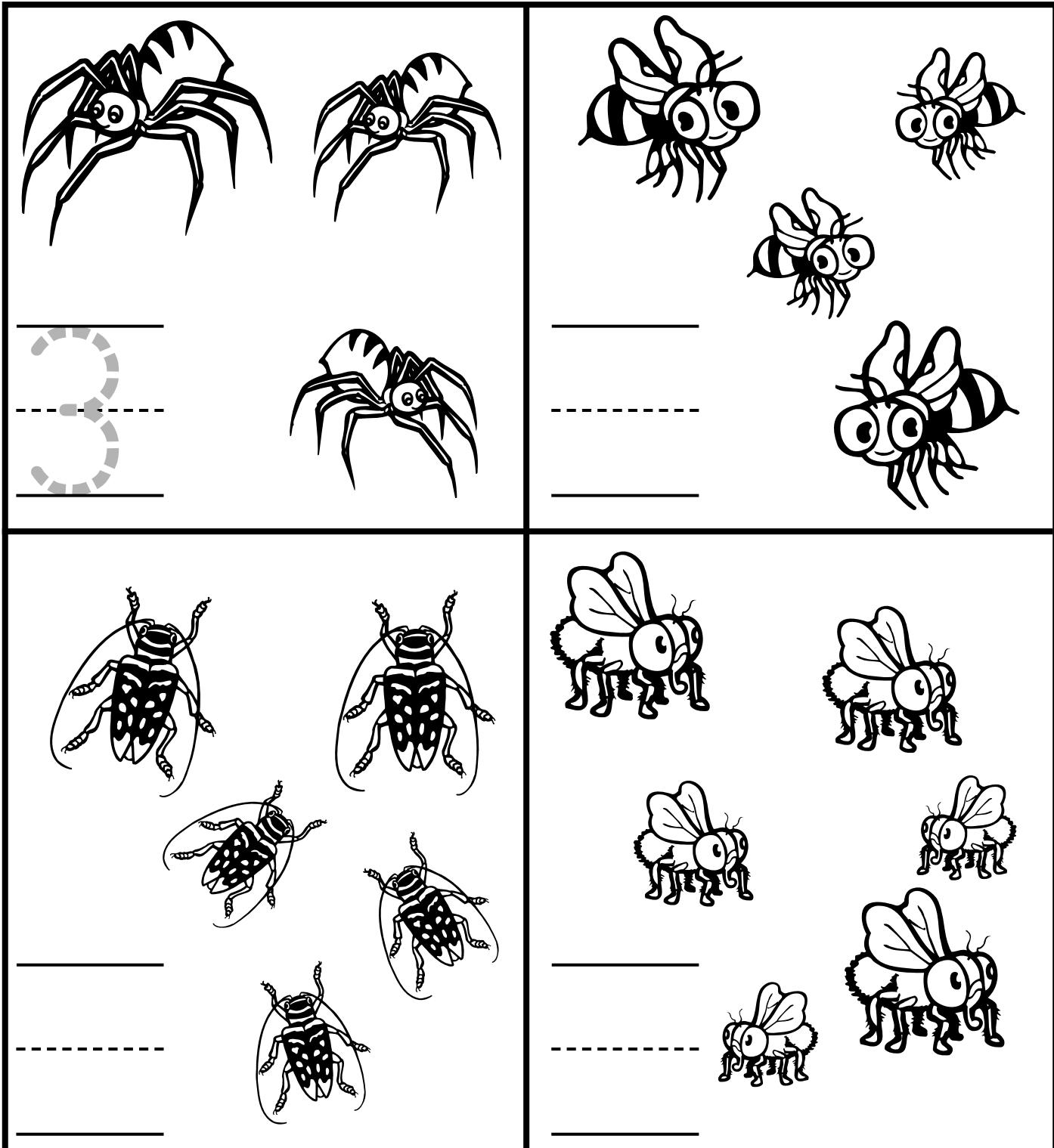
Trace the numbers. Circle the

correct number of insects in each row.



Name \_\_\_\_\_

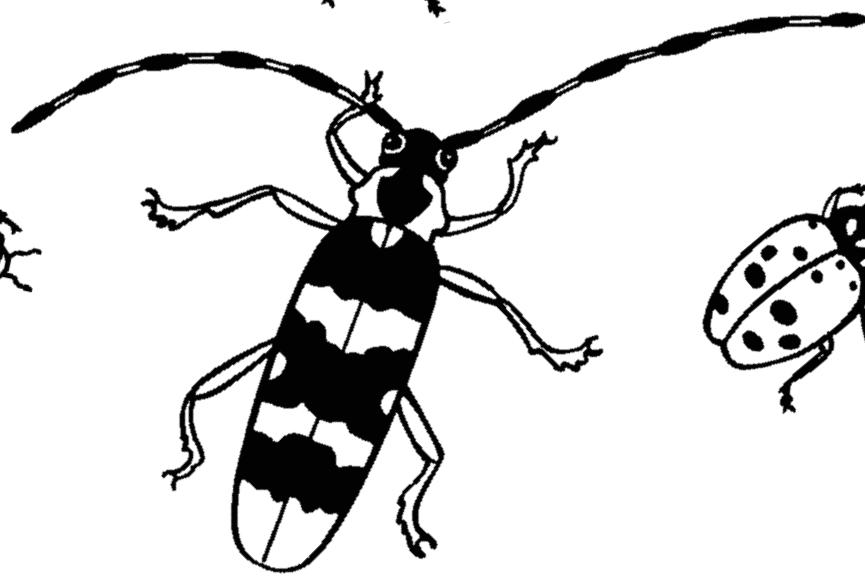
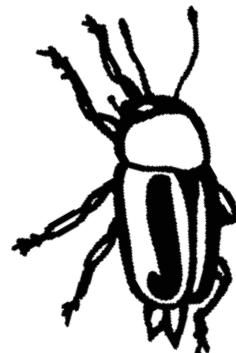
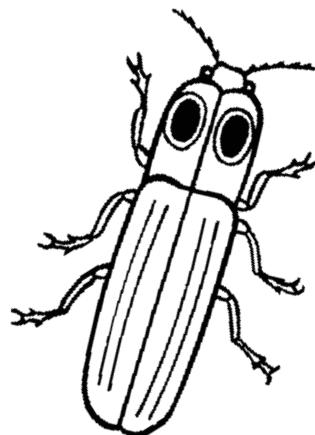
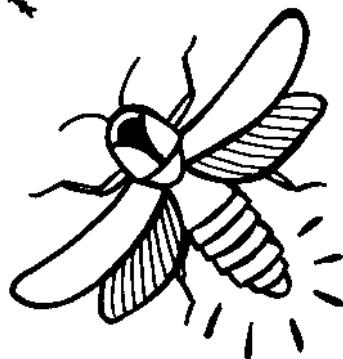
# Count and then write how many insects or spiders are in each box.



Name \_\_\_\_\_

Find all the ladybugs and color

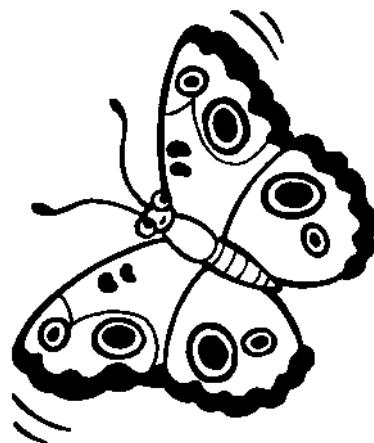
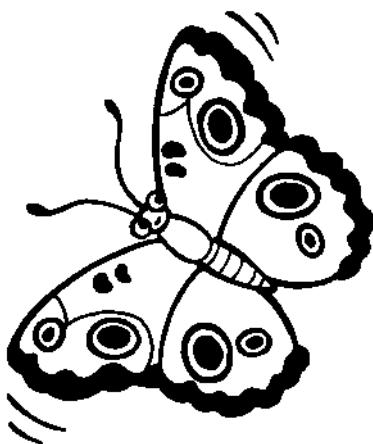
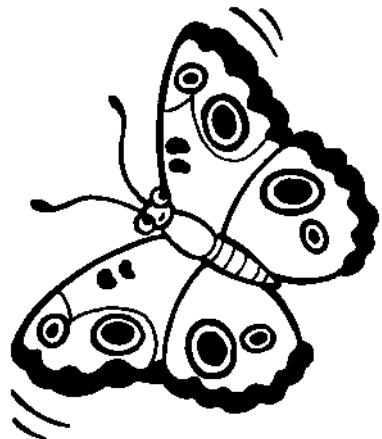
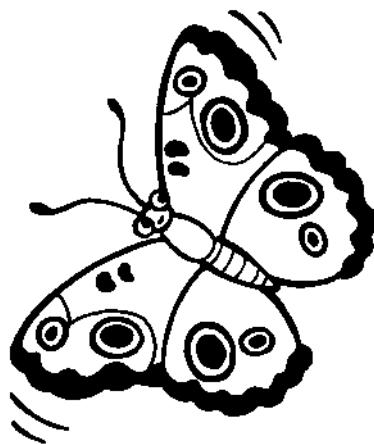
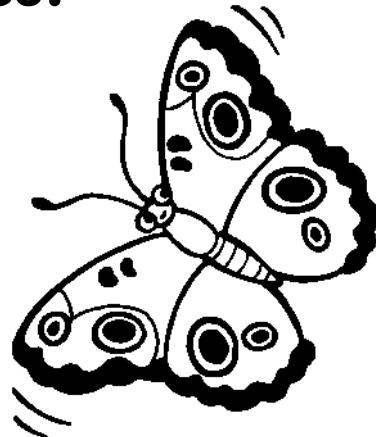
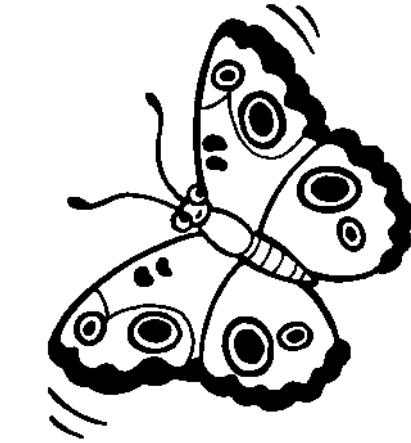
them red.



How many red ladybugs are there? \_\_\_\_\_

Name \_\_\_\_\_

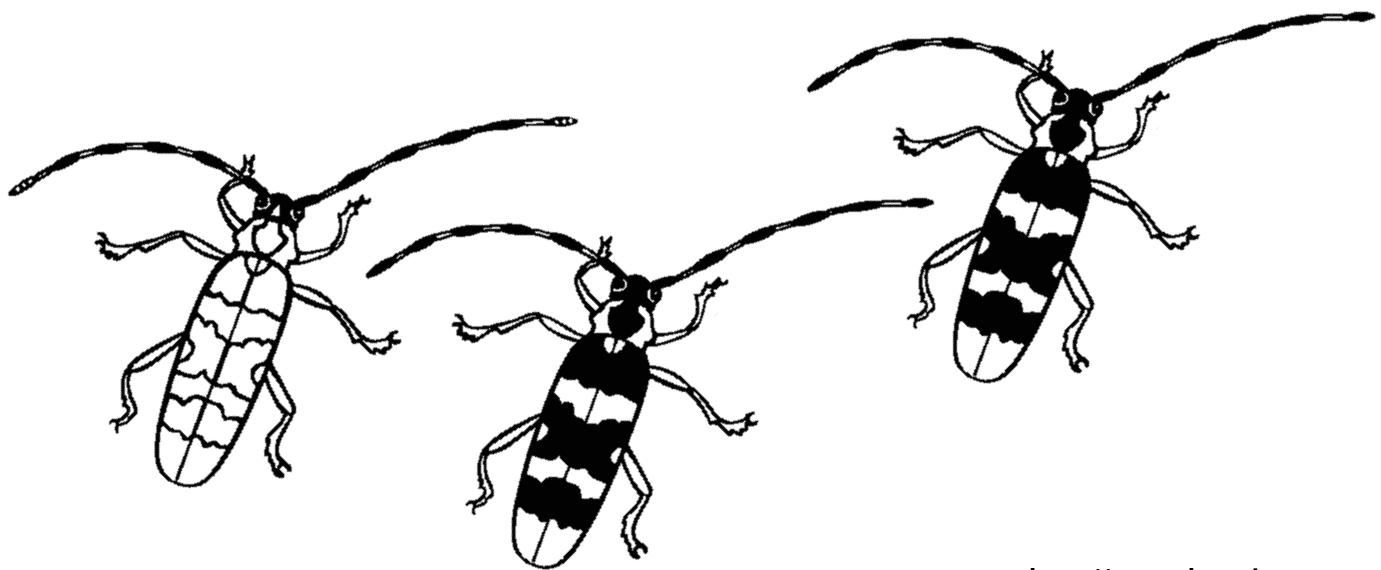
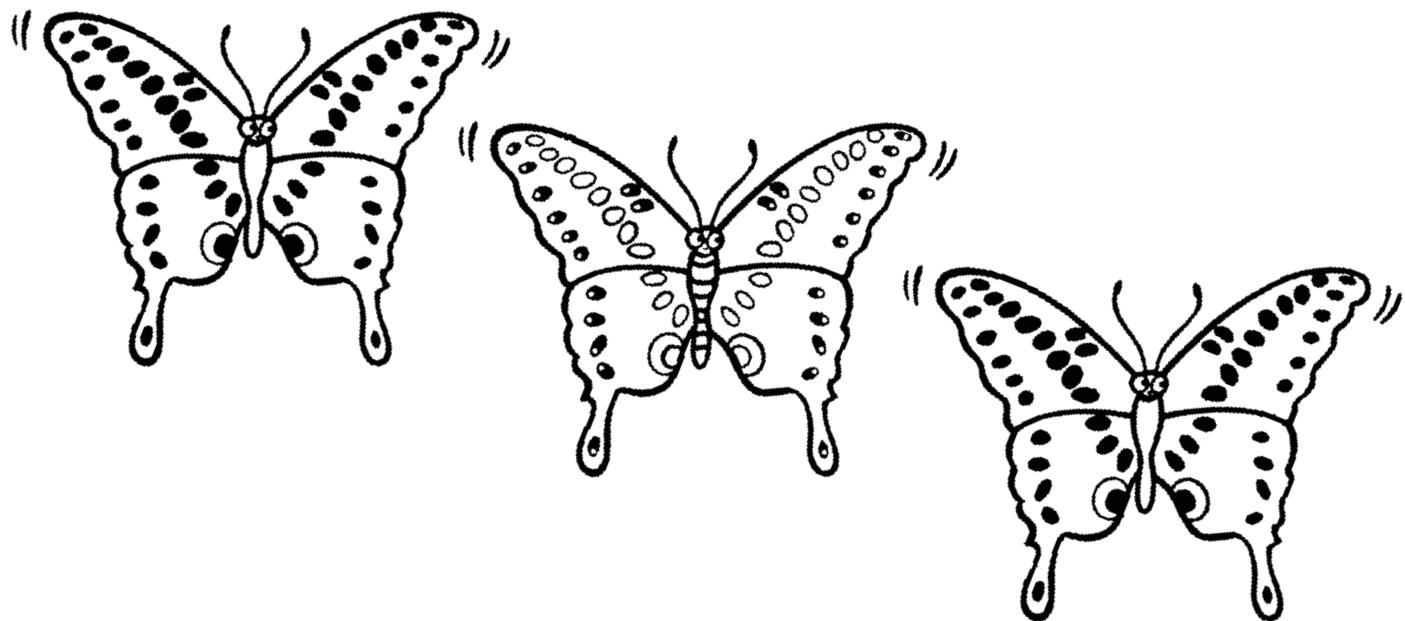
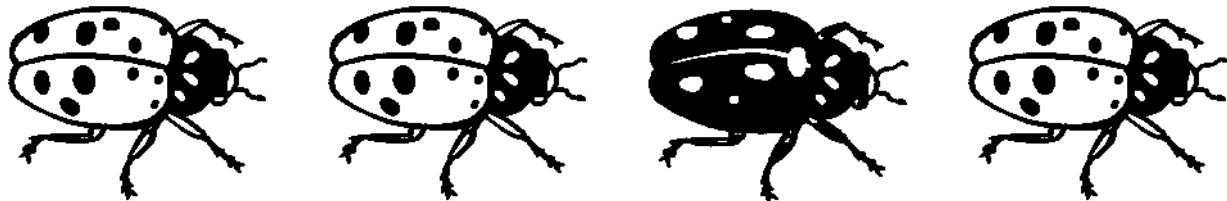
There are 6 butterflies. Color in  
half of the 6 butterflies.



Name \_\_\_\_\_

Color the insects that are the same

in each row.



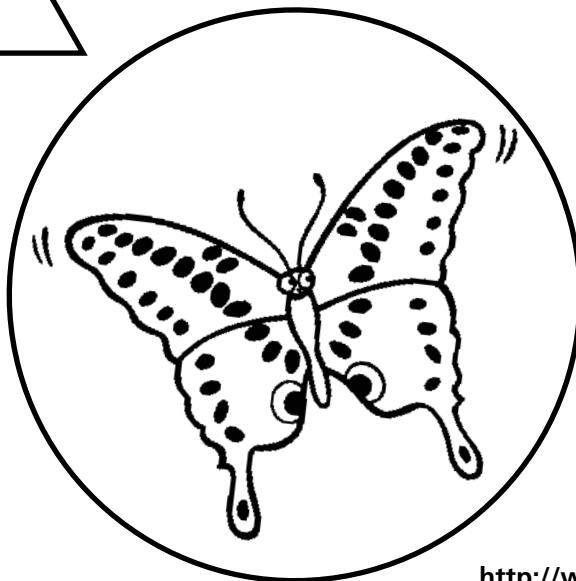
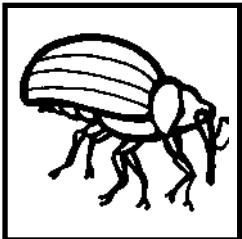
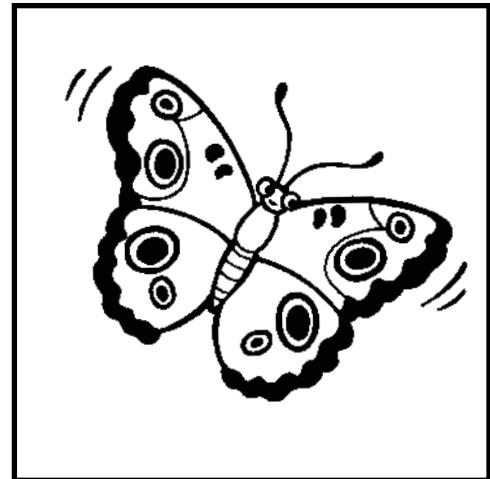
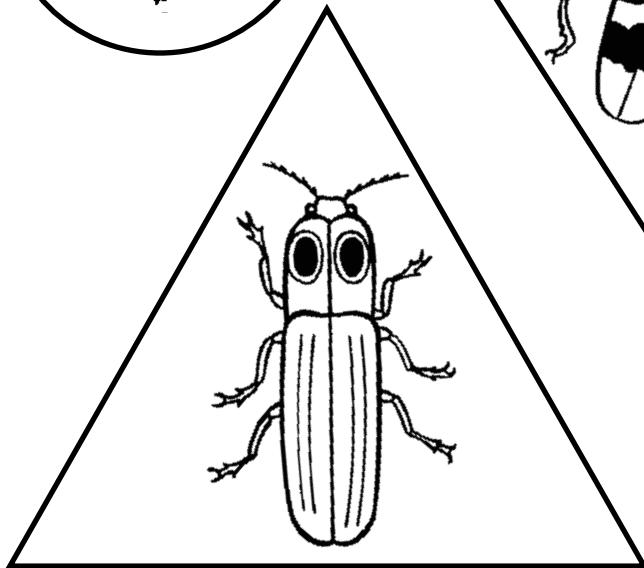
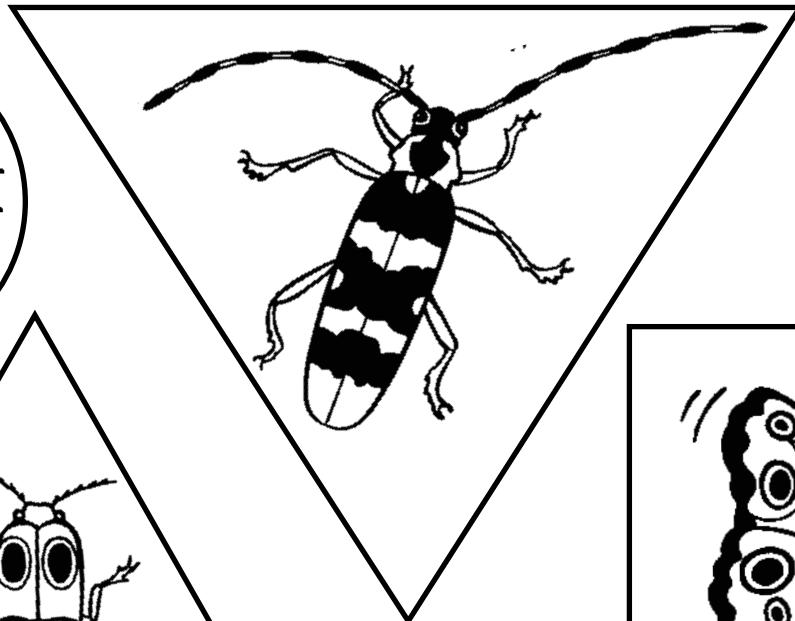
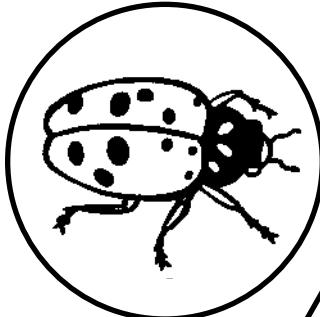
SKILL: IDENTIFY OBJECTS THAT ARE THE SAME

Name \_\_\_\_\_

Color the insects that are in a circle

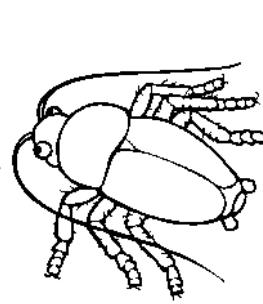
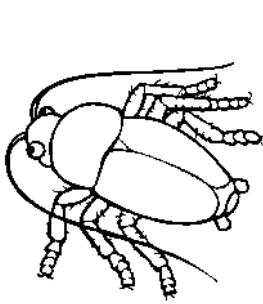
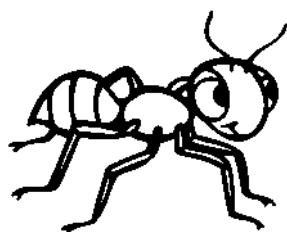
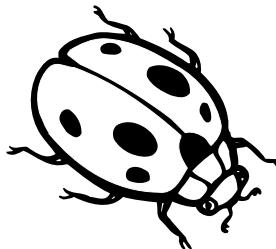
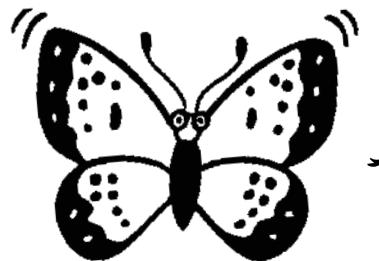
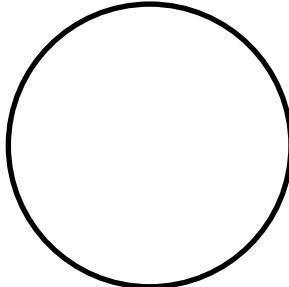
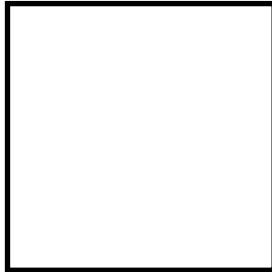
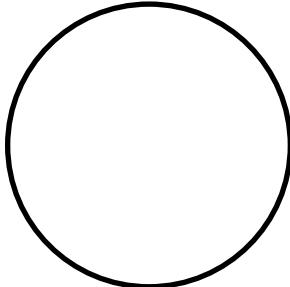
blue, the insects that are in a square red,

and the insects that are in a triangle green.



Name \_\_\_\_\_

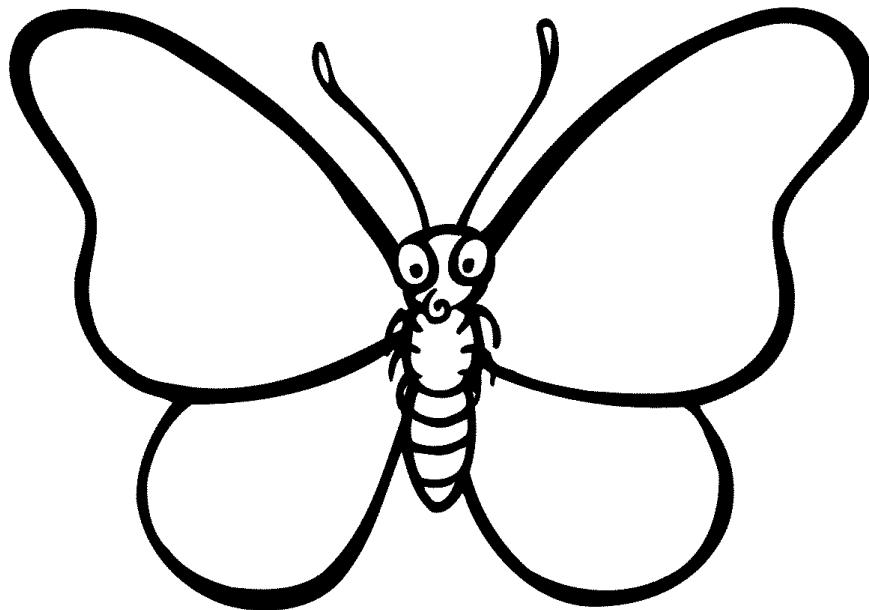
Draw what comes next in each row.



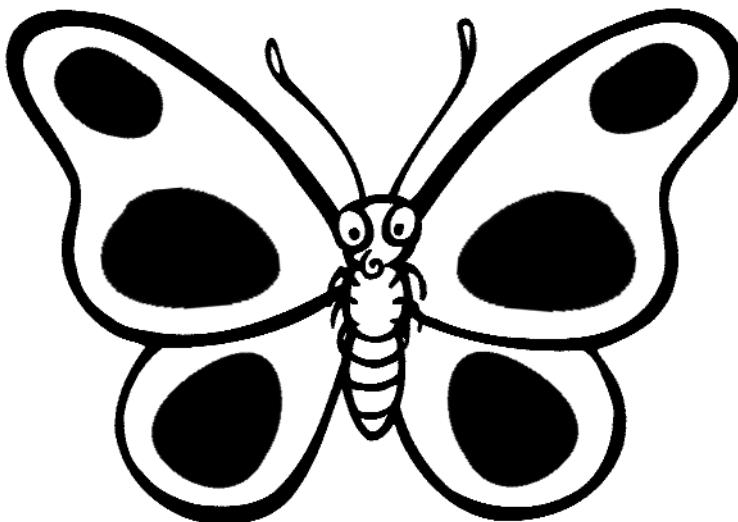
SKILL: RECOGNIZE PATTERNS

Name \_\_\_\_\_

Draw 4 spots on each wing of the butterfly.



Write down the number of spots that you count on this butterfly.



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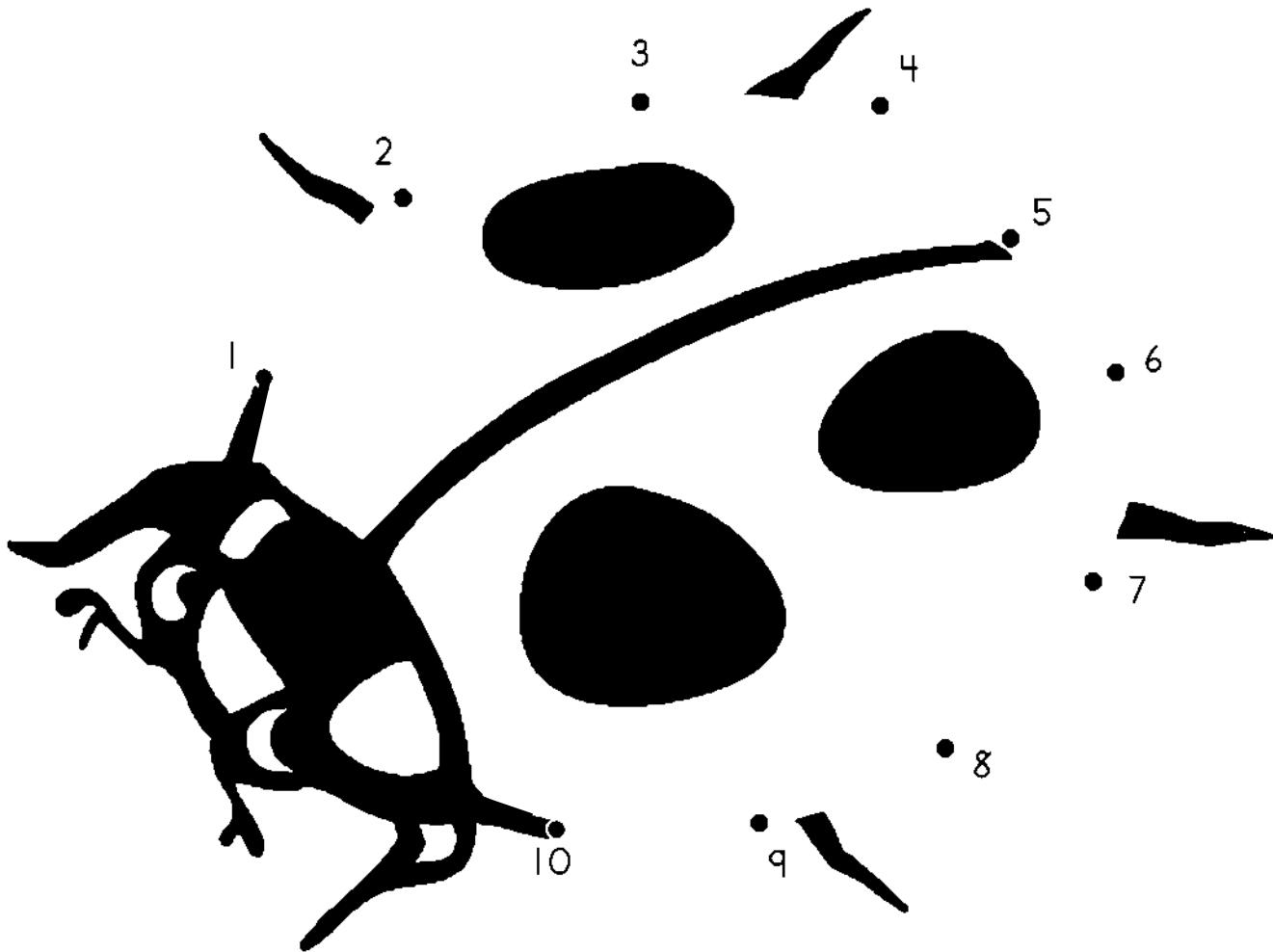
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Name \_\_\_\_\_

Follow the dots from 1 to 10.

What insect did you draw?

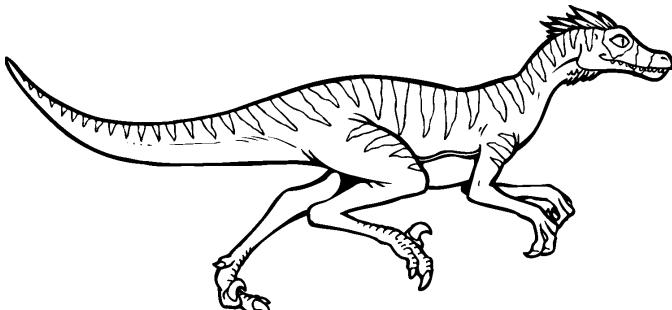


Name \_\_\_\_\_

Some dinosaurs ate meat, they were called carnivores.

Other dinosaurs ate plants, they were called herbivores. Some dinosaurs ate both meat and plants. They were called omnivores.

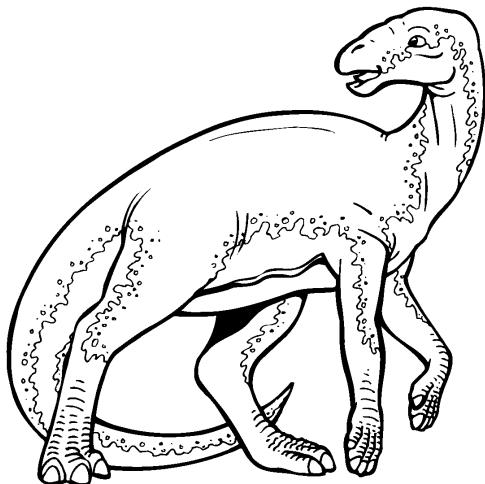
Use your Fact Files to find out if the dinosaurs below are carnivores, herbivores, or omnivores and write the answer.



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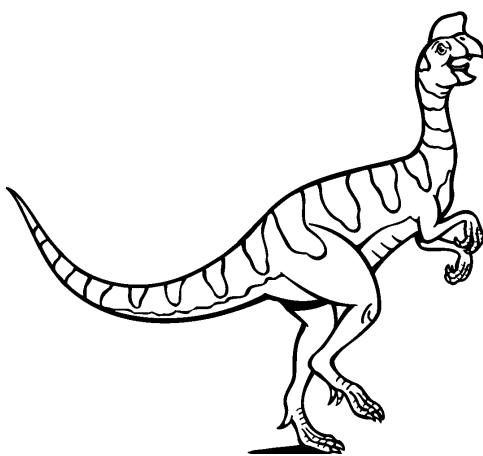
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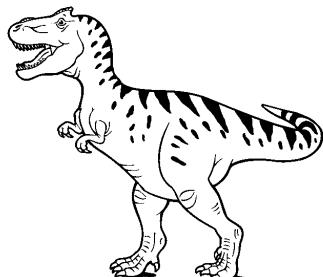
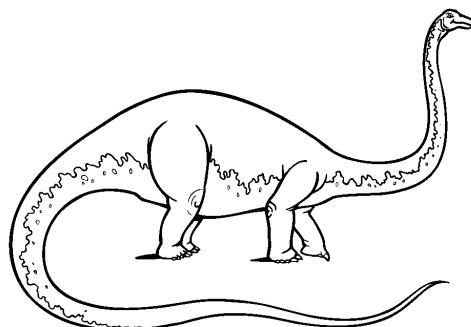
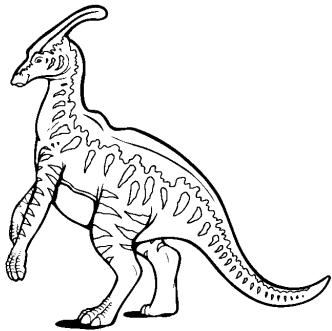
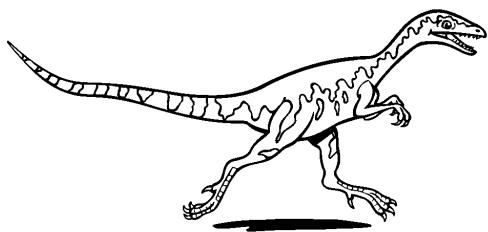
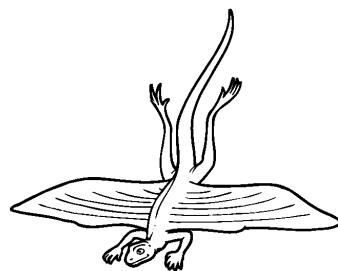
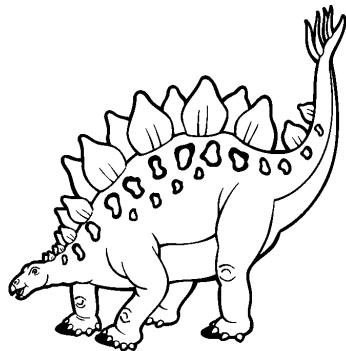
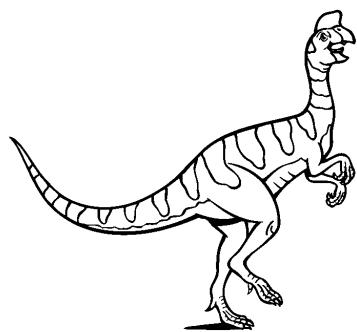
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Name \_\_\_\_\_

Some dinosaurs were very, very big. Other dinosaurs were small. Look at the pictures of the dinosaurs below. Color the ones that are smaller than you with green and yellow, and color the ones that are larger than you with red and orange. Use your Fact File to help you find the correct answers.

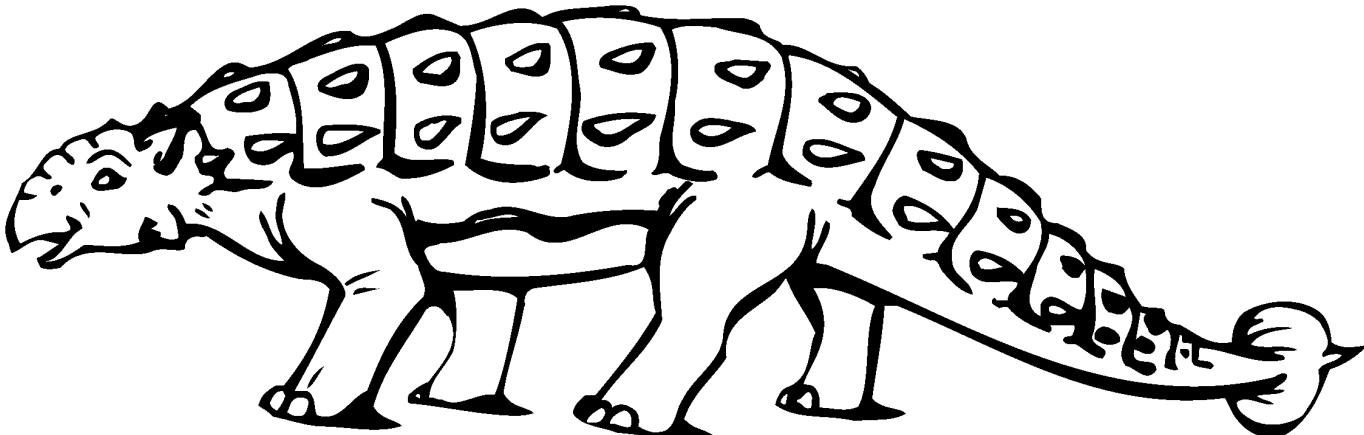


Name \_\_\_\_\_

Read the sentences, then circle the correct answer.

Dinosaurs lived long ago before there were any people on the earth. All the dinosaurs died. They became extinct. When humans arrived, all the dinosaurs were gone.

1. If all of one kind of animal dies out, they become
  - a. extinct.
  - b. exit.
  
2. Dinosaurs lived on earth
  - a. when your grandfather was a boy.
  - b. before there were people.
  
3. a. No person has seen a live dinosaur.  
b. 100 people have



Name \_\_\_\_\_

Use your Fact Files to fill in the missing numbers.

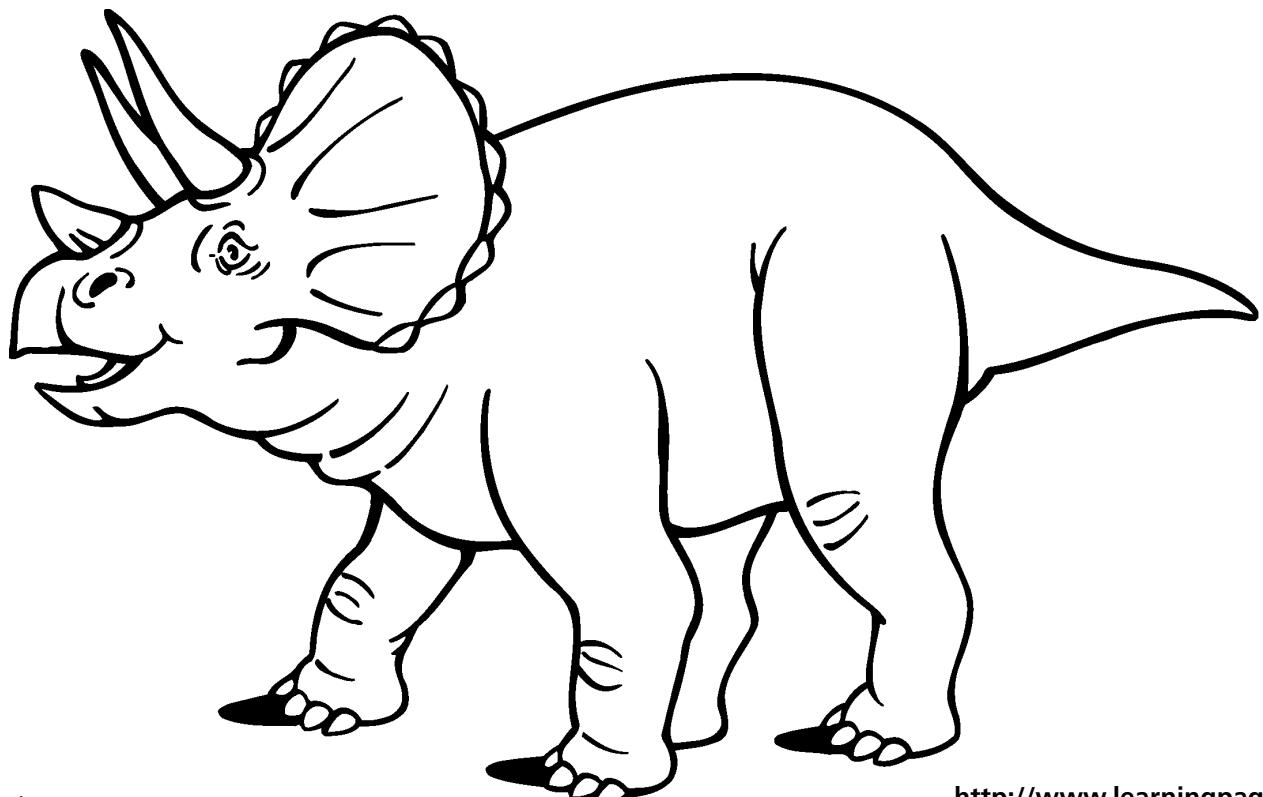
4	3	9	3	6,000
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1. Triceratops had \_\_\_\_\_ horns.

2. Triceratops was \_\_\_\_\_ meters long.

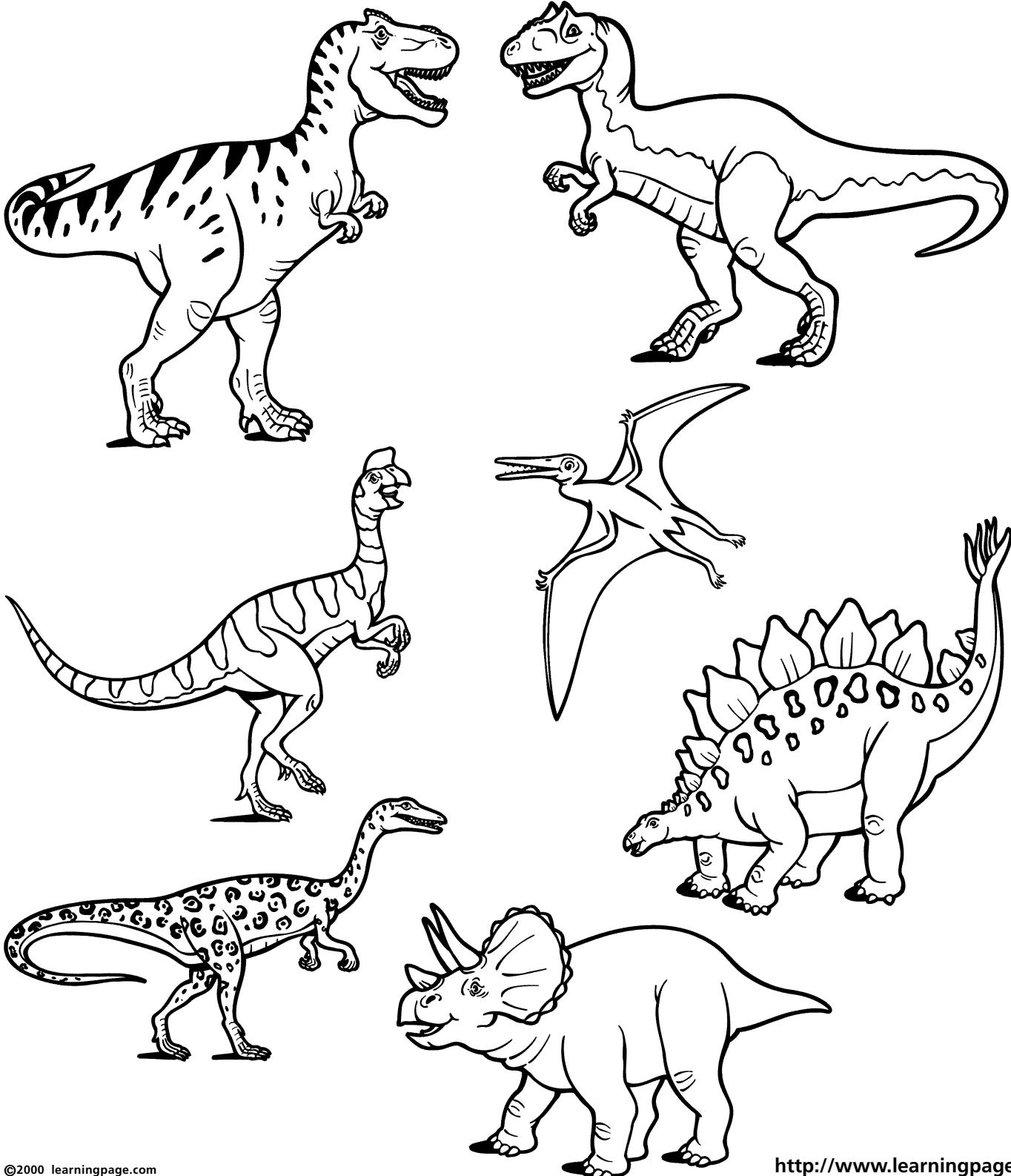
3. Triceratops weighed \_\_\_\_\_ kilograms.

4. Triceratops was \_\_\_\_\_ meters tall.



Name \_\_\_\_\_

Use your Fact Files to help tell which dinosaurs lived together. Color the Triassic dinosaurs green, the Jurassic dinosaurs red, and the Cretaceous dinosaurs yellow.



SKILL: IDENTIFY AND COLOR DINOSAURS

Name \_\_\_\_\_

Read the sentences, then circle the correct answer.

Dinosaurs first appeared 225 million years ago in what scientists call the Triassic Period. The earth was covered with large deserts, which were very hot and dry. The continents of the Earth had jammed together to form a single supercontinent called Pangaea.

1. Dinosaurs first appeared      a. 225 million years ago.  
                                        b. 225 years ago.
  
2. a. Deserts  
    b. Jungles are a very hot and dry place.
  
3. The supercontinent on Earth was      a. Pancakes.  
                                        b. Pangaea.



Name \_\_\_\_\_

Use your Dinosaur Fact Files to fill in the blanks below:

My name means “tyrant lizard.”

1. 2.

Triceratops liked to eat palm leaves.

3.

The heaviest dinosaur in the Fact Files weighed 7,000

4.

Dimetrodon liked to eat other

5.

Stygimoloch means River Demon.

6.

Velociraptor lived in the period.

7.

Now fill in the letters below from the boxes above.

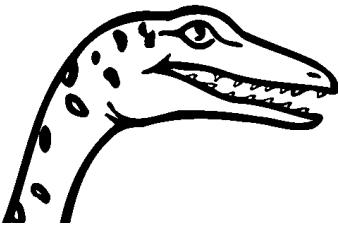
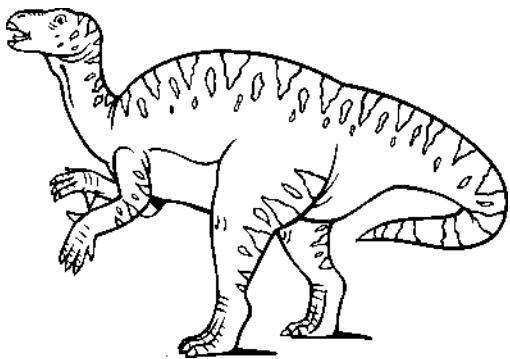
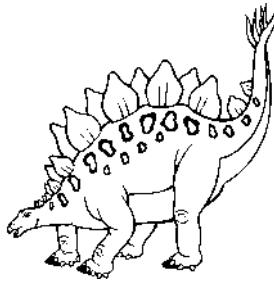
There aren't any dinosaurs left, they are all

5. 6. 1. 4. 2. 7. 3.

Name \_\_\_\_\_

Pick each dinosaur's "special" feature from the list  
and write it under the dinosaur's picture.

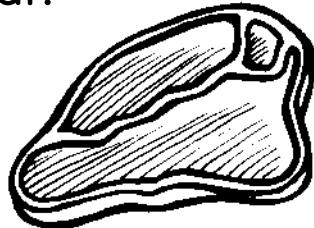
sharp teeth	good eyes	spiked tail	crest
spiked thumb		parrot-like head	



Name \_\_\_\_\_

Use your Fact Files to circle the correct dinosaur facts.

Which foods would the Hadrosaurus like to eat?



About how many meters tall was the Ceratosaurus?

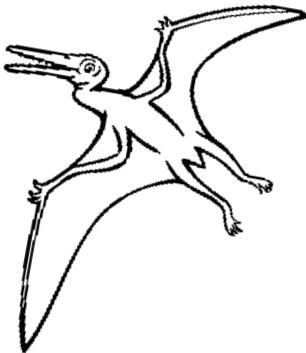
6

20

4

10

Which winged creature lived in the Jurassic period?



The name Allosaurus means

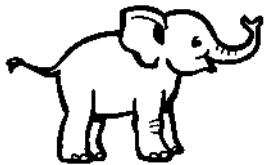
crazy crocodile

different reptile

lazy lizard

Albert

Circle the dinosaur baby.



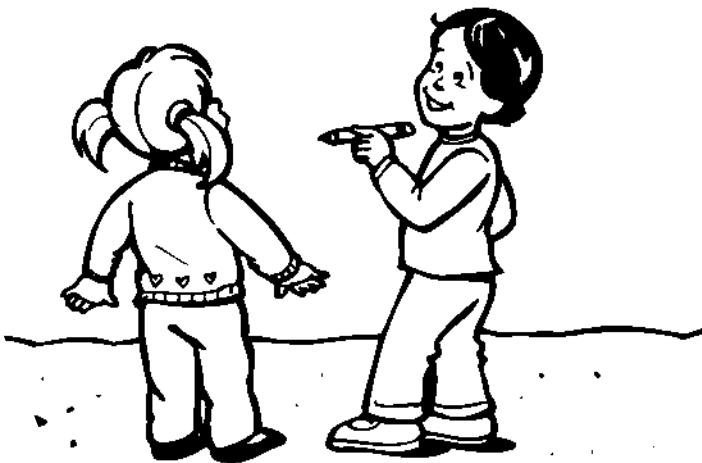
Name \_\_\_\_\_

Find the following words about dinosaurs in the letters below.

herbivore	Jurassic	paleontology	fossils	pangaea
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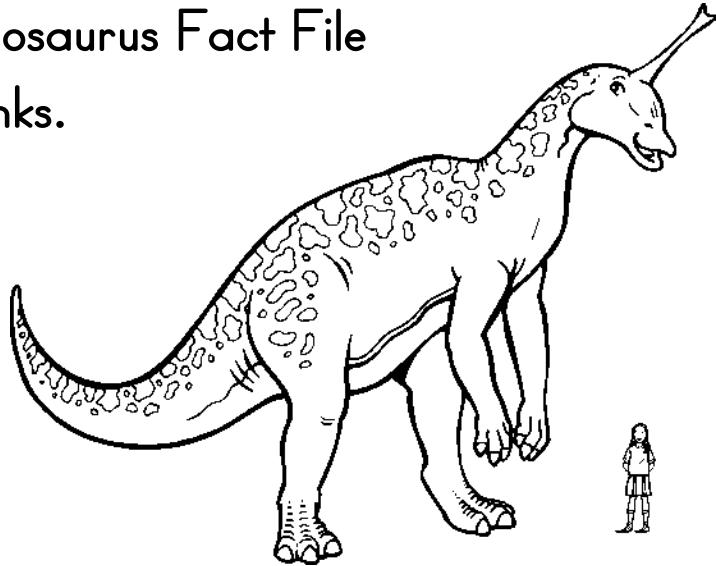


p	f	p	i	c	a	b	j	p	z	m	k	o
d	r	a	f	j	u	r	a	s	s	i	c	f
e	i	l	g	p	q	x	k	u	n	p	e	o
k	l	e	i	a	e	r	b	i	v	o	r	s
s	t	o	n	n	r	w	z	m	o	j	k	s
y	a	n	f	g	d	e	h	i	n	x	y	i
q	r	t	v	a	t	a	l	l	e	s	t	l
b	c	o	e	e	b	h	c	d	i	q	a	s
r	s	l	g	a	l	a	n	t	s	f	g	d
b	a	o	v	q	p	l	k	u	y	n	i	w
c	d	g	h	e	r	b	i	v	o	r	e	x
f	g	y	v	n	s	p	m	a	n	t	i	l



Name \_\_\_\_\_

Use your Tsintaosaurus Fact File  
to fill in the blanks.



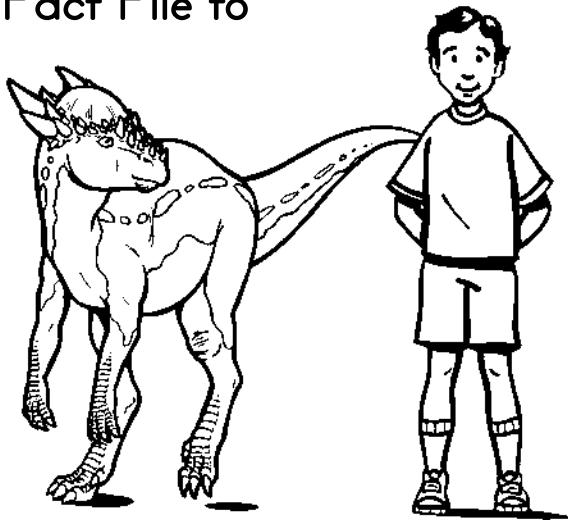
1. Tsintaosaurus lived in the \_\_\_\_\_ period.
2. Tsintaosaurus was about \_\_\_\_\_ meters (24 feet) tall.
3. Two plants this creature liked to eat were \_\_\_\_\_  
and \_\_\_\_\_.
4. Tsintaosaurus walked on how many legs? \_\_\_\_\_

Draw a Tsintaosaurus



Name \_\_\_\_\_

Use your Stygimoloch Fact File to  
fill in the blanks.



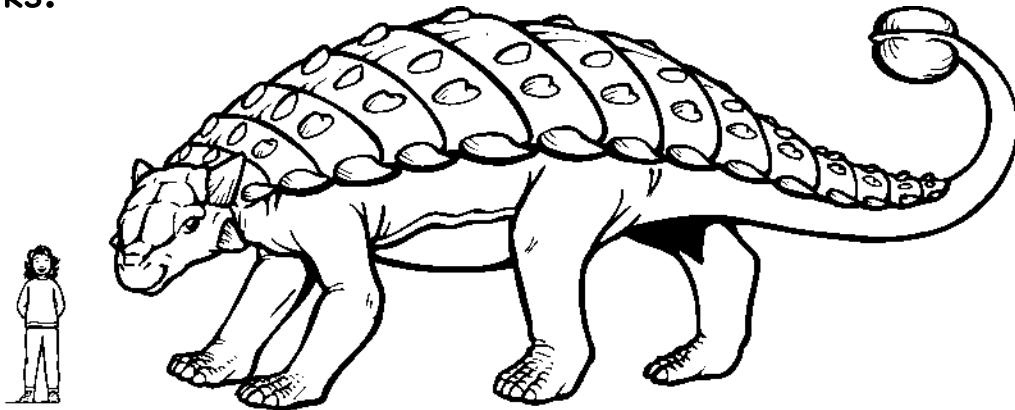
1. Stygimoloch lived in the \_\_\_\_\_ period.
2. Stygimoloch was about \_\_\_\_\_ meters (6.6 feet) tall.
3. The thick, bony dome on top of its skull may have been used for \_\_\_\_\_.
4. Stygimoloch walked on how many legs? \_\_\_\_\_

Draw a Stygimoloch



Name \_\_\_\_\_

Use your Ankylosaurus Fact File to  
fill in the blanks.



1. Ankylosaurus lived in the \_\_\_\_\_ period.
2. Ankylosaurus was about \_\_\_\_\_ meters (33 feet) long.
3. Ankylosaurus used its bony \_\_\_\_\_ to defend itself from predators.
4. Ankylosaurus walked on how many legs? \_\_\_\_\_

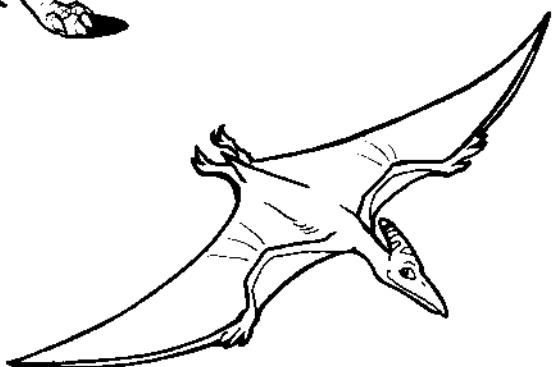
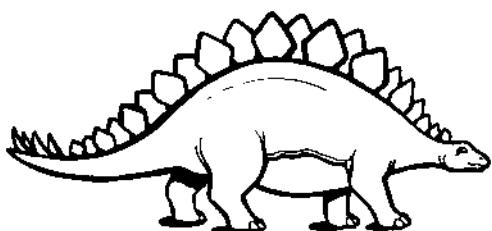
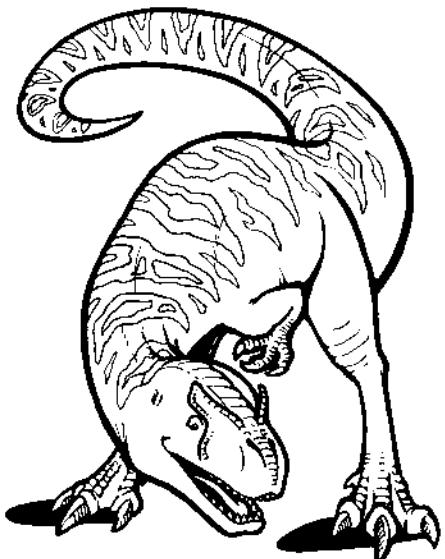
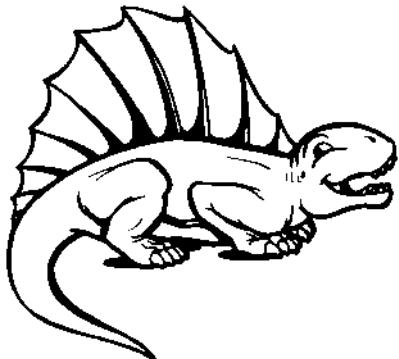
Draw an Ankylosaurus



Name \_\_\_\_\_

There are many different kinds of dinosaurs.

Stegosaurus, Tyrannosaurus, and Stygimoloch are all dinosaurs. Use your fact files to find out which of these animals are not dinosaurs and circle them. Color the dinosaurs.



Name \_\_\_\_\_

Circle the correct facts about Coelophysis.

Coelophysis was a small (carnivore, herbivore) that lived during the (Jurassic, Triassic) period. It walked on (four, two) legs and probably (hunted, danced) in packs like wolves. Its name means (narrow, hollow) form. Coelophysis is (alive, extinct) today, like all the dinosaurs.

Write this dinosaur's name.

Coelophysis



Name \_\_\_\_\_

Read about what is the same and what is different between dinosaurs and humans.

Same:

Both are animals.

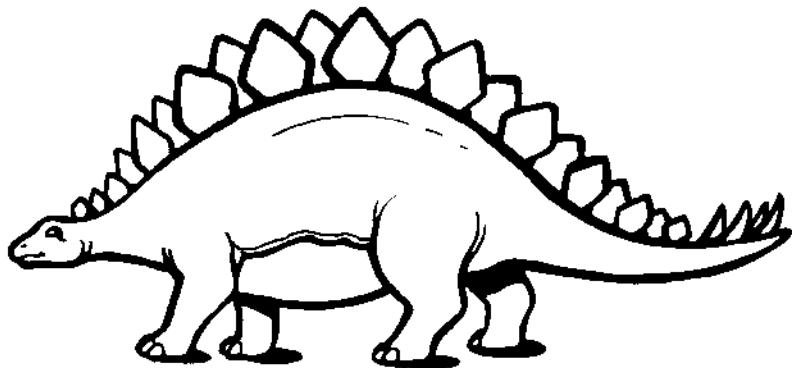
Both breathe air.

Different:

Dinosaurs are extinct;  
humans are still living.

Dinosaurs are reptiles;  
humans are mammals.

Answer the questions.



dinosaurs

humans

Is it an animal? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

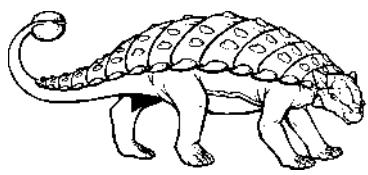
\_\_\_\_\_

What group  
is it in?

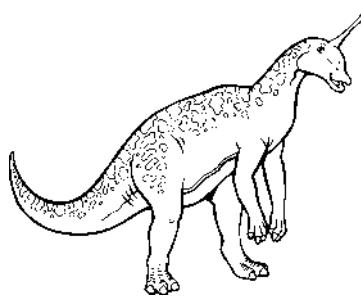
What is another  
difference?

Name \_\_\_\_\_

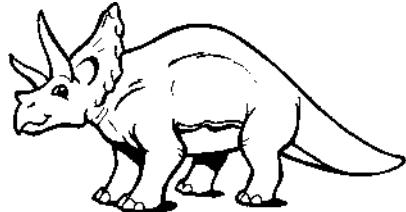
Some dinosaurs are bipeds, meaning they walk on two legs. Other dinosaurs are quadrupeds, meaning they walk on four legs. Look at the pictures below. Then make a list of all the bipeds and another list of all the quadrupeds.



Ankylosaurus



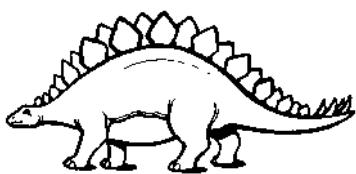
Tsintaosaurus



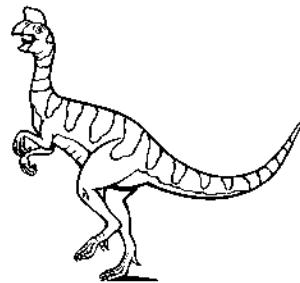
Triceratops



Tyrannosaurus



Stegosaurus



Oviraptor

bipeds

quadrupeds

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Name \_\_\_\_\_

Write one important fact about each of the following dinosaurs. Use your Fact Files to help you find the information.

1. Stegosaurus

bony plates

2. Tyrannosaurus

large teeth

3. Coelophysis

long tail

4. Velociraptor

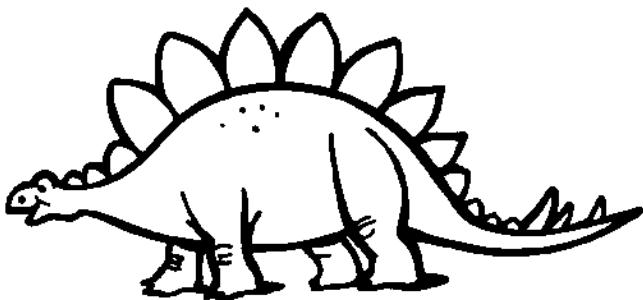
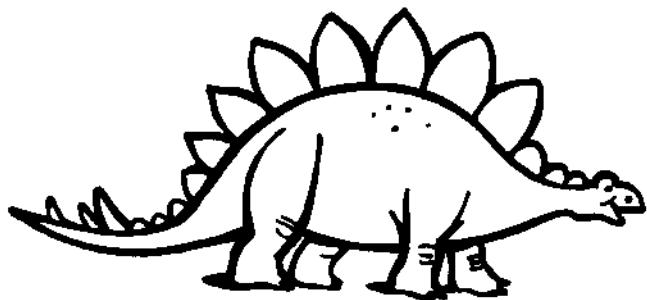
fast runner

5. Tsintaosaurus

long neck

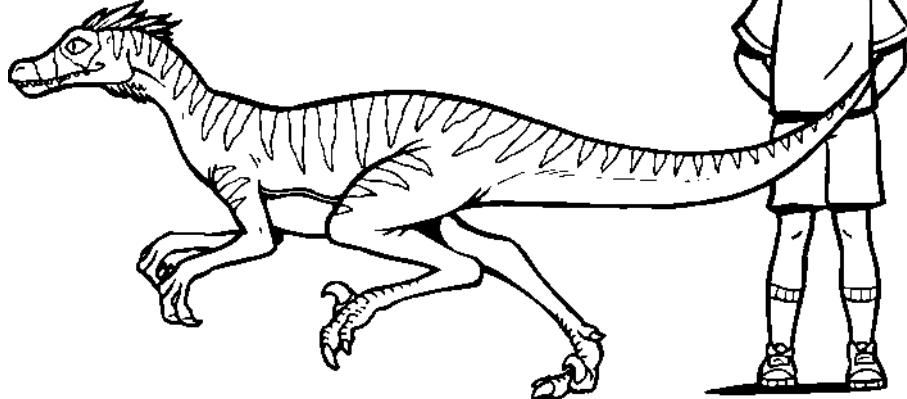
6. Iguanodon

long tail



Name \_\_\_\_\_

Use your Velociraptor Fact File  
to fill in the blanks.



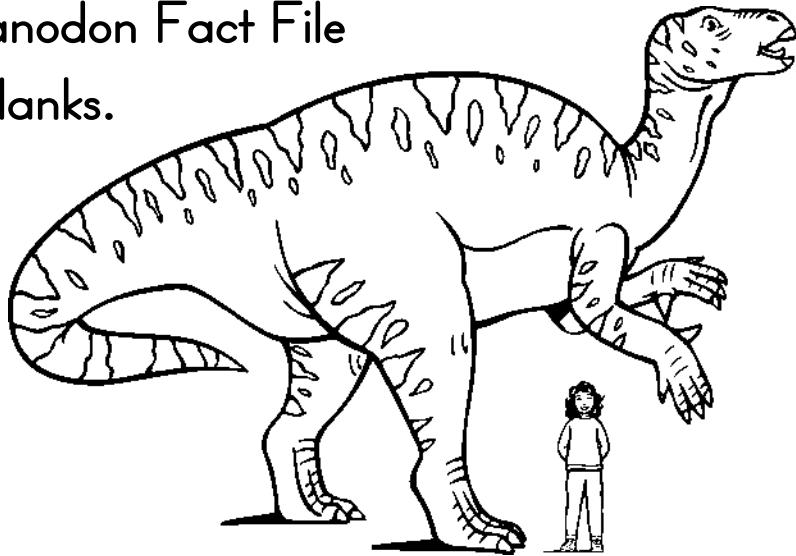
1. Velociraptor lived in the \_\_\_\_\_ period.
2. Velociraptor was about \_\_\_\_\_ meters (2.5 feet) tall.
3. This creature liked to eat \_\_\_\_\_  
\_\_\_\_\_.
4. Velociraptor walked on how many legs? \_\_\_\_\_

Draw a Velociraptor



Name \_\_\_\_\_

Use your Iguanodon Fact File  
to fill in the blanks.



1. Iguanodon lived in the \_\_\_\_\_ period.
2. Iguanodon was about \_\_\_\_\_ meters (16 feet) tall.
3. This creature liked to eat \_\_\_\_\_  
\_\_\_\_\_.
4. Iguanodon walked on how many legs? \_\_\_\_\_

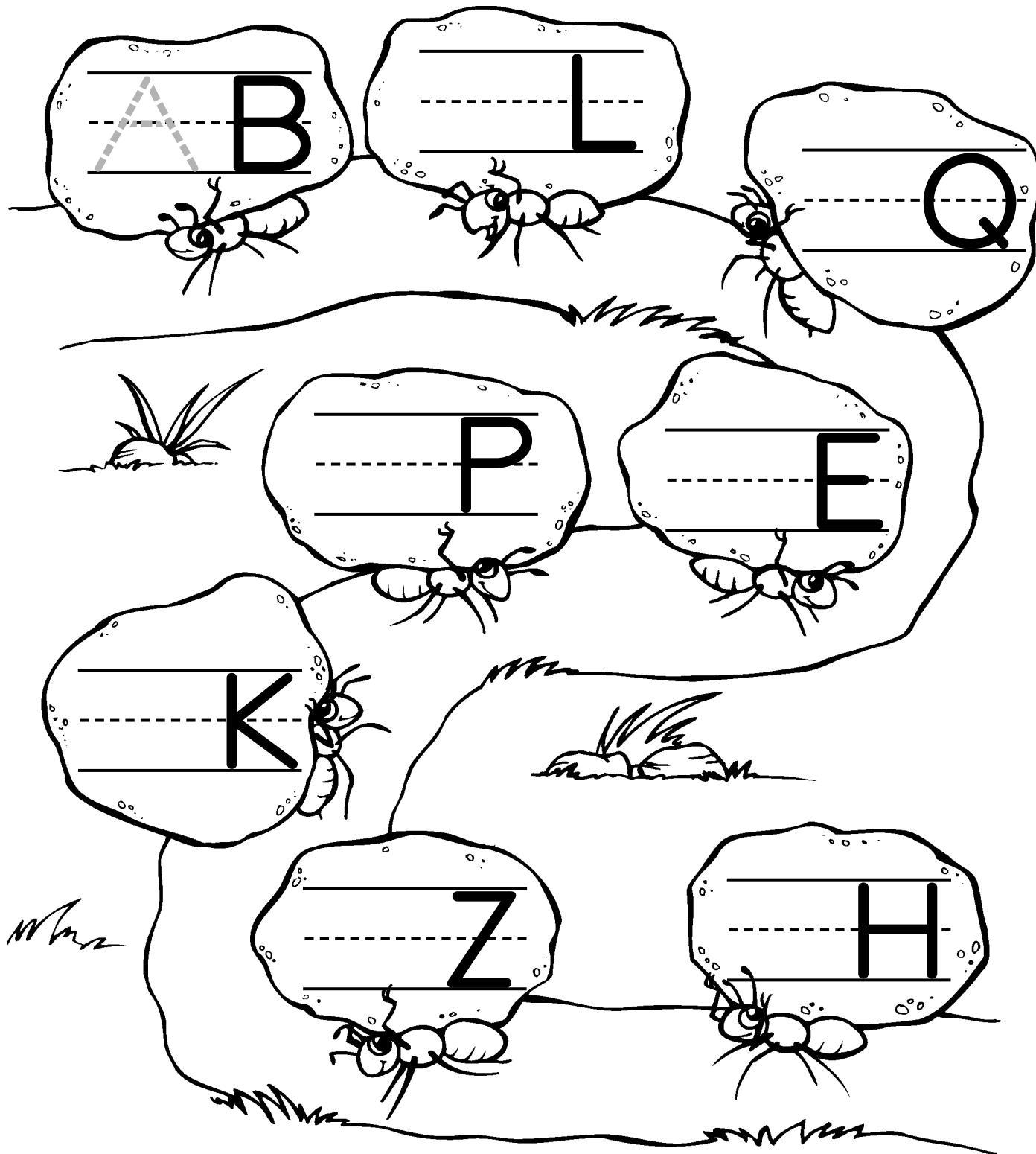
Draw an Iguanodon



Name \_\_\_\_\_

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A comes before B. Write the letter that comes  
before each letter on the crumbs.



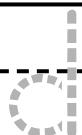
SKILL: LETTER BEFORE

Name \_\_\_\_\_

a b c d e f g h i j k l m n o p q r s t u v w x y z

d comes after c. Write the letter that comes after each letter.

c



o

f

k

s

x

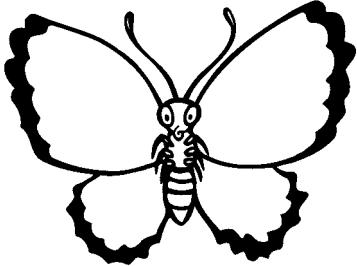


SKILL: LETTER AFTER

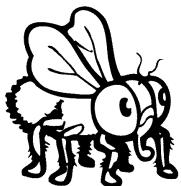
Name \_\_\_\_\_

Say the names of the insects in each box.

Then write the letter that makes the beginning sound for each picture.



B b

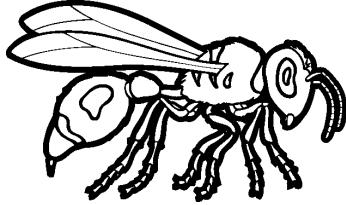
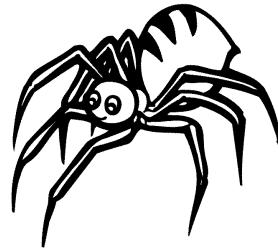
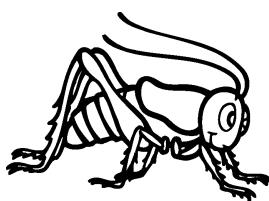
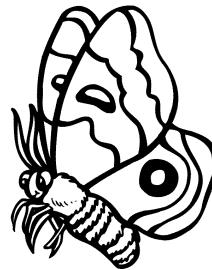
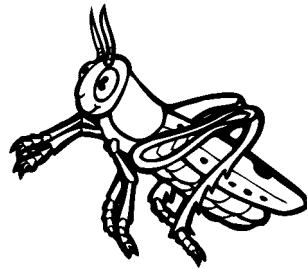
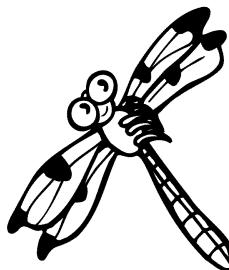


butterfly      cricket

dragonfly      moth

fly      spider

grasshopper      wasp

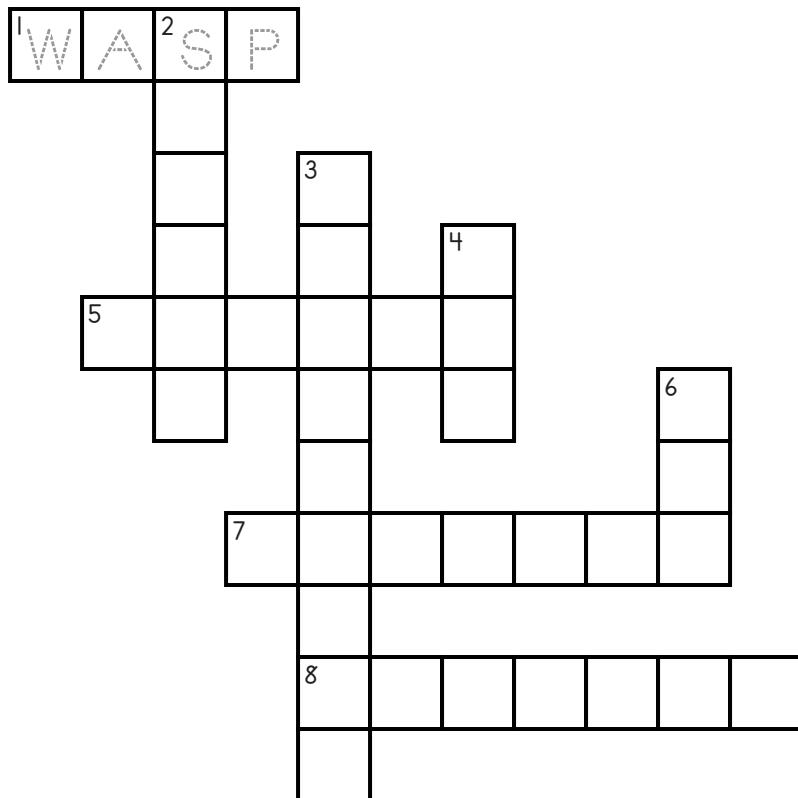
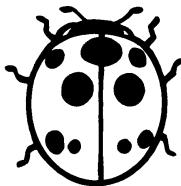
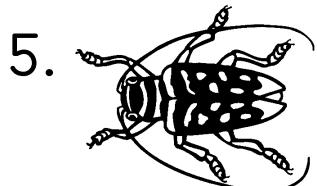
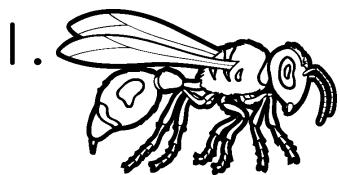


Name \_\_\_\_\_

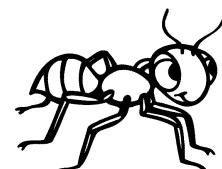
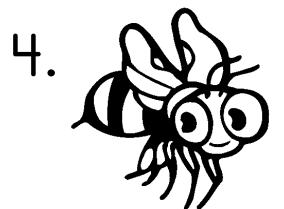
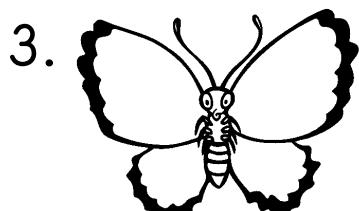
Learning  
Page.com ©

Write the names of the creatures in the crossword puzzle.

# Across



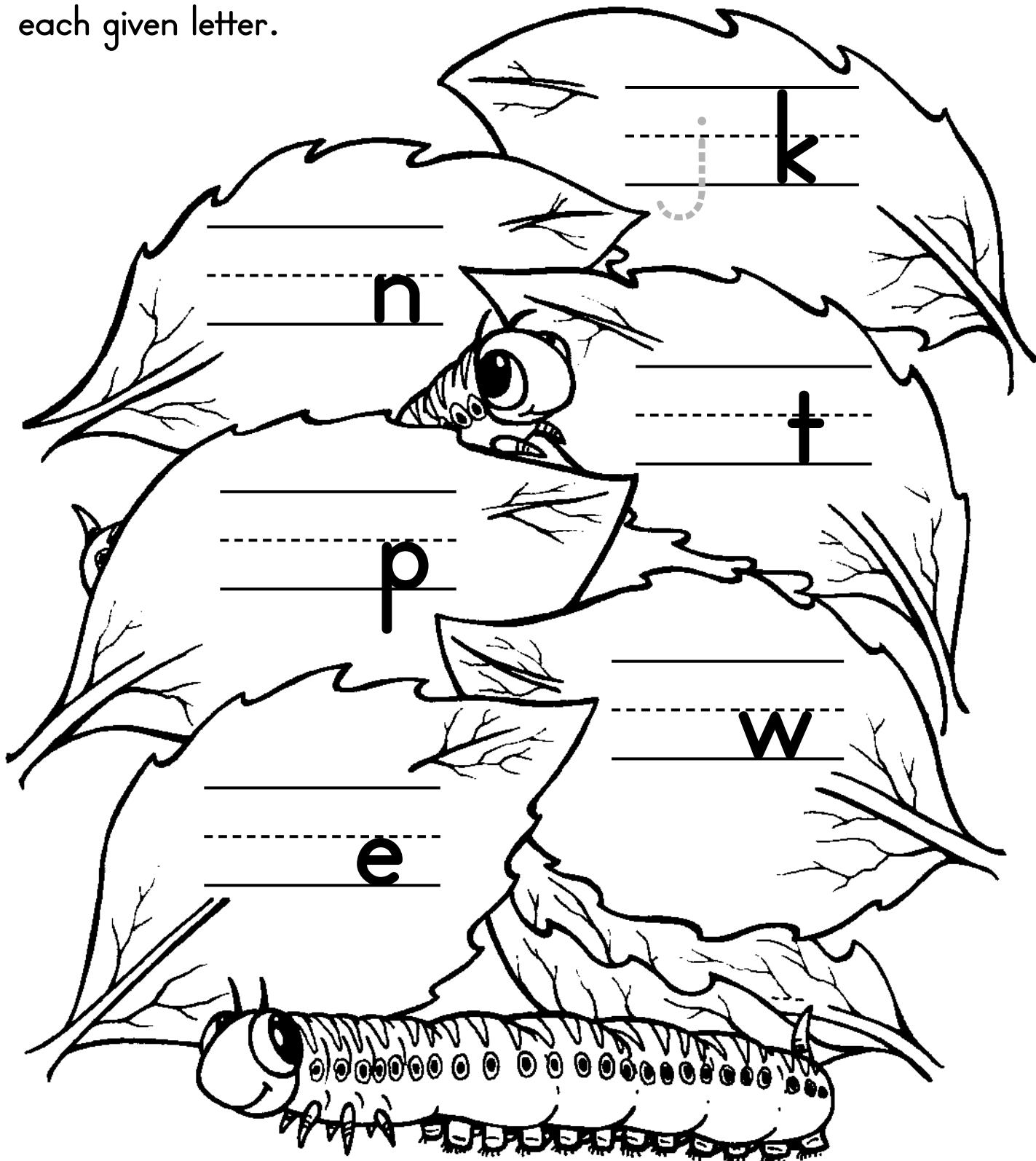
Down



Name \_\_\_\_\_

a b c d e f g h i j k l m n o p q r s t u v w x y z

j comes before k. Write the letter that comes before each given letter.



SKILL: LETTER BEFORE

Name \_\_\_\_\_

Circle the word that is spelled correctly. Then write the word in the space provided.



rain

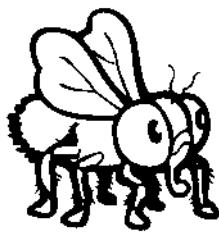
\_\_\_\_\_

rayn

\_\_\_\_\_

rane

\_\_\_\_\_



fli

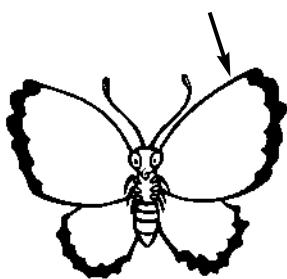
\_\_\_\_\_

phly

\_\_\_\_\_

fly

\_\_\_\_\_



weeng

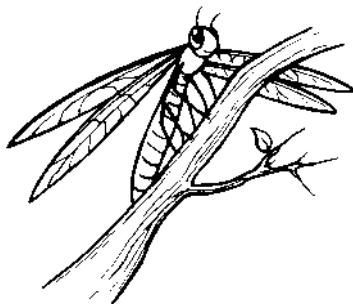
\_\_\_\_\_

wing

\_\_\_\_\_

weng

\_\_\_\_\_



perch

\_\_\_\_\_

pirch

\_\_\_\_\_

pertch

\_\_\_\_\_



hyde

\_\_\_\_\_

hide

\_\_\_\_\_

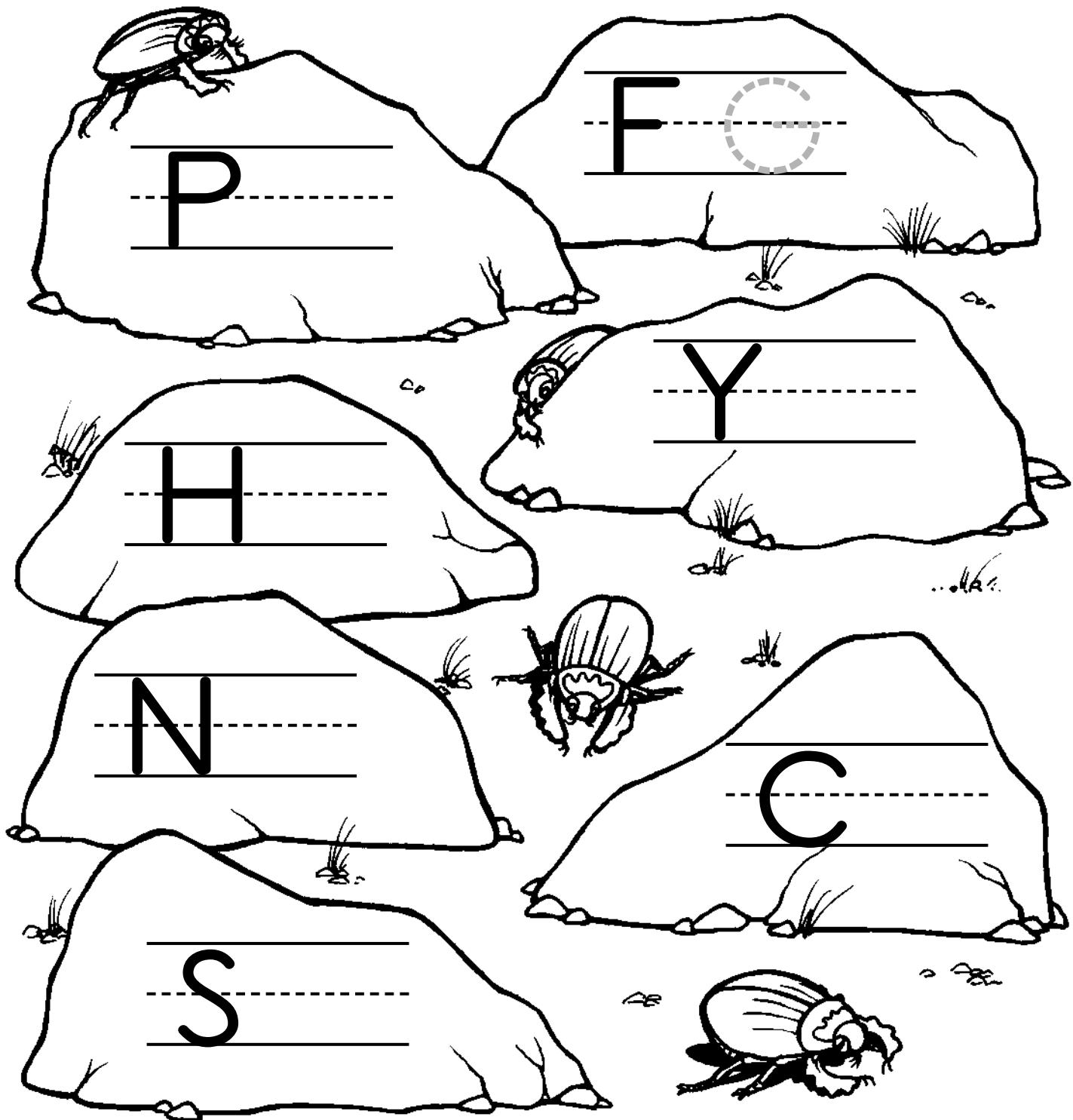
hied

\_\_\_\_\_

Name \_\_\_\_\_

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

G comes after F. Write the letter that comes after  
each given letter.



Name \_\_\_\_\_

Look at the letters in “carpenter ant” and write them below.

carpenter ant

Now make 10 new words using any of these letters.

1. pet

6. \_\_\_\_\_

2. \_\_\_\_\_

7. \_\_\_\_\_

3. \_\_\_\_\_

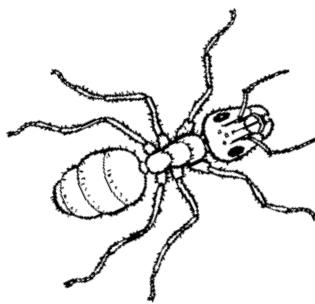
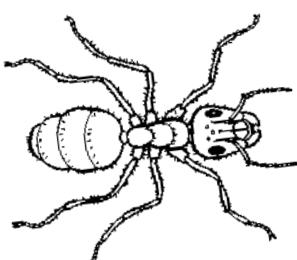
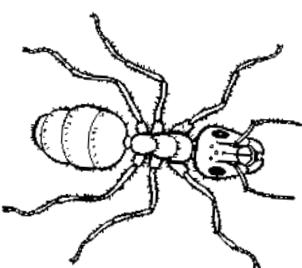
8. \_\_\_\_\_

4. \_\_\_\_\_

9. \_\_\_\_\_

5. \_\_\_\_\_

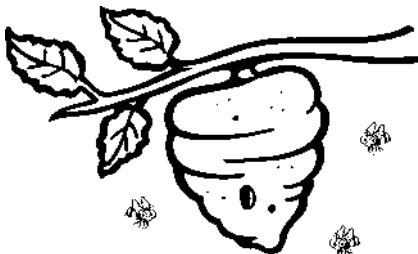
10. \_\_\_\_\_



Name \_\_\_\_\_

Read the words. Look at the pictures. Choose the correct words and write them.

1. bee  
bees



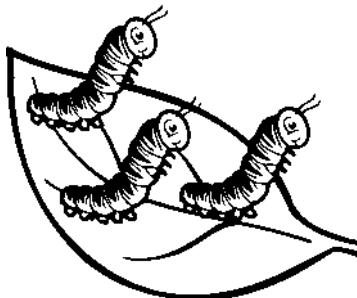
The \_\_\_\_\_ are home.

2. ant  
ants



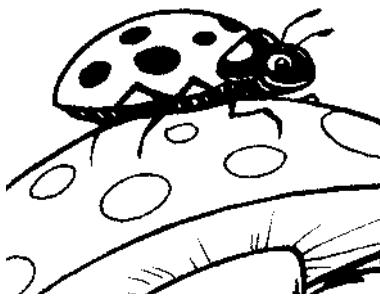
The \_\_\_\_\_ walks home.

3. caterpillar  
caterpillars



sit on the leaf.

4. ladybug  
ladybugs



The \_\_\_\_\_ sits on a toadstool.

Circle the answer. Then write the word.

1. The moth eats \_\_\_\_\_ from flowers.

nectar      milk

\_\_\_\_\_  
**nectar**  
\_\_\_\_\_2. Ladybugs are a \_\_\_\_\_ to  
gardeners.

help      danger

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

3. Wasps have a very \_\_\_\_\_ waist.

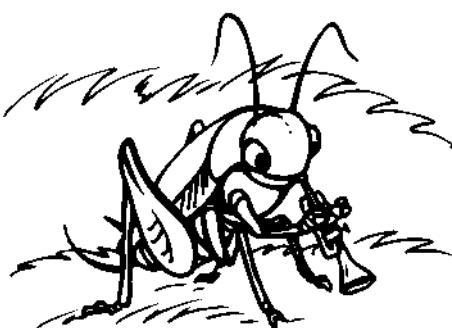
wide      thin

\_\_\_\_\_  
\_\_\_\_\_4. Male grasshoppers \_\_\_\_\_ by  
rubbing their legs together.

sing      talk

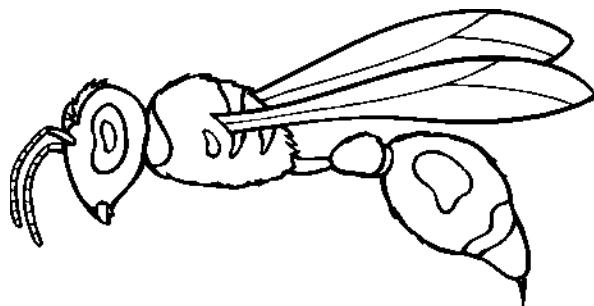
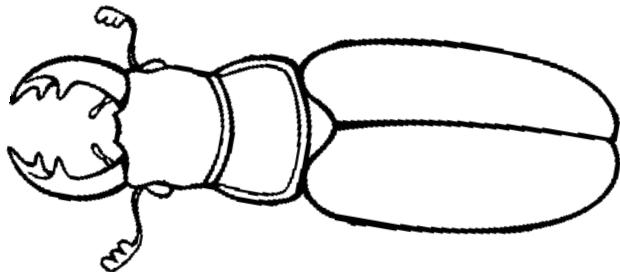
\_\_\_\_\_  
\_\_\_\_\_5. A cockroach will hardly ever \_\_\_\_\_  
even though it has wings.

dive      fly

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

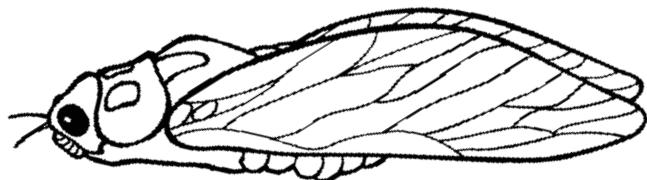
Name \_\_\_\_\_

Draw 6 legs on each of the insects below. Then  
write the words, the number 6, and the word six.



beetle

wasp



cicada

6

six

Name \_\_\_\_\_

Say the words on the left, then circle the word on the right that rhymes with it. Say the two words together.

fold

fall

gold

gone

jump

pump

pale

jolt

new

neat

nine

flew

fly

flea

why

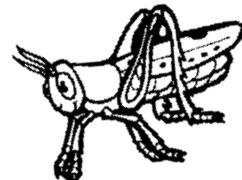
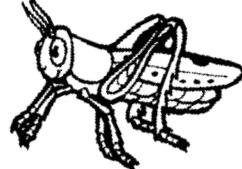
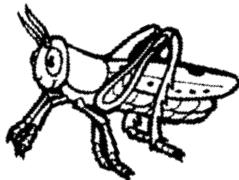
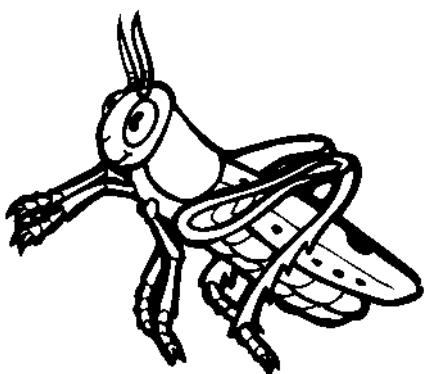
feel

crawl

fall

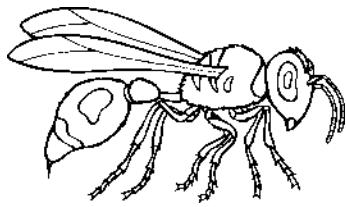
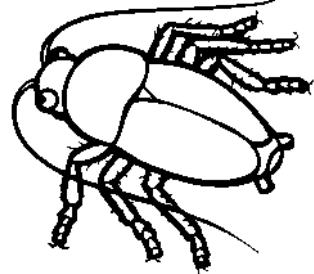
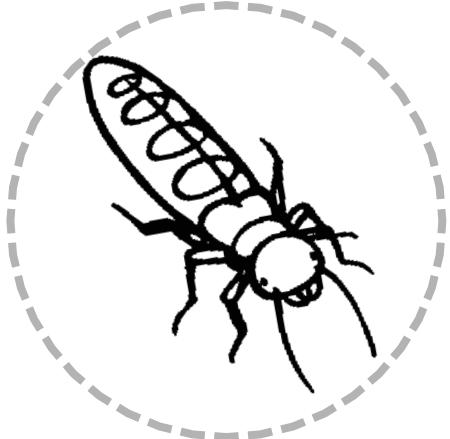
far

flap

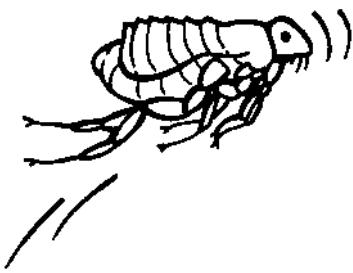
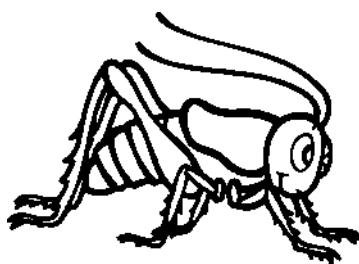
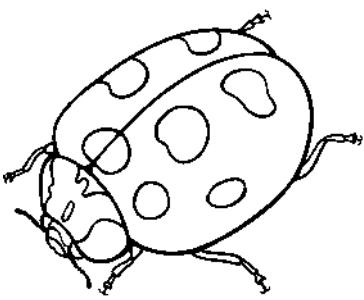


Name \_\_\_\_\_

Say the names of the insects below. Circle the ones  
that have an "r" in their name. Write their names.



termite



Name \_\_\_\_\_

Circle the answer. Then write the word.

1. A bee's hive might be found in a

---

---

---

tree      shoe

2. A grasshopper can \_\_\_\_\_ very far.

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---

---

jump      swim

3. Spiders \_\_\_\_\_ their prey in webs.

---

---

---

lose      catch

4. A female mosquito drinks \_\_\_\_\_.

---

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---

blood      milk

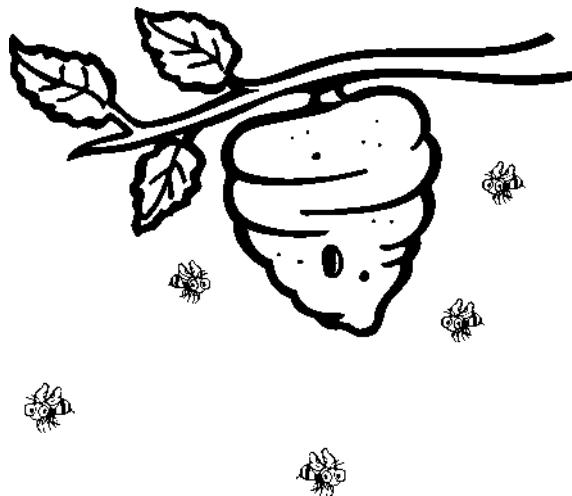
5. Most beetles have a very hard \_\_\_\_\_.

---

---

---

shell      nose



Name \_\_\_\_\_

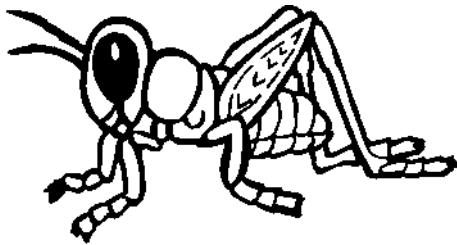
Read the story.

I am a baby grasshopper.

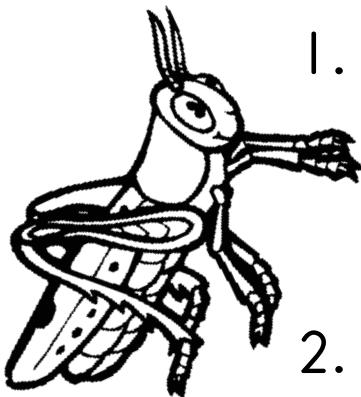
I am an insect.

I hatched out of an egg.

I like to hide out of sight, but you can  
still hear my singing!



Now finish these sentences:



1. Grasshoppers are \_\_\_\_\_.

frogs

insects

2. Baby grasshoppers hatch from \_\_\_\_\_.

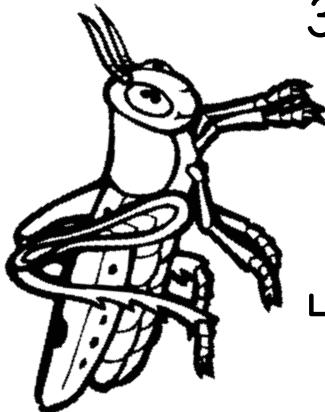
soup

eggs

3. Grasshoppers like to stay \_\_\_\_\_ of sight.

in

out



4. Grasshoppers \_\_\_\_\_ quite loudly!

sing

hop

Name \_\_\_\_\_

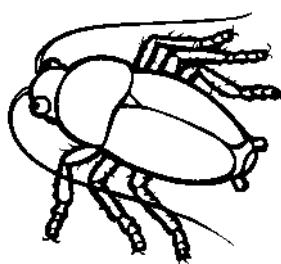
Look at each picture. Choose the right word  
to finish each sentence. Write it.

too

help

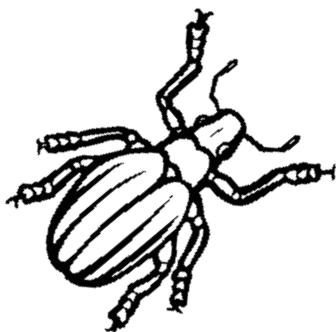
pests

fly



Cockroaches are \_\_\_\_\_.

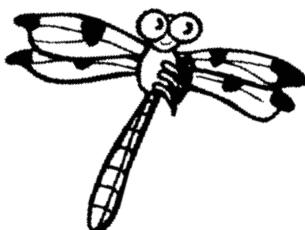
pests



Weevils are pests, \_\_\_\_\_.



Spiders \_\_\_\_\_ people by eating pests.

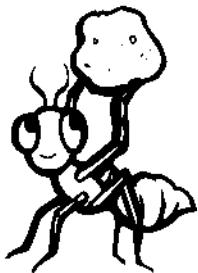


Dragonflies can \_\_\_\_\_ very fast.

Name \_\_\_\_\_

Circle the word that tells about each picture.

1.



lift  
leap

2.



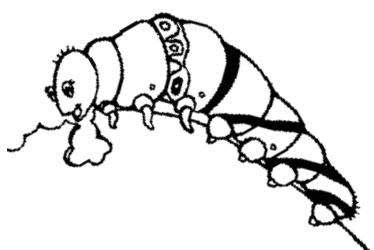
cap  
catch

3.



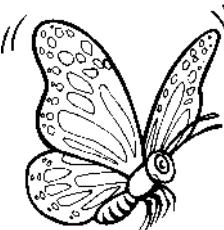
hold  
hive

4.



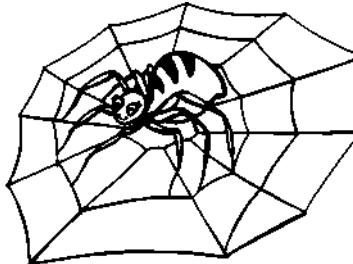
eat  
ear

5.



fly  
fold

6.



web  
walk

7.



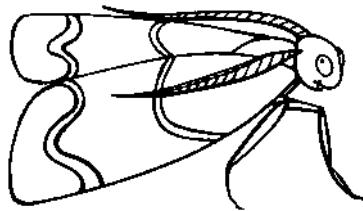
hop  
hip

8.

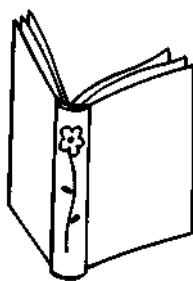


hunt  
hide

Trace the letter. Say the words.



moth



book

Name \_\_\_\_\_

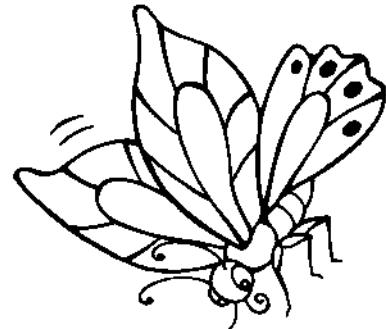
Read the story. Draw a line under each sentence that tells about the story.

A. The butterfly sees the flower.

He flies down to land.

He takes a drink of the sweet nectar.

The butterfly flies away.



1. The butterfly is hungry.

2. The butterfly sees a spider.

3. The butterfly likes the green leaves.

4. The butterfly flies away after eating.

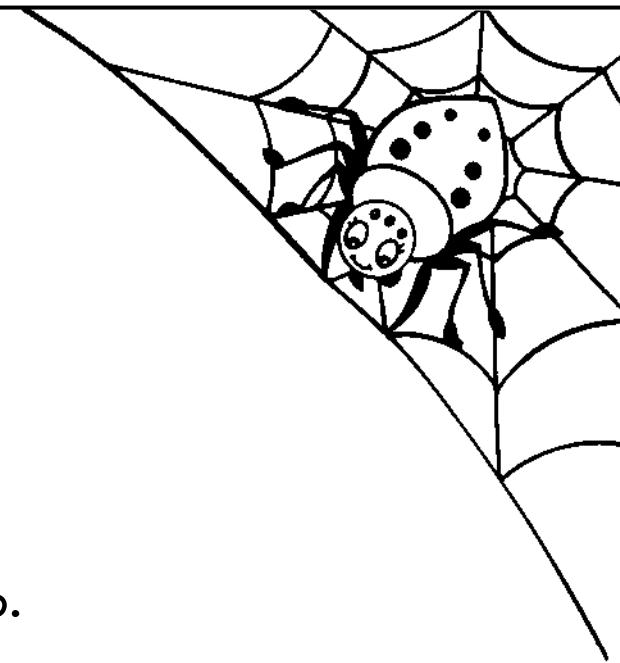


B. The spider watches for a tasty insect.

She sees a fly coming close.

It gets caught in her sticky web.

The spider has her dinner.



1. Spiders chase their dinner.

2. The spider has a sticky web.

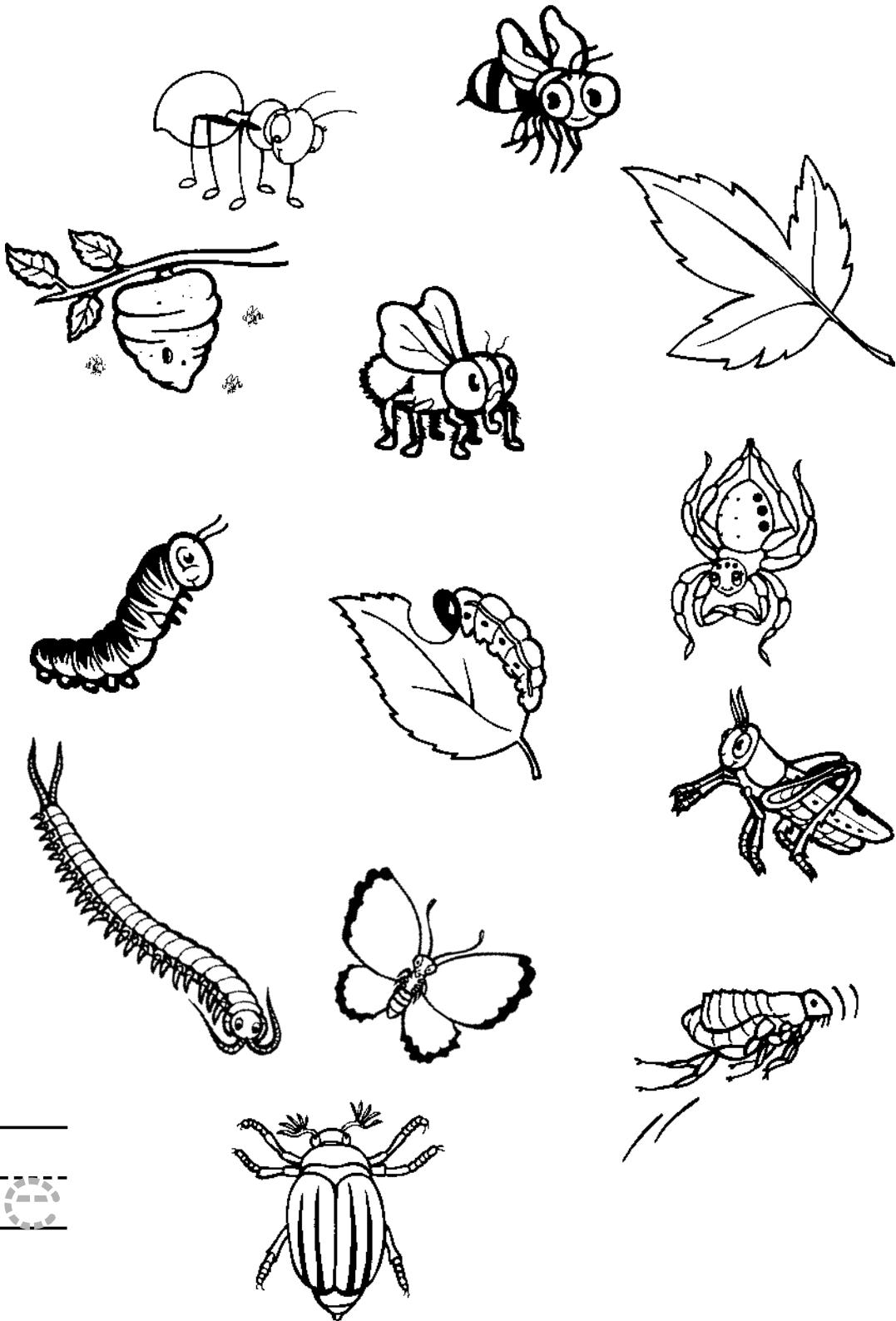
3. Beetles eat leaves and grass.

4. Spiders eat insects, like flies.

Name \_\_\_\_\_

Trace each letter. Then circle any pictures that rhyme with bee.

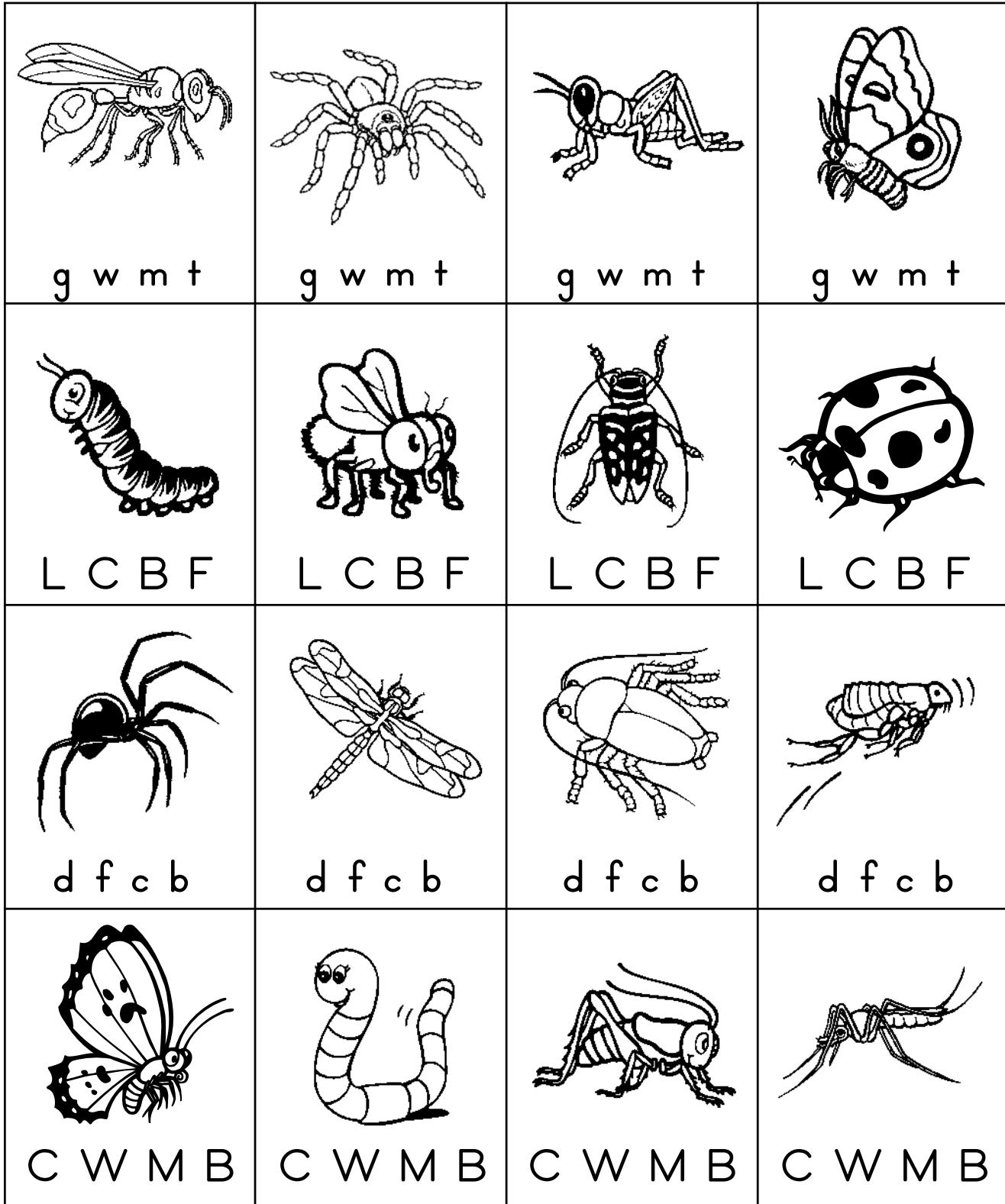
bee



Name \_\_\_\_\_

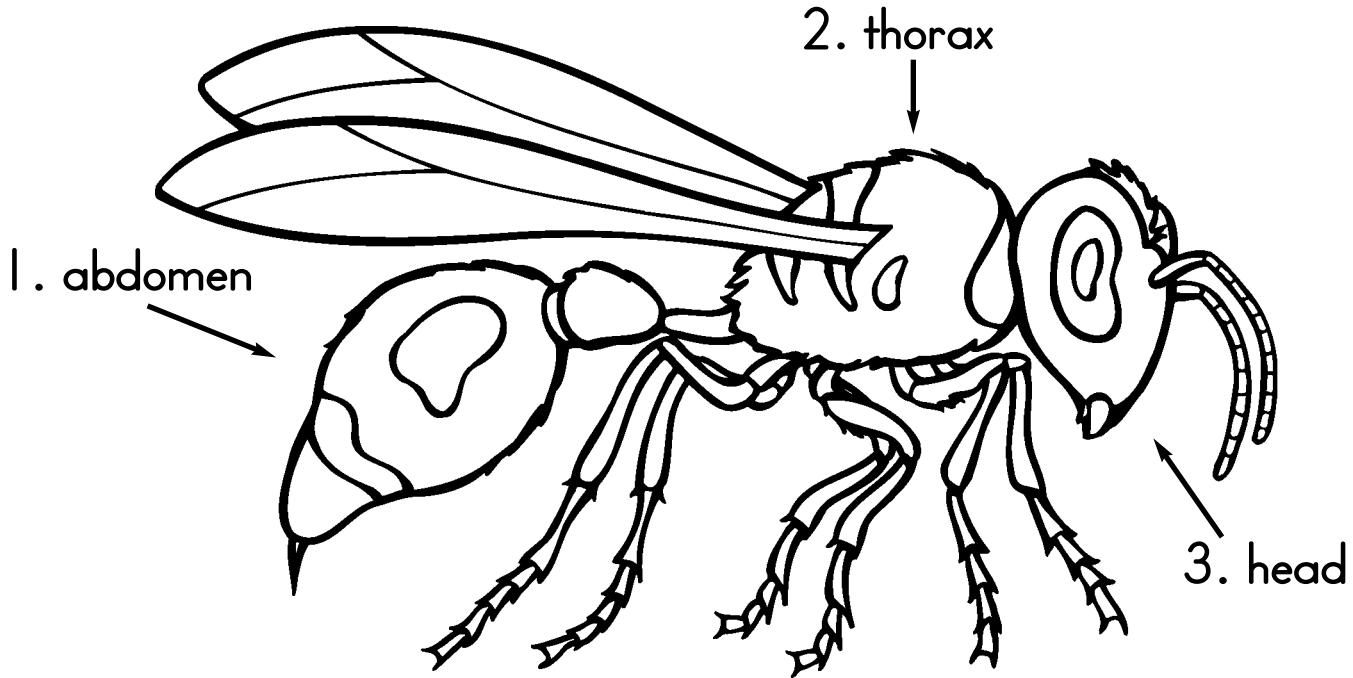
Say the name of the insect or spider in each picture.

Circle the letter that makes the beginning sound.



Name \_\_\_\_\_

Insects do not have bones inside their bodies. Instead, they have a hard outside shell. Insects have six legs and most adult insects have wings. Insects have three main body parts.



Write the three main parts of an insect's body. The first letter is written for you.

1.

g

2.

t

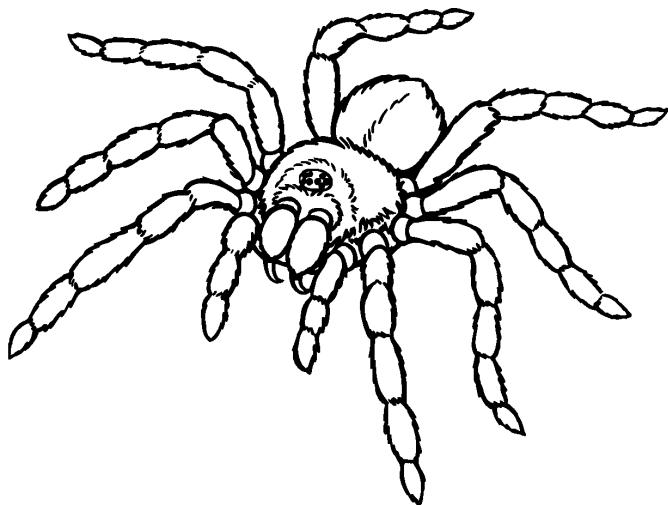
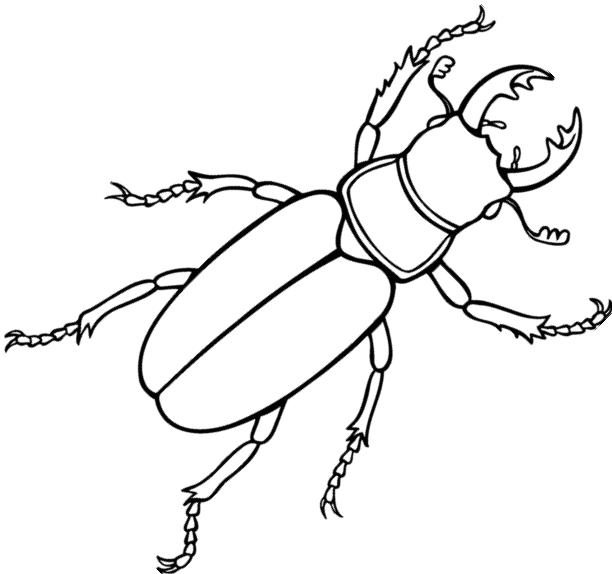
3.

h

Name \_\_\_\_\_

Spiders are not insects. They have eight legs, not six.

They have two main body parts, not three. Spiders don't have wings or antennae.



Write the differences between an insect and a spider.

insect

---

---

yes

---

---

wings?

---

---

no

---

---

antennae?

---

---

how many  
legs?

---

---

how many  
body parts?

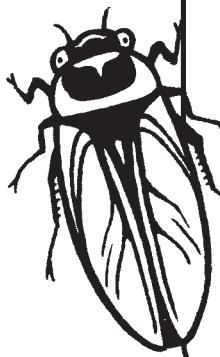
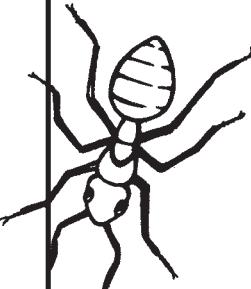
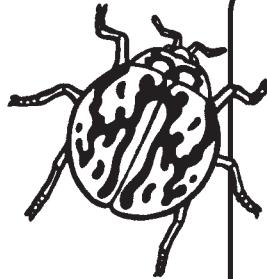
---

---

Name \_\_\_\_\_

Find the following insects and spiders in the word-find puzzle below. Read your Fact File for the bonus.

butterfly	tarantula	beetle	wasp
bee	moth	coleoptera	dragonfly



+ y b u t t e r f l y c  
p a e m w a s p k v w o  
e t e l l r k g o m q l  
m o t h p a c j n j k e  
e c l f h n i d g a h o  
b e e d i t e h a z f p  
r u x b n u g f r y c t  
a r s t i l l e r o u b e  
n u v w y a h k c e l r  
+ k d r a g o n f l y a

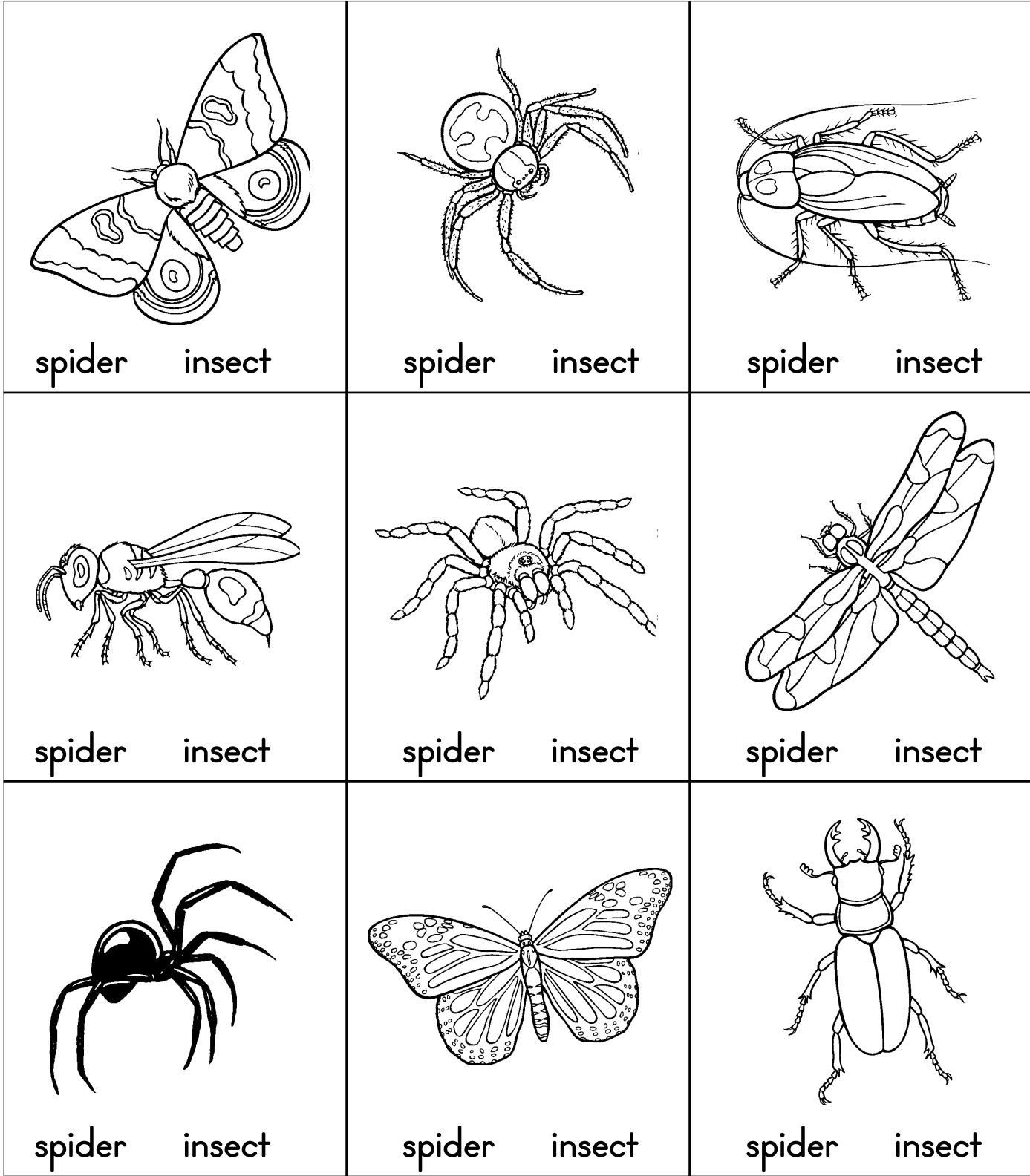
Bonus:

Beetles belong to the order \_\_\_\_\_.

Name \_\_\_\_\_

Decide whether the picture is an insect or a spider.

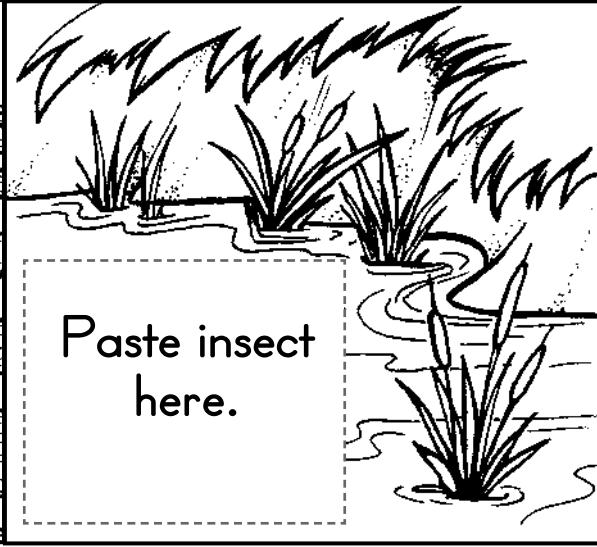
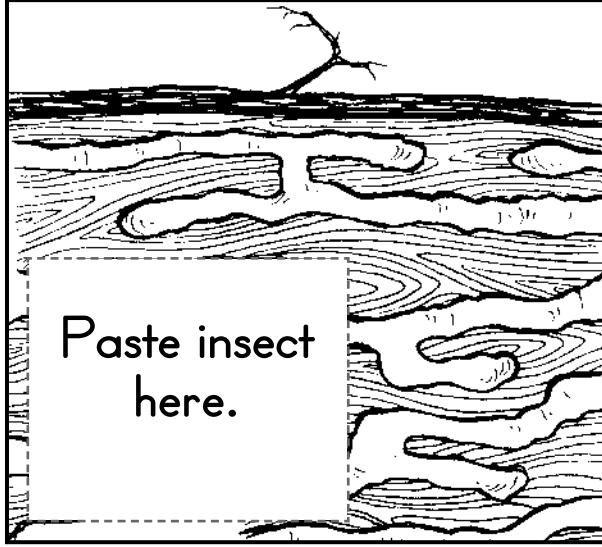
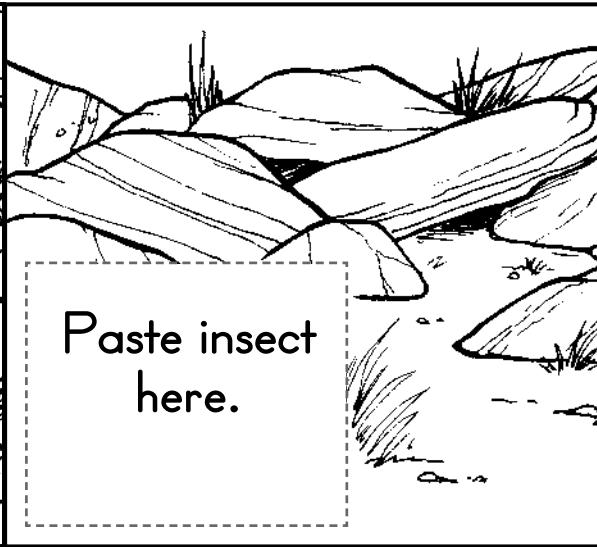
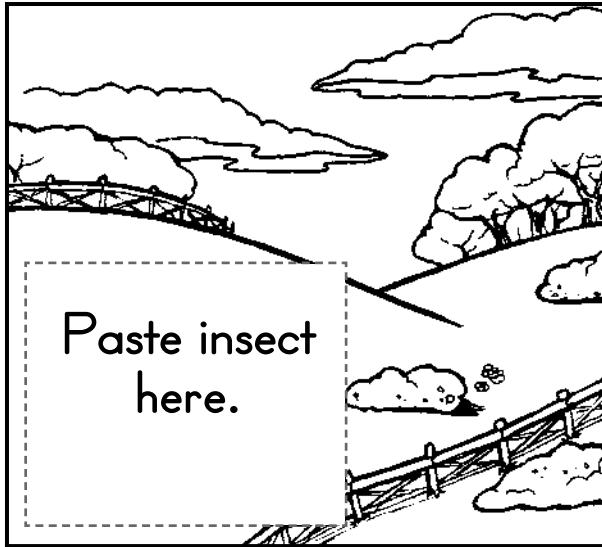
Circle the word. Color the insects.



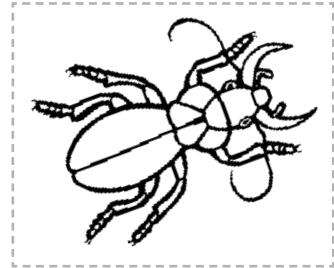
Name \_\_\_\_\_

Insects can live in many different environments.

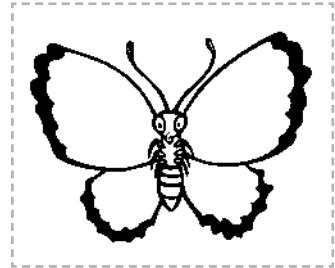
Color these pictures, then cut and paste the insects where they live.



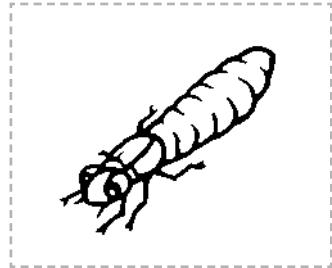
dragonfly



beetle



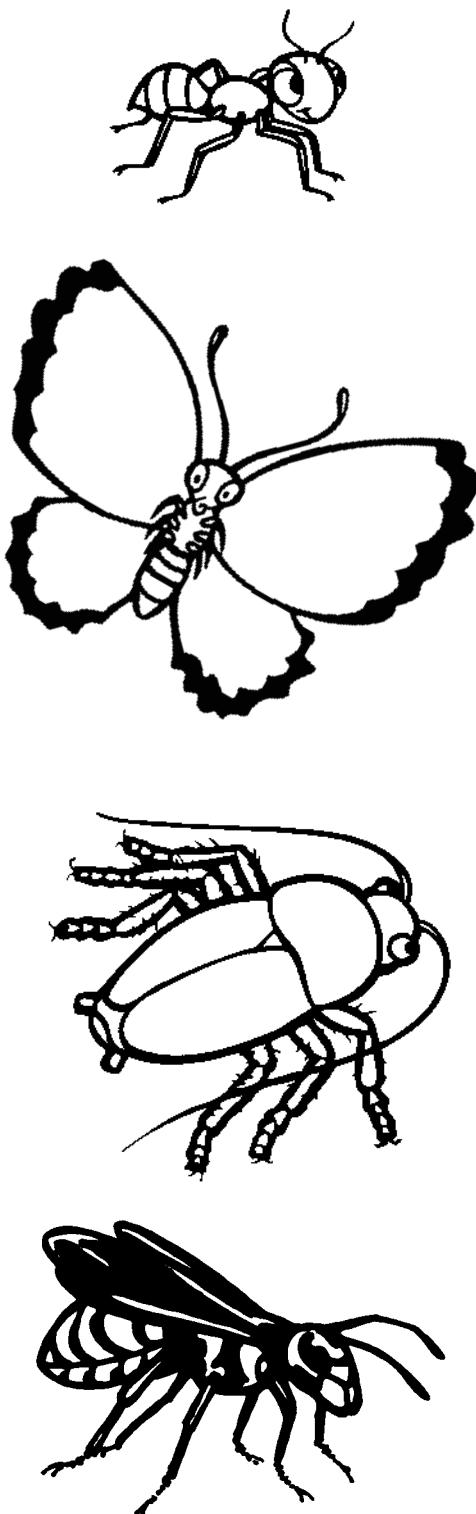
butterfly



termite

Name \_\_\_\_\_

There are many different kinds of insects. All insects have six legs, wings, and antennae. Color the animals on this page that are insects.

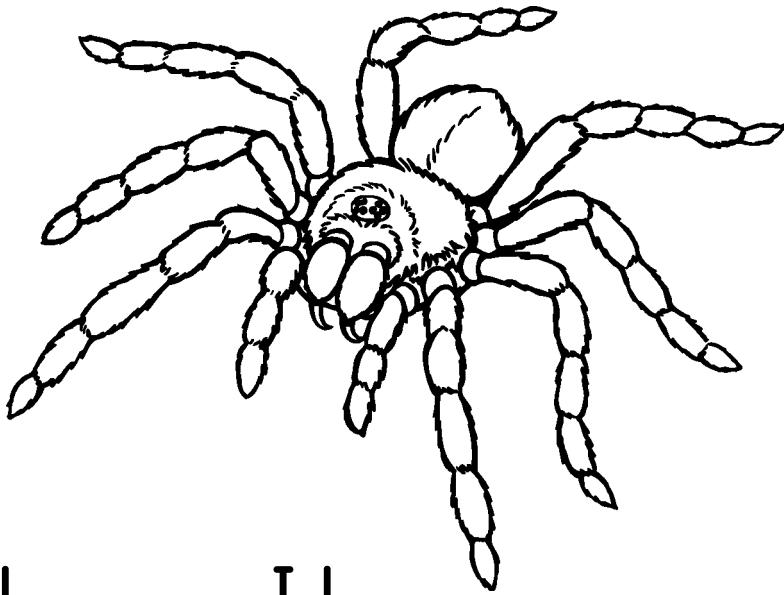


SKILL: WHAT IS AN INSECT?

Name \_\_\_\_\_

Use your Tarantula Spider Fact File to fill in the correct answers.

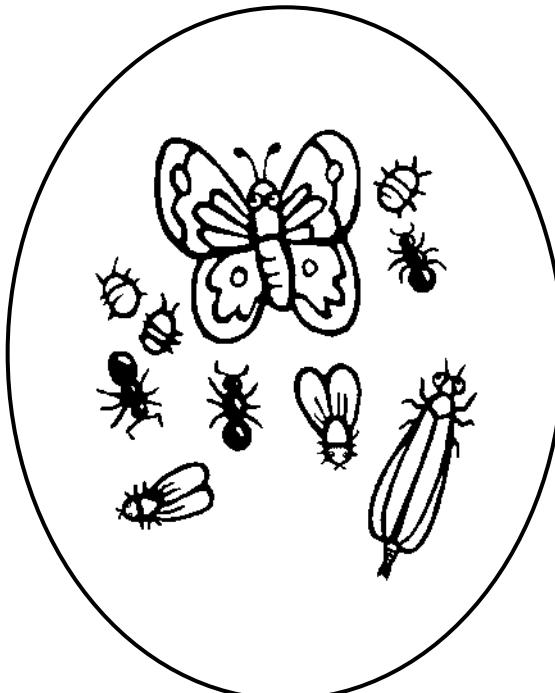
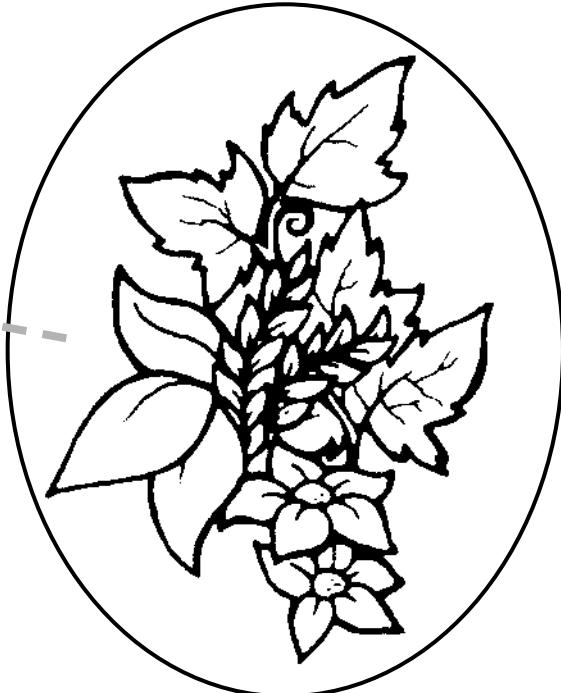
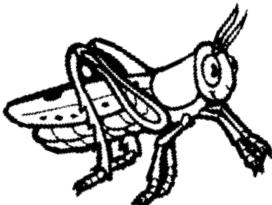
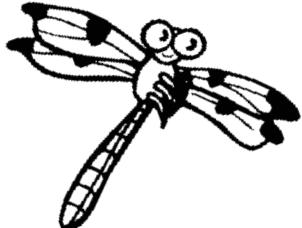
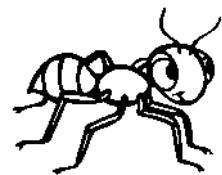
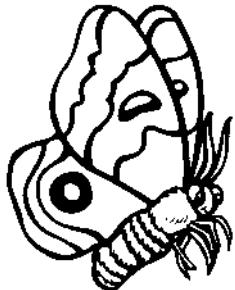
eight	animals
venom	Araneae
insects	wings
spider	desert



I am not an insect because I have eight legs and no \_\_\_\_\_ or antennae. I like to eat \_\_\_\_\_, lizards, and other small \_\_\_\_\_. I am the largest kind of \_\_\_\_\_. My home is in the \_\_\_\_\_. I have \_\_\_\_\_, but unlike a black widow's, it is not strong. I belong to the order \_\_\_\_\_.

Name \_\_\_\_\_

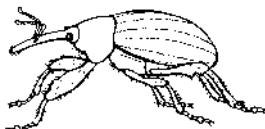
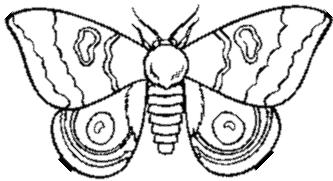
Some insects are carnivorous (meat eaters) while others are herbivorous (plant eaters). Draw a line from each insect to its food.



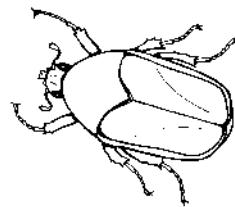
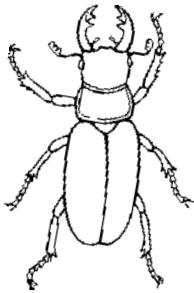
Name \_\_\_\_\_

Use your Fact Files to answer the following.

1. Which of these is in the same order as the beetle?



2. Which of these will grow to be the largest beetle?



3. Many beetles live in: (circle one)

gardens

seashores

mountain tops

4. How many types of beetles are there in the world? (circle one)

2,000

150

300,000

5. Beetles have how many wings? (circle one)

2

4

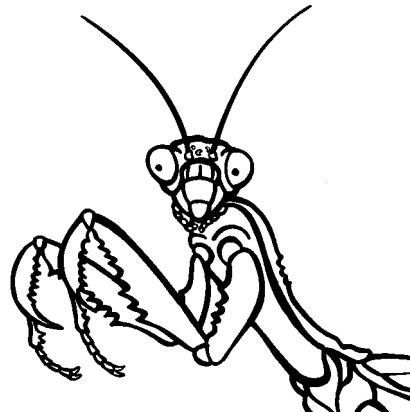
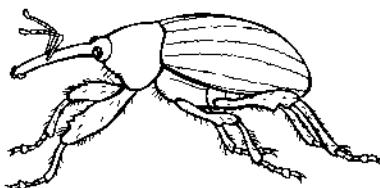
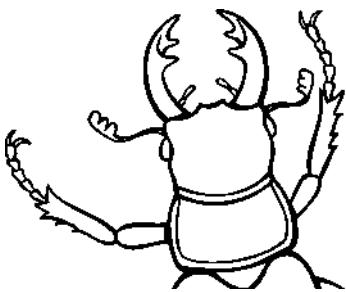
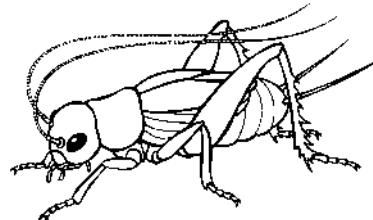
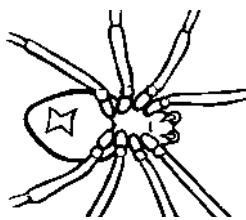
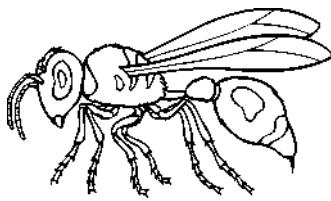
6

8

Name \_\_\_\_\_

Pick each insect or spider's "special" feature from the list and write it under the animal's picture.

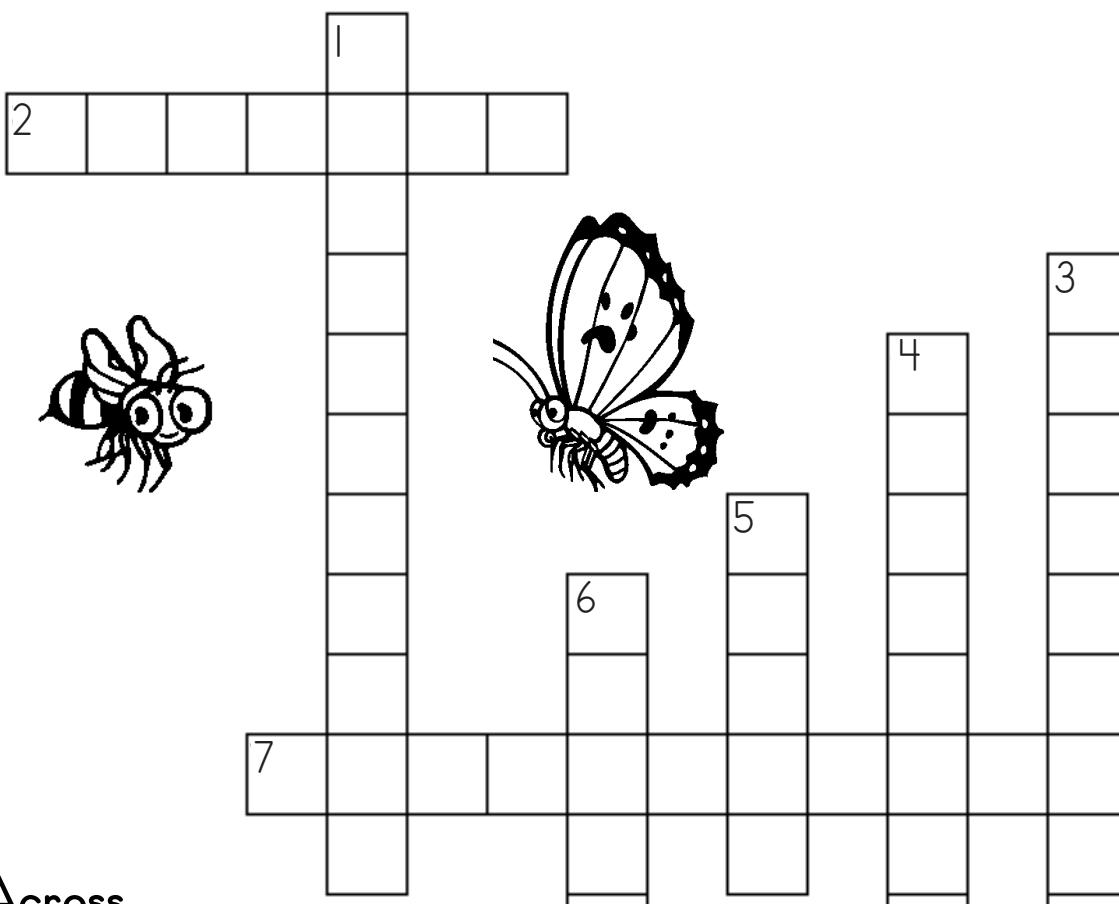
snout	"praying hands"	hourglass
pincers	narrow waist	jumping legs



SKILL: WRITE INSECT AND SPIDER CHARACTERISTICS

Name \_\_\_\_\_

## Insect Crossword Puzzle



### Across

2. This butterfly is very colorful.
7. The moth belongs to the order \_\_\_\_\_ .

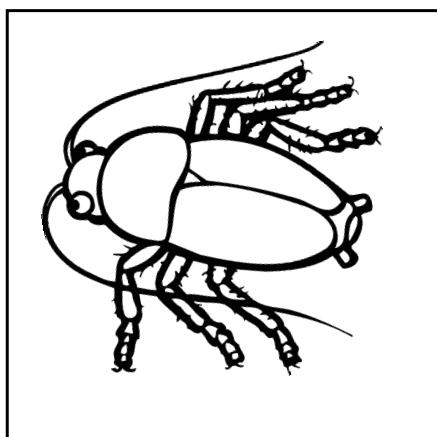
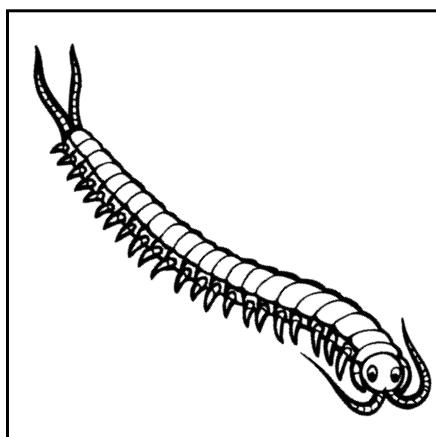
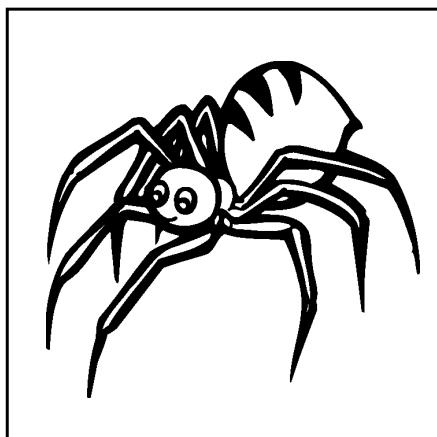
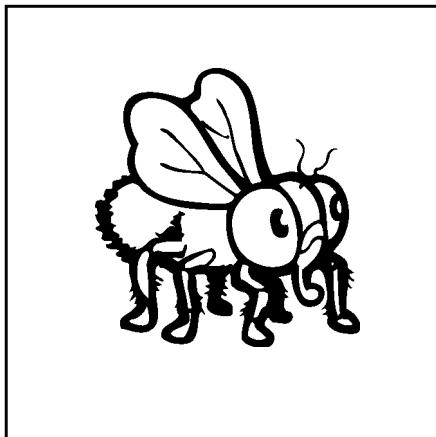
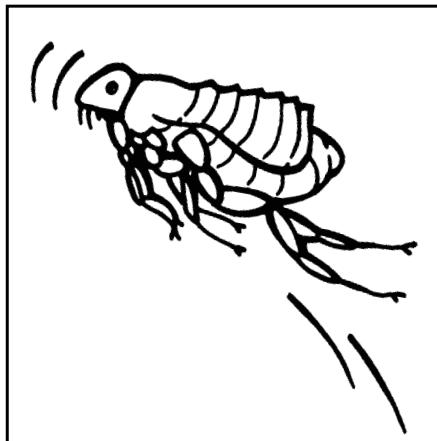
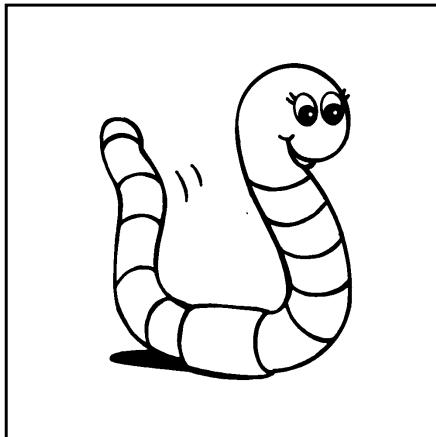


### Down

1. The males of this insect “sing” by rubbing their legs together.
3. This insect has wings but hardly ever flies.
4. An insect that makes honey.
5. These *hymenoptera* help pollinate flowers.
6. This insect is very helpful to gardeners.
1. A fly

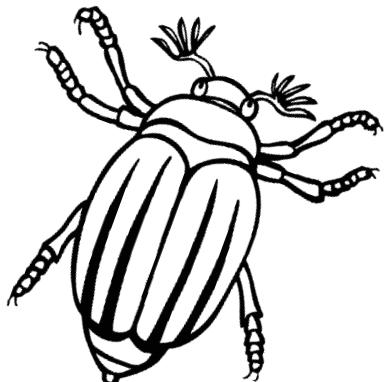
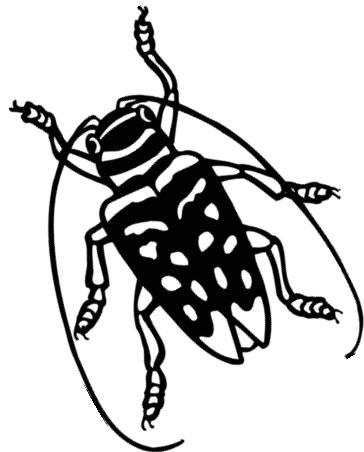
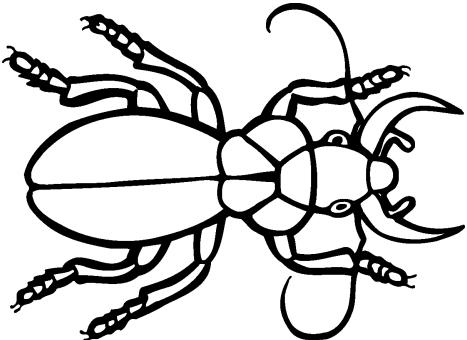
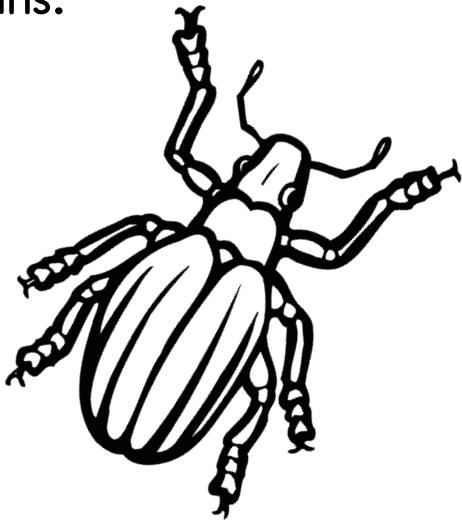
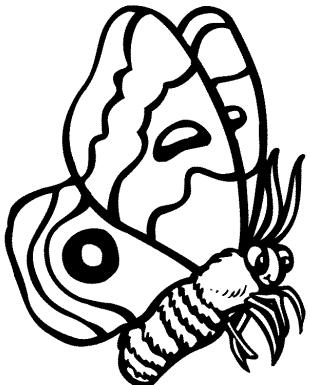
Name \_\_\_\_\_

Color the animals that are NOT insects.



Name \_\_\_\_\_

All beetles belong to a group called *Coleoptera*, which means shield-wings. All beetles have one pair of wings for flying and one pair that is hardened into a shell for protection. Color the pictures that are Coleopterans.



Name \_\_\_\_\_

Add the problems.

$$\begin{array}{r} 3 \\ 3 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ 1 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ 2 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} - \\ 5 \\ +2 \\ \hline \end{array}$$

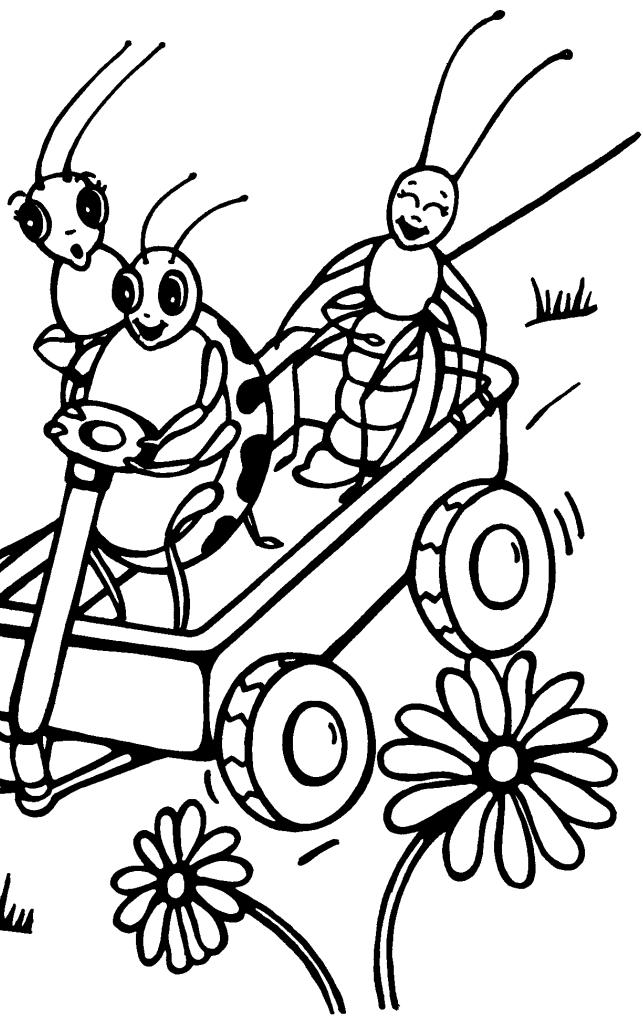
$$\begin{array}{r} - \\ 5 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ 1 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} - \\ - \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ 4 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ 0 \\ +6 \\ \hline \end{array}$$



Name \_\_\_\_\_

Subtract the problems on the leaf.

$$\begin{array}{r} 10 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ - 1 \\ \hline \end{array}$$

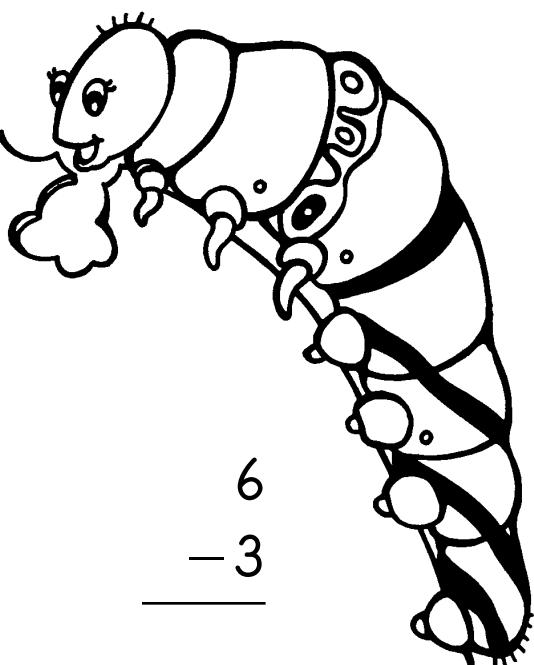
$$\begin{array}{r} 7 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 6 \\ \hline \end{array}$$



SKILL: SUBTRACTION

Name \_\_\_\_\_

Subtract.

$$\begin{array}{r} 13 \\ - 10 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \\ - 11 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ - 23 \\ \hline \end{array}$$

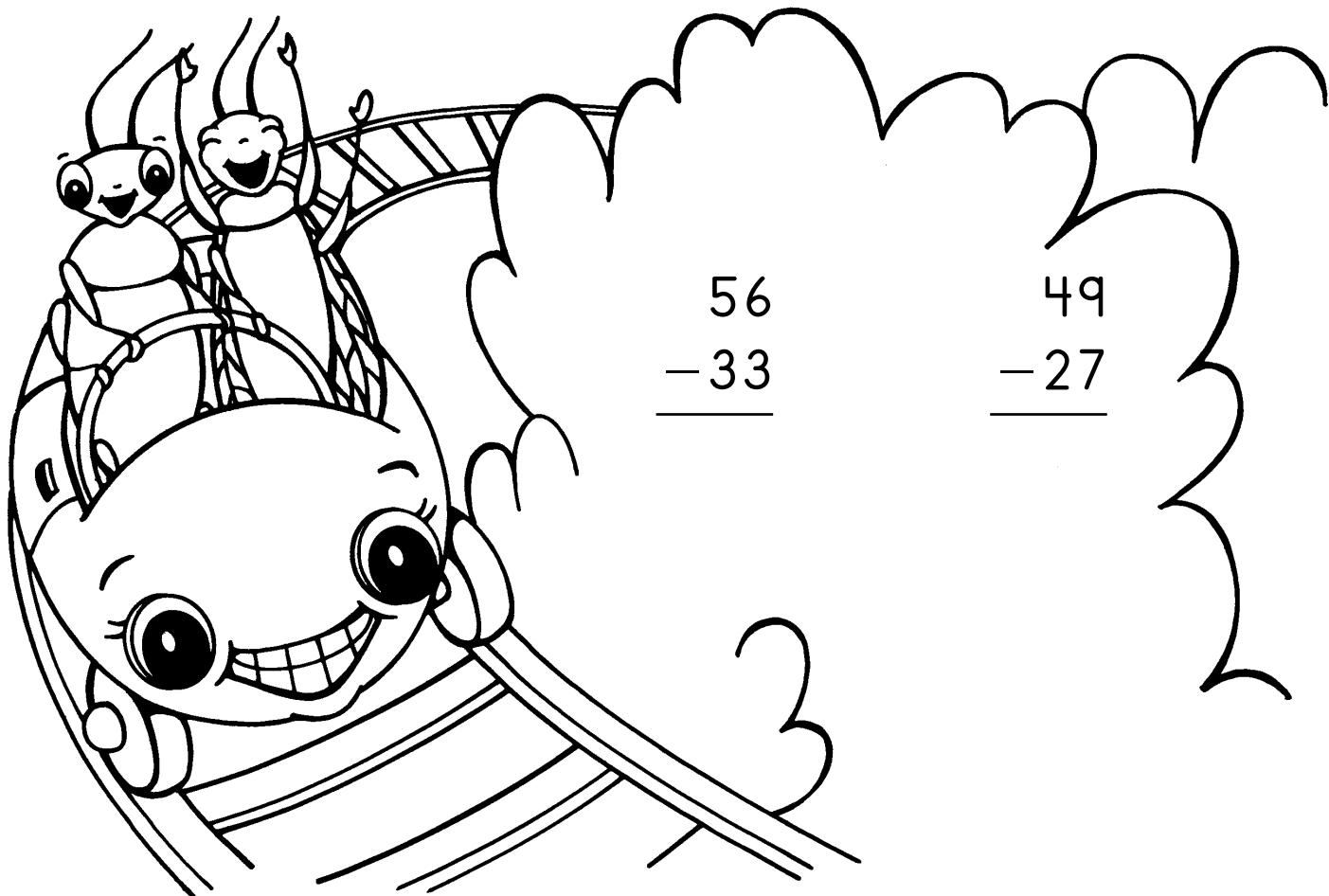
$$\begin{array}{r} 45 \\ - 24 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 26 \\ - 16 \\ \hline \end{array}$$

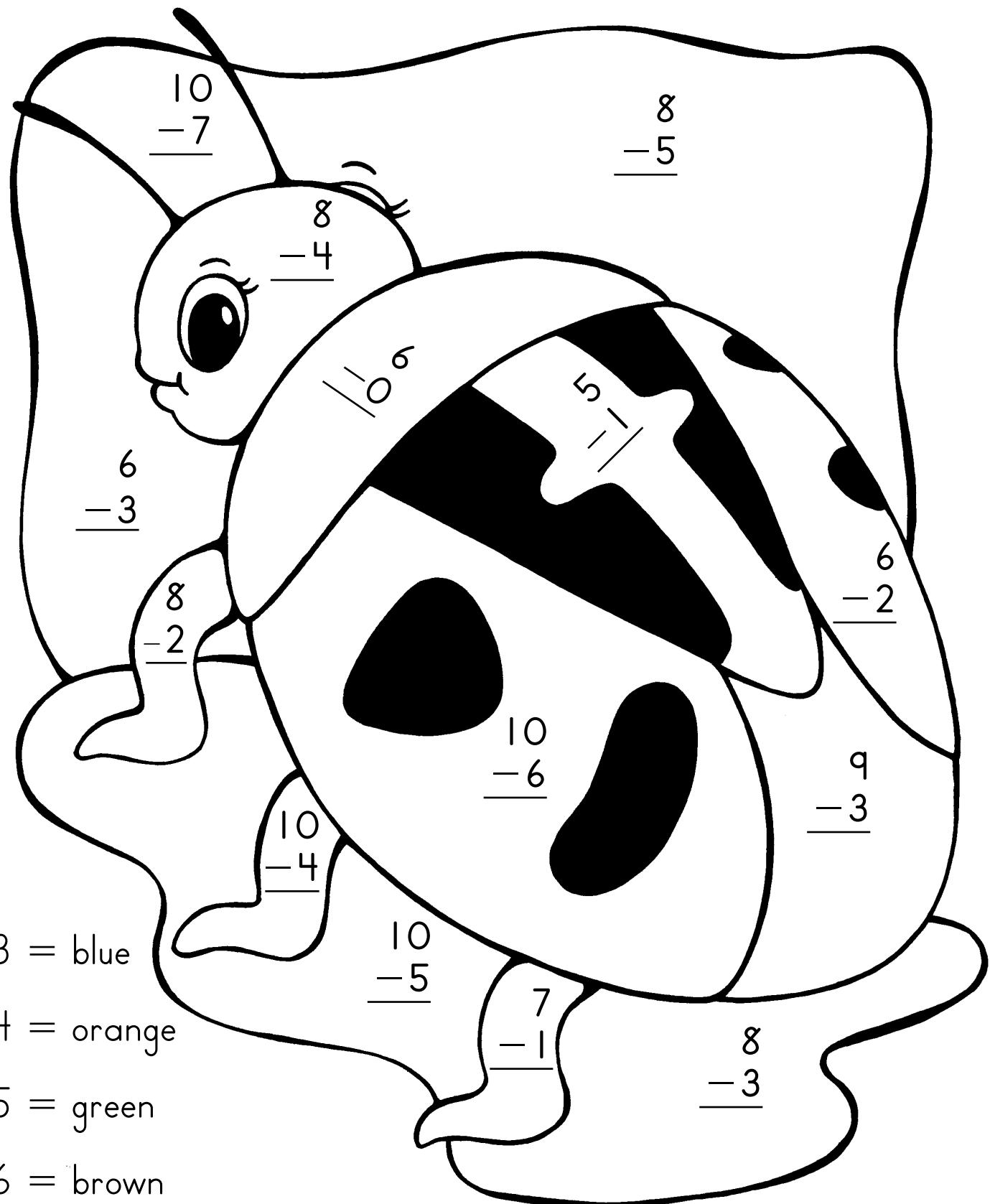
$$\begin{array}{r} 38 \\ - 35 \\ \hline \end{array}$$

$$\begin{array}{r} 62 \\ - 40 \\ \hline \end{array}$$



Name \_\_\_\_\_

Subtract and color. Use the color codes below.



3 = blue

4 = orange

5 = green

6 = brown

Name \_\_\_\_\_

Write the number that comes before on each line.

\_\_\_\_\_ 31

\_\_\_\_\_ 16

\_\_\_\_\_ 1

\_\_\_\_\_ 46

\_\_\_\_\_ 28

\_\_\_\_\_ 21

\_\_\_\_\_ 10

\_\_\_\_\_ 2

\_\_\_\_\_ 37

\_\_\_\_\_ 29

\_\_\_\_\_ 11

\_\_\_\_\_ 15



SKILL: NUMBER BEFORE

Name \_\_\_\_\_

Write the number that comes after on each line.

12 \_\_\_\_\_

19 \_\_\_\_\_

32 \_\_\_\_\_

40 \_\_\_\_\_

0 \_\_\_\_\_

21 \_\_\_\_\_

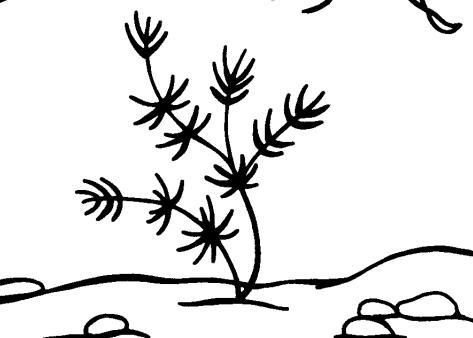
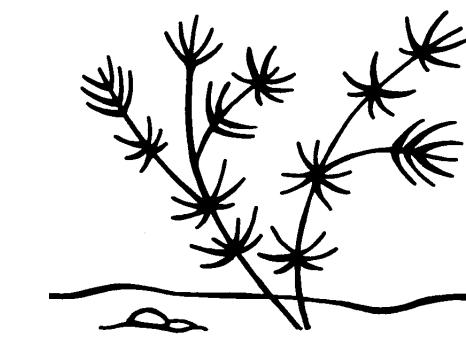
14 \_\_\_\_\_

35 \_\_\_\_\_

47 \_\_\_\_\_

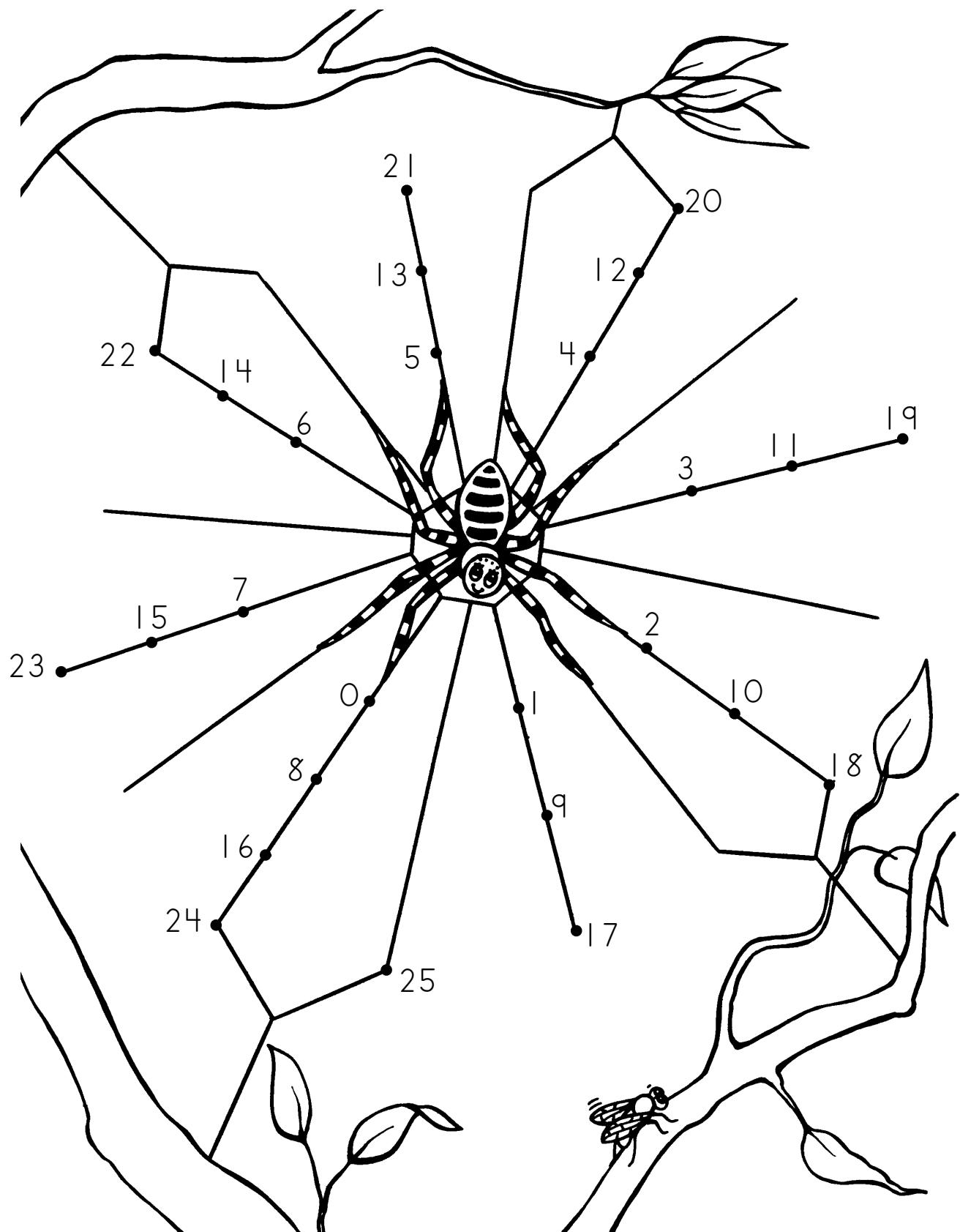
10 \_\_\_\_\_

39 \_\_\_\_\_



Name \_\_\_\_\_

Connect the dots. Count from 0 to 25.



SKILL: CONNECT THE DOTS

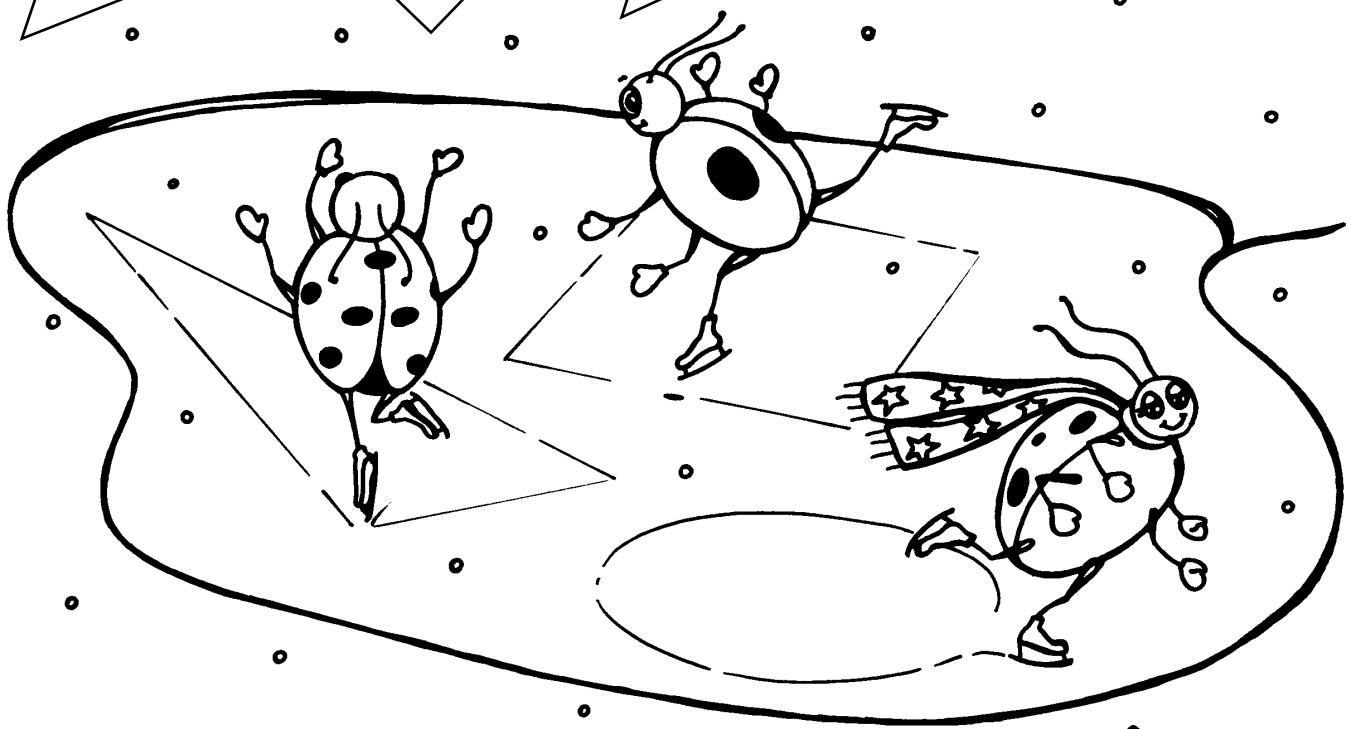
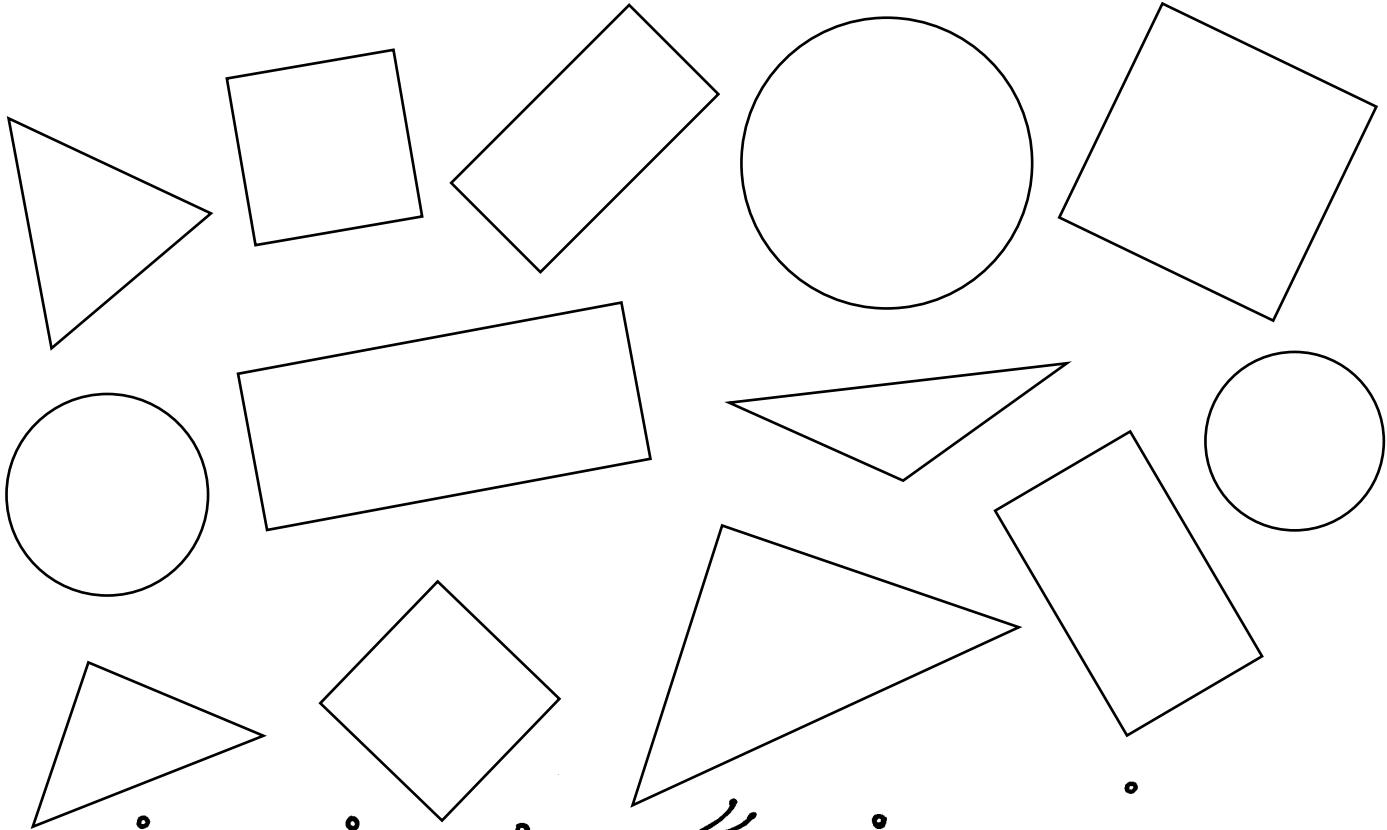
GRADE ONE • INSECTS/SPIDERS • MATH • 007

Name \_\_\_\_\_

Shapes.

Color the triangles red. Color the circles blue.

Color the squares green. Color the rectangles yellow.

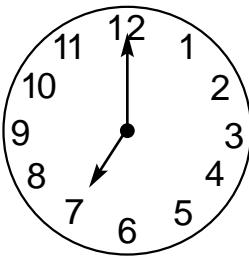


SKILL: SHAPES

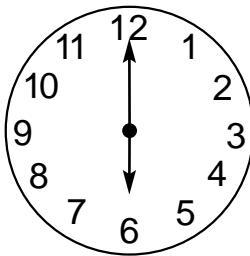
Name \_\_\_\_\_

What time is it?

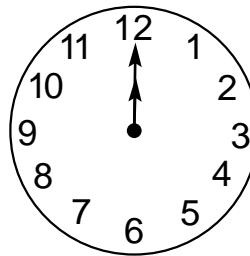
Write the correct time below each clock.



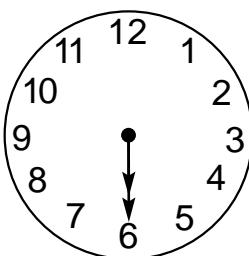
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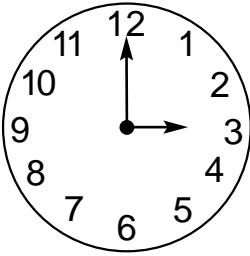
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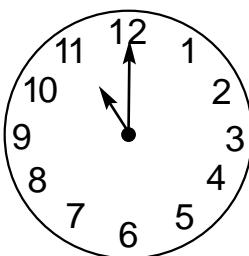
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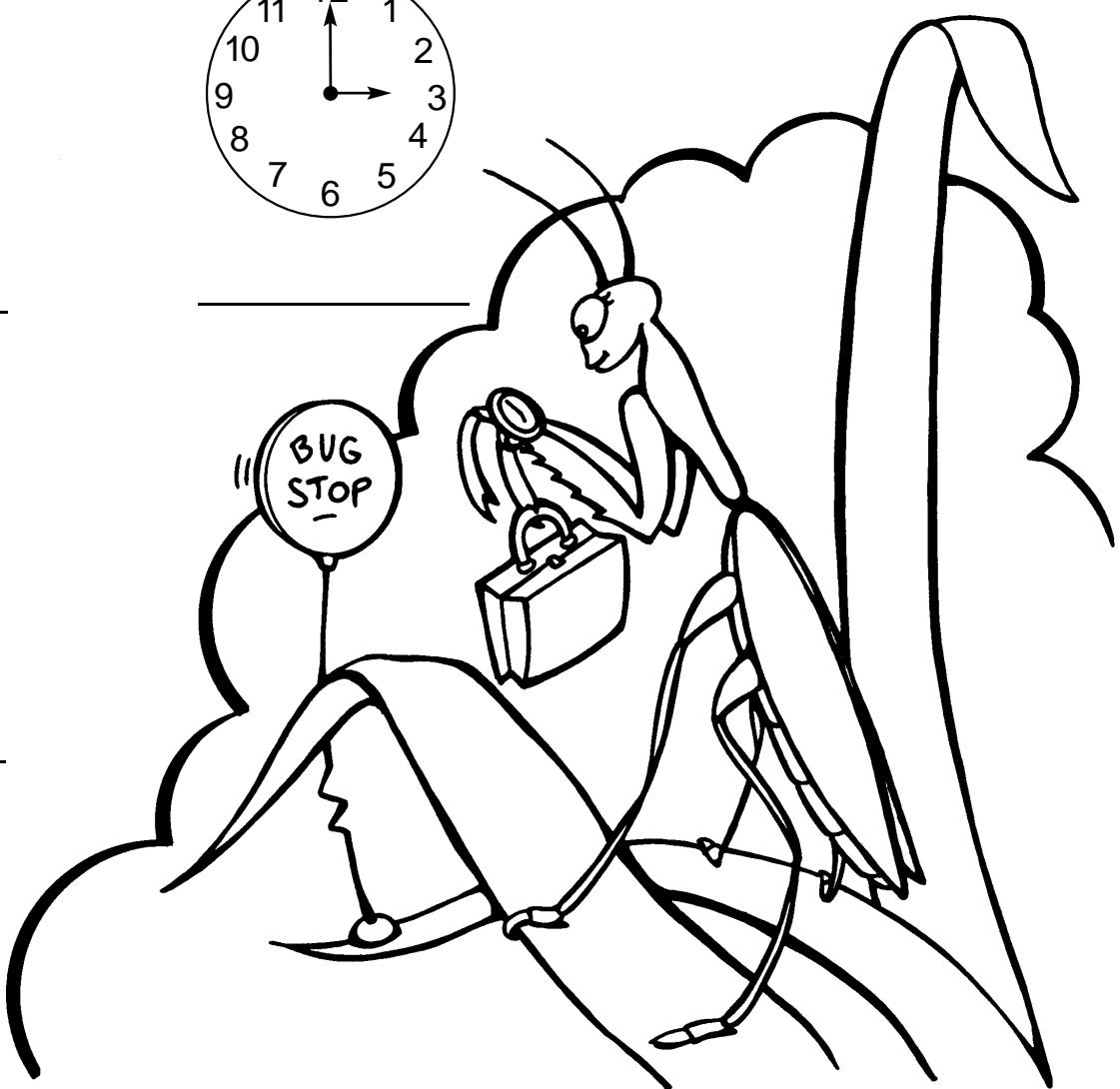
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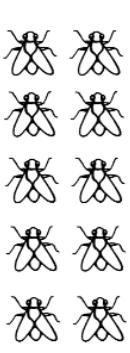
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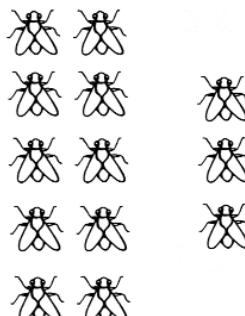
SKILL: TIME

Name \_\_\_\_\_

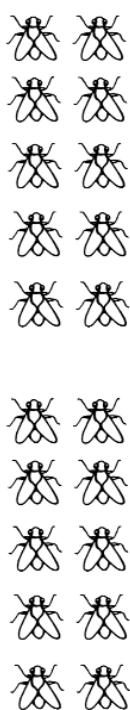
How many tens? How many ones?



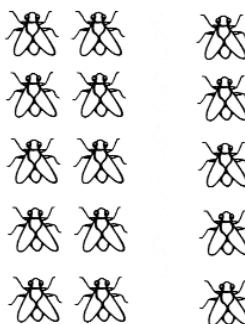
Tens	Ones



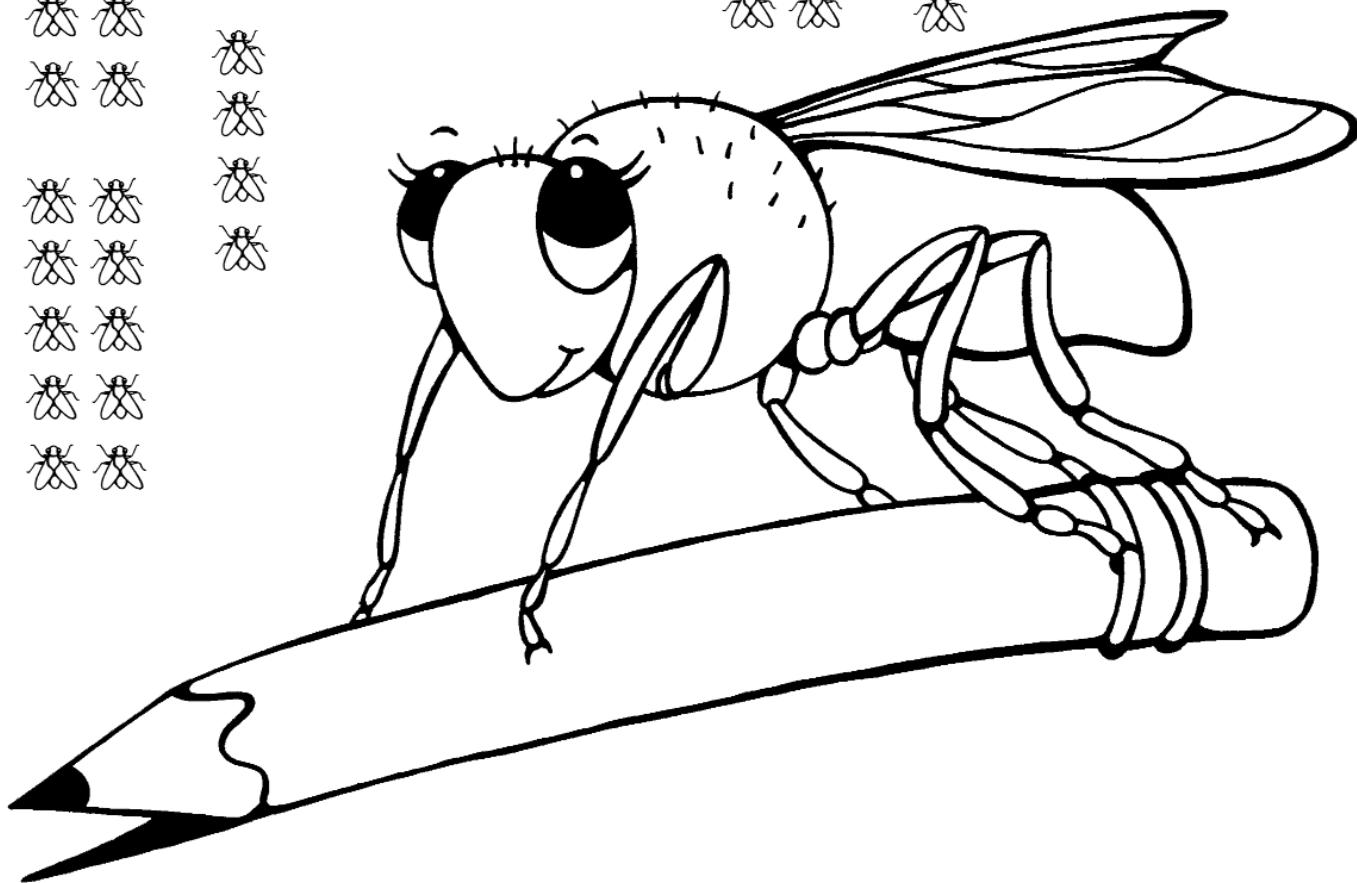
Tens	Ones



Tens	Ones



Tens	Ones



Name \_\_\_\_\_

Circle the number that is greater in each box.

40 or 30

17 or 20

23 or 19

5 or 11

0 or 5

15 or 44

Circle the number that is less in each box.

13 or 12

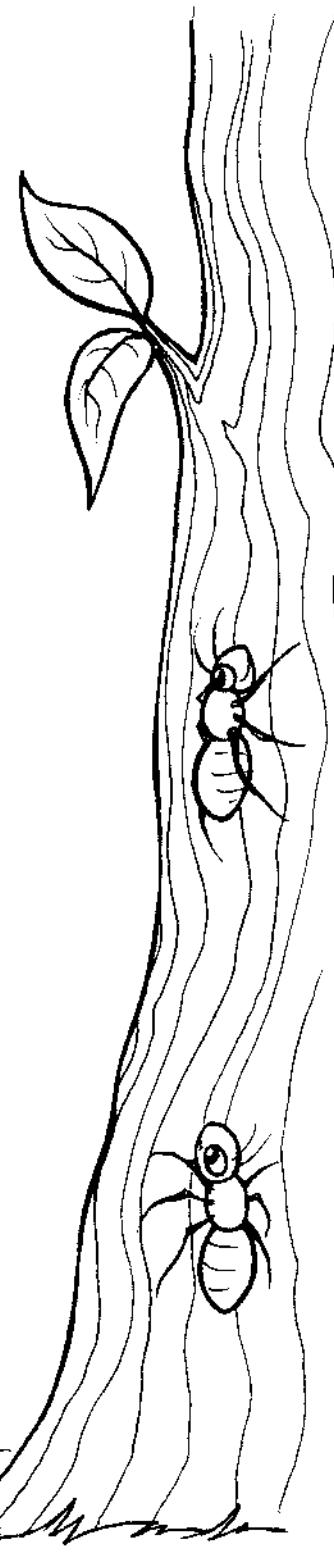
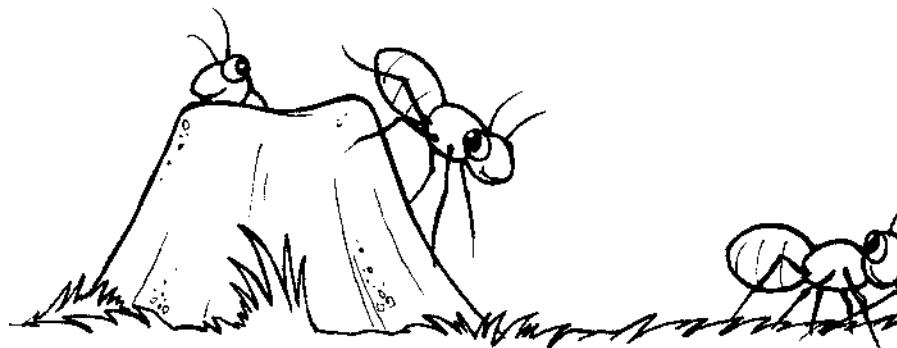
2 or 4

15 or 8

21 or 18

15 or 26

11 or 9



Name \_\_\_\_\_

Solve each problem.

1. There are 3  .

Then 6  land.

How many flies in all?

$$\begin{array}{r} 3 \\ + 6 \\ \hline \end{array}$$

2. There are 7  .

5  hide away.

How many are left?

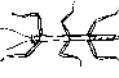
$$\begin{array}{r} 7 \\ - 5 \\ \hline \end{array}$$

3. There were 6  .

5 more  came.

How many in all?

$$\begin{array}{r} 6 \\ + 5 \\ \hline \end{array}$$

4. 9  were eating.

2  left.

How many are still eating?

$$\begin{array}{r} 9 \\ - 2 \\ \hline \end{array}$$

5. 8  were making webs.

8 more  joined in.

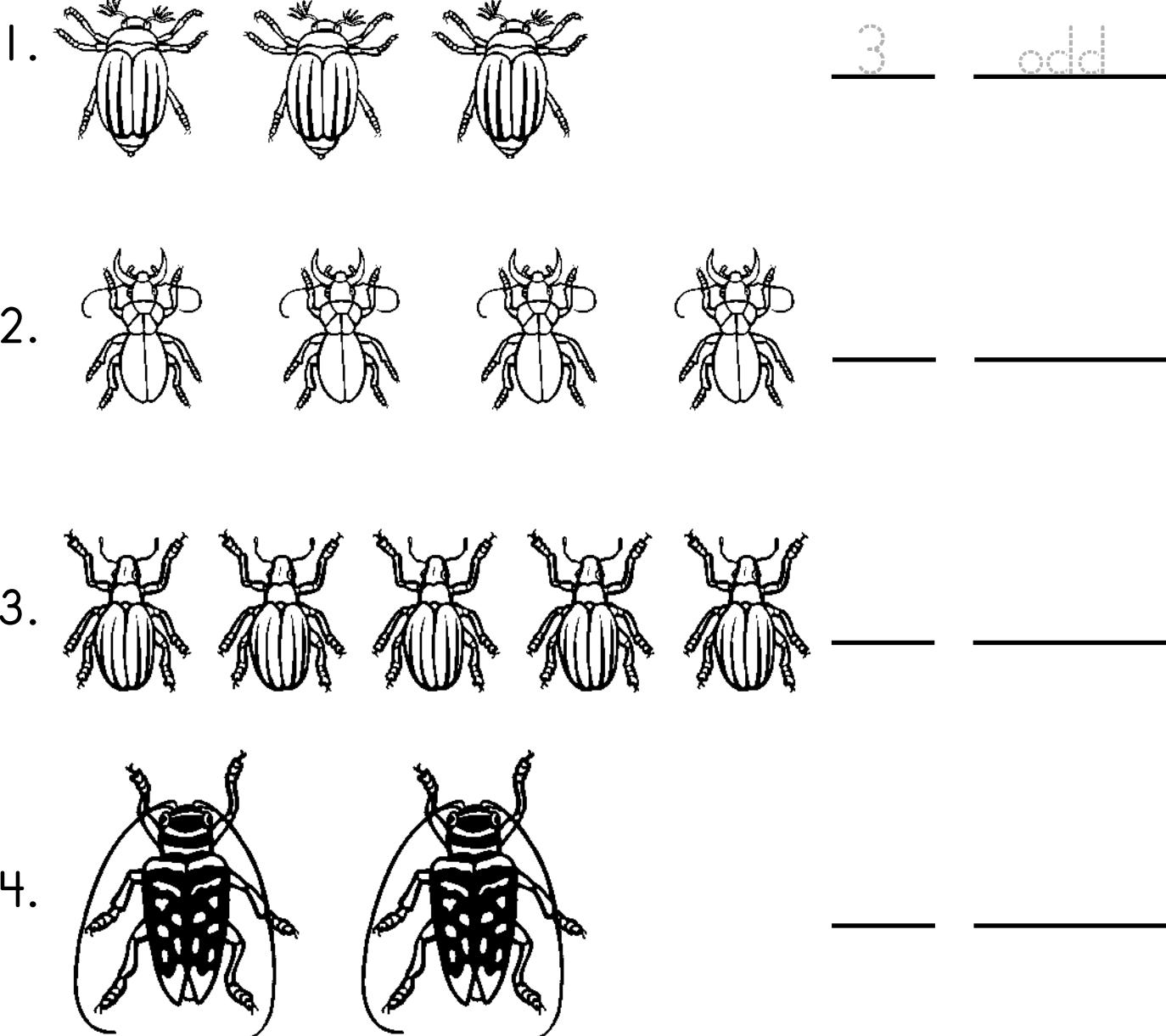
How many in all?

$$\begin{array}{r} 8 \\ + 8 \\ \hline \end{array}$$

Name \_\_\_\_\_

Count the beetles. Write the number.

Write whether it is even or odd.



Use even numbers to count by 2s.

2, 4, \_\_, \_\_, \_\_, \_\_, \_\_, \_\_.

Use odd numbers to count by 2s.

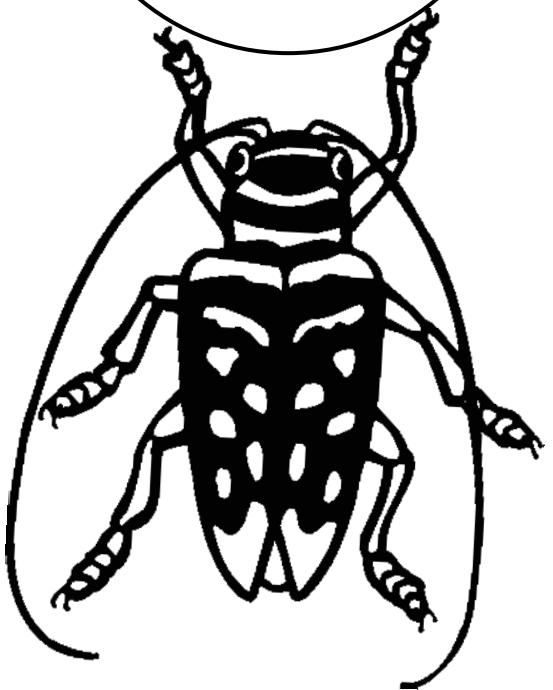
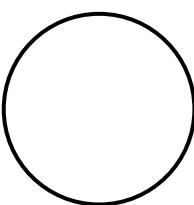
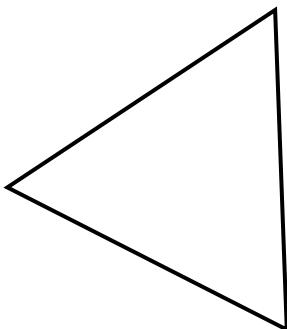
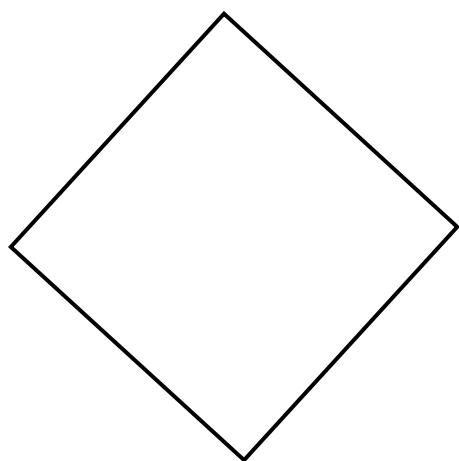
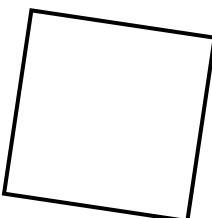
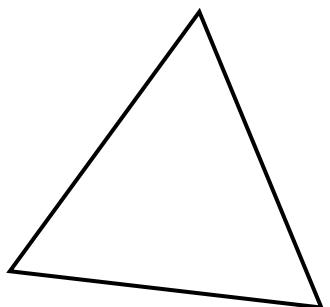
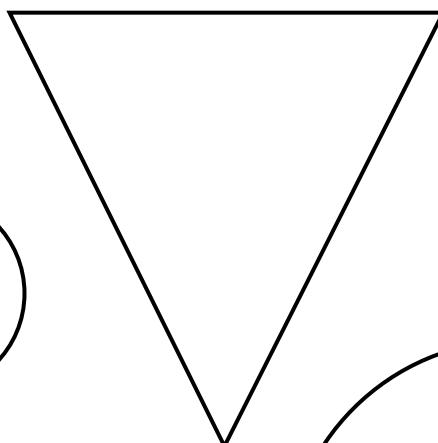
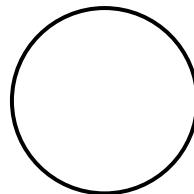
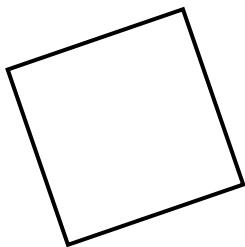
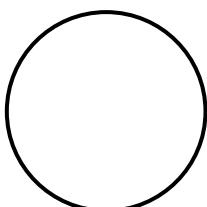
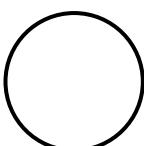
1, 3, \_\_, \_\_, \_\_, \_\_, \_\_, \_\_.

Name \_\_\_\_\_

Color the circles green.

Color the squares purple.

Color the triangles red.



SKILL: SHAPES

Name \_\_\_\_\_

Circle the number in each box that is greater.

11 or 22

25 or 52

31 or 18

6 or 2

5 or 0

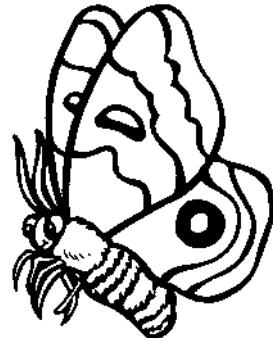
16 or 30

Circle the number in each box that is less.

22 or 29

6 or 0

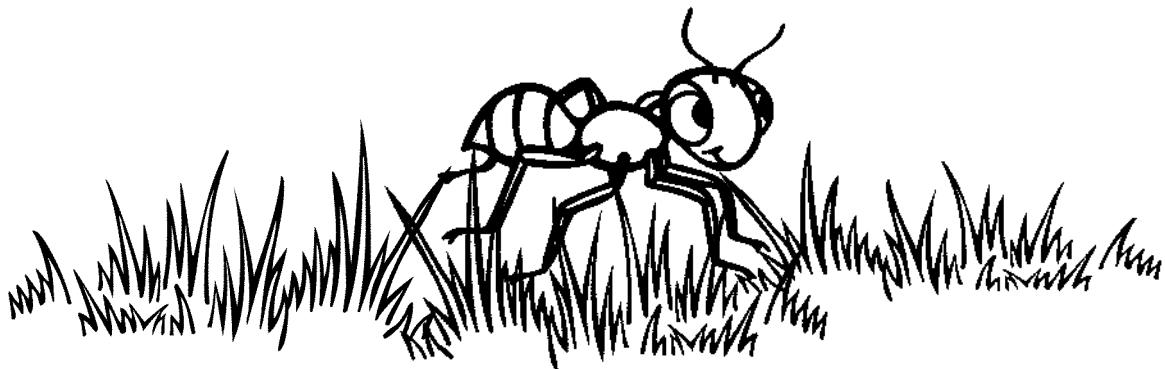
8 or 7



66 or 99

71 or 17

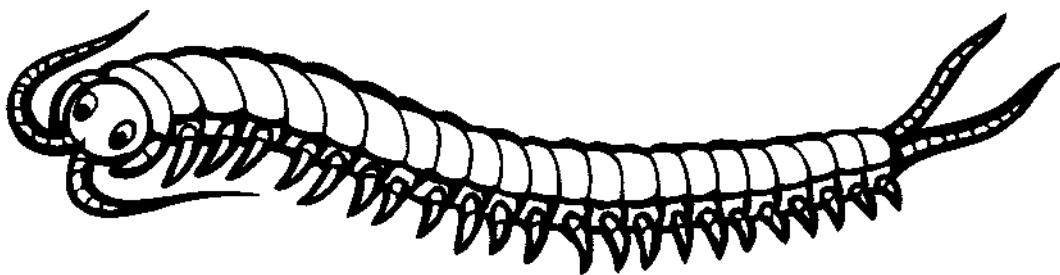
10 or 1



Name \_\_\_\_\_

Add the problems.

$$\begin{array}{r} 3 \\ 3 \\ + 1 \\ \hline \end{array}$$



$$\begin{array}{r} 7 & 2 & 4 & 4 \\ 5 & 4 & 2 & 4 \\ + 2 & + 5 & + 6 & + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 8 & 4 & 7 & 4 \\ 4 & 2 & 9 & 7 \\ + 7 & + 2 & + 1 & + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 9 & 8 & 7 & 7 \\ 5 & 3 & 3 & 4 \\ + 1 & + 2 & + 2 & + 3 \\ \hline \end{array}$$

Name \_\_\_\_\_

Subtract the double digit numbers.

$$\begin{array}{r} 34 \\ -13 \\ \hline \end{array}$$

$$\begin{array}{r} 59 \\ -27 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ -15 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ -25 \\ \hline \end{array}$$

$$\begin{array}{r} 77 \\ -22 \\ \hline \end{array}$$

$$\begin{array}{r} 39 \\ -15 \\ \hline \end{array}$$

$$\begin{array}{r} 64 \\ -23 \\ \hline \end{array}$$

$$\begin{array}{r} 79 \\ -29 \\ \hline \end{array}$$

$$\begin{array}{r} 68 \\ -36 \\ \hline \end{array}$$

$$\begin{array}{r} 39 \\ -18 \\ \hline \end{array}$$

$$\begin{array}{r} 46 \\ -31 \\ \hline \end{array}$$

$$\begin{array}{r} 63 \\ -41 \\ \hline \end{array}$$

$$\begin{array}{r} 48 \\ -23 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \\ -20 \\ \hline \end{array}$$

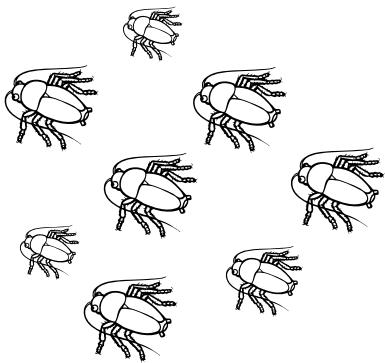
$$\begin{array}{r} 26 \\ -15 \\ \hline \end{array}$$

$$\begin{array}{r} 39 \\ -22 \\ \hline \end{array}$$



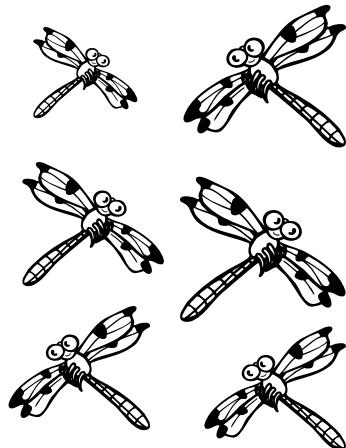
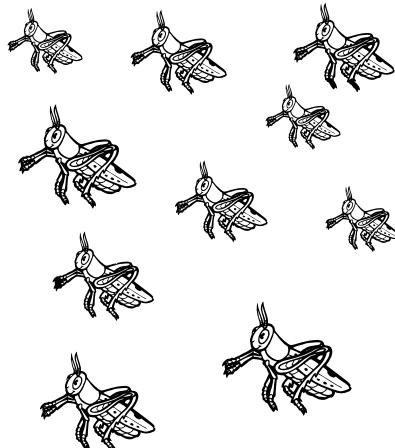
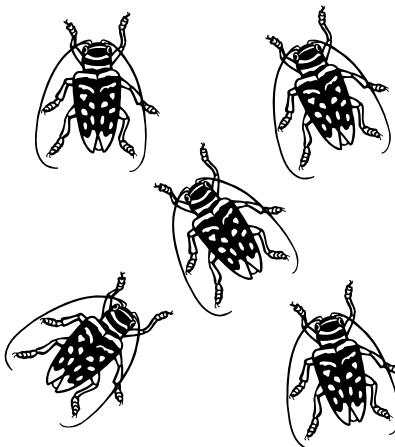
Name \_\_\_\_\_

Count how many are in each group and write the number on each line and tell whether it is odd or even.

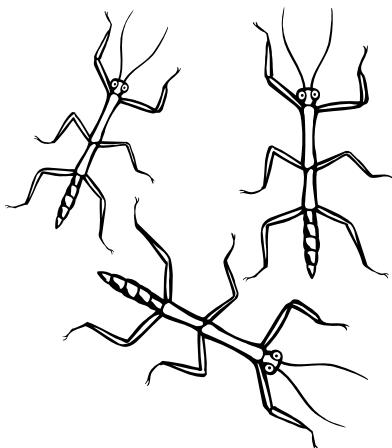


8

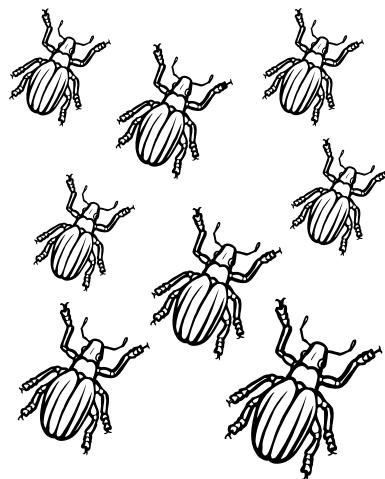
even





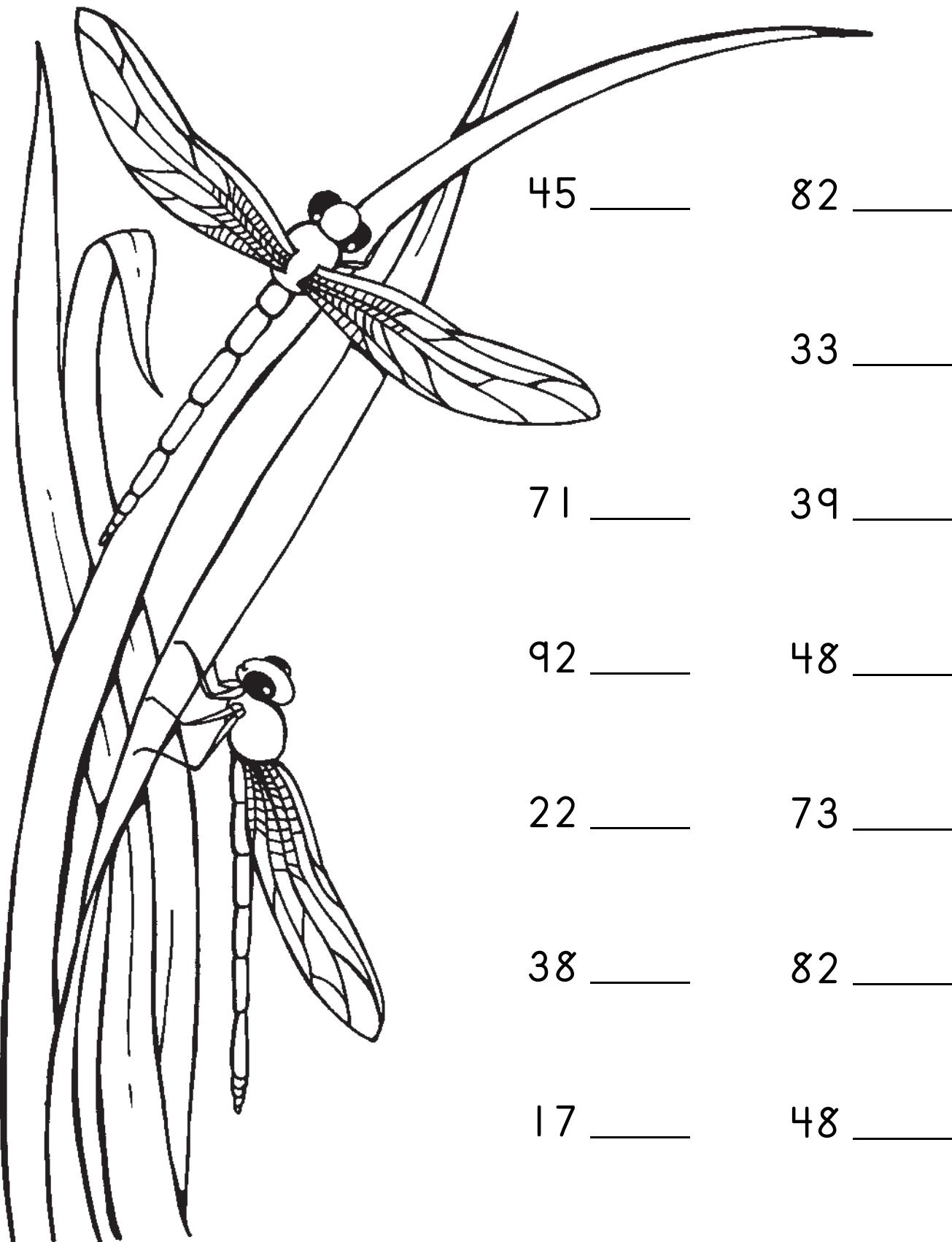


SKILL: COUNT 1-10

Name \_\_\_\_\_

Write the number that comes after on each line.



SKILL: NUMBER AFTER

Name \_\_\_\_\_

Write the number that comes before on each line.

\_\_\_\_\_ 15

\_\_\_\_\_ 77

\_\_\_\_\_ 83

\_\_\_\_\_ 64

\_\_\_\_\_ 32

\_\_\_\_\_ 29

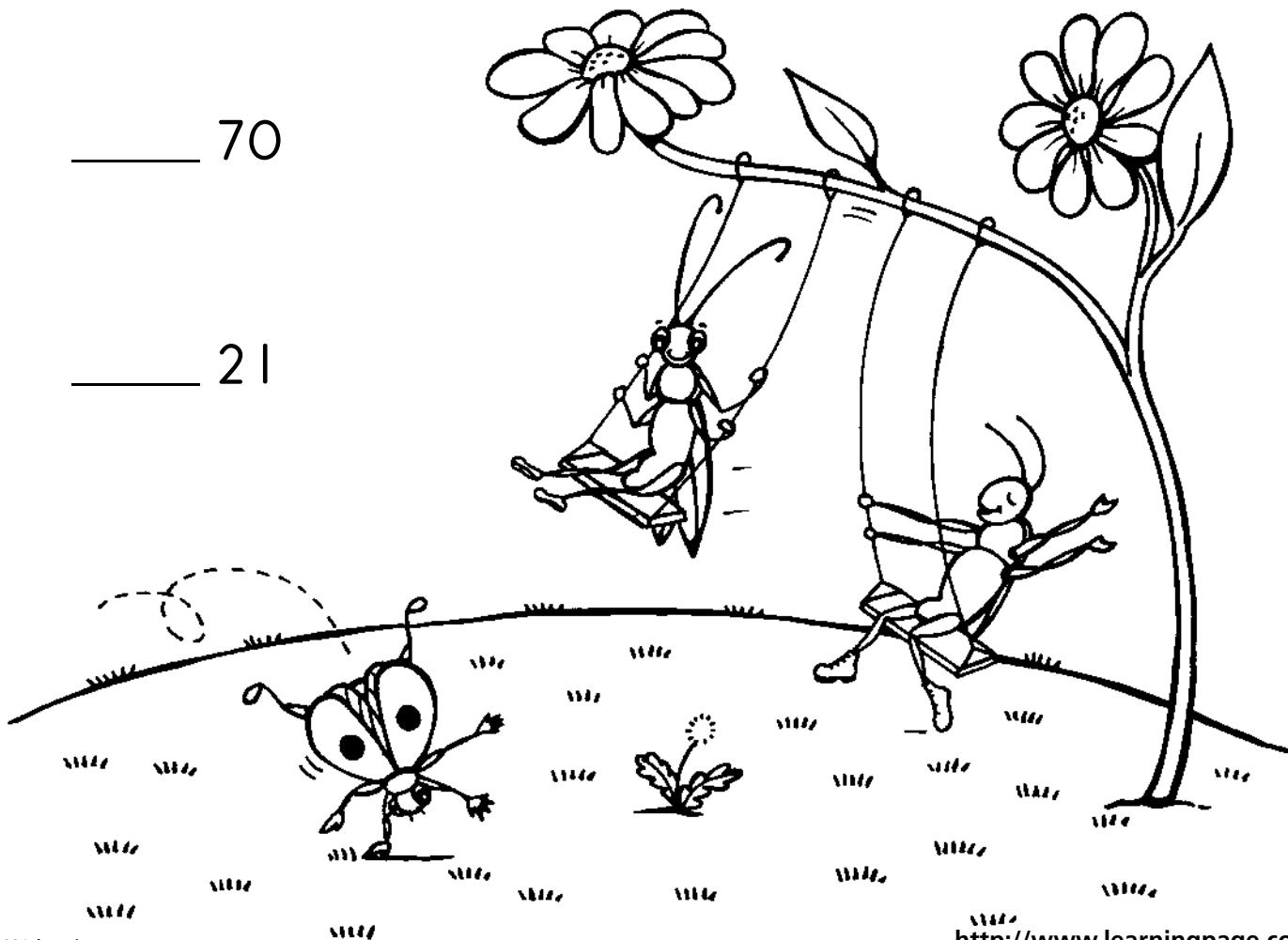
\_\_\_\_\_ 82

\_\_\_\_\_ 94

\_\_\_\_\_ 38

\_\_\_\_\_ 70

\_\_\_\_\_ 21

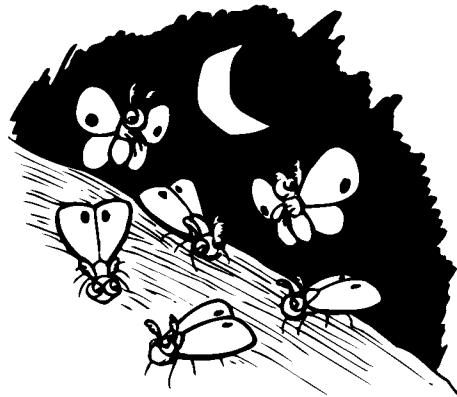
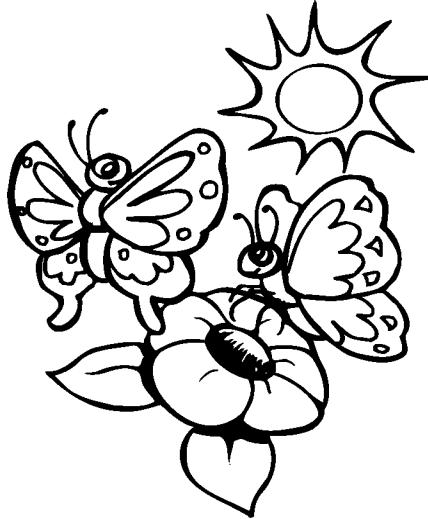


SKILL: NUMBER BEFORE

Name \_\_\_\_\_

A word that has the opposite meaning of another word  
is called an antonym. Read the words in each box and draw  
a line to match each word with its antonym (opposite).

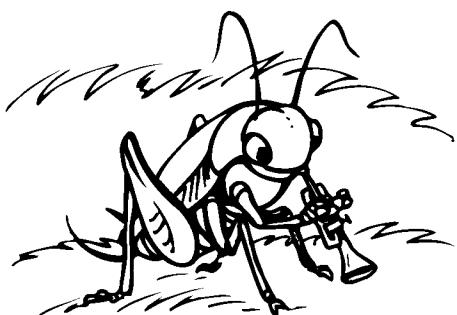
large	many
light	small
few	dark



pull	hot
strong	push
cold	weak



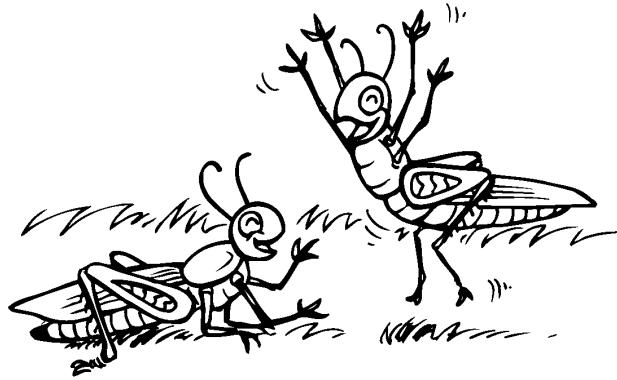
noise	top
awake	quiet
bottom	asleep



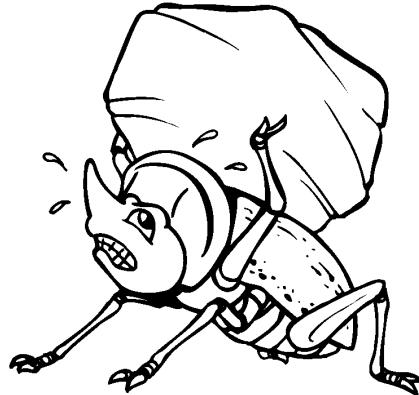
Name \_\_\_\_\_

A word that has the same meaning as another word  
is called a **synonym**. Read the words in each box and draw  
a line to match each word with its synonym.

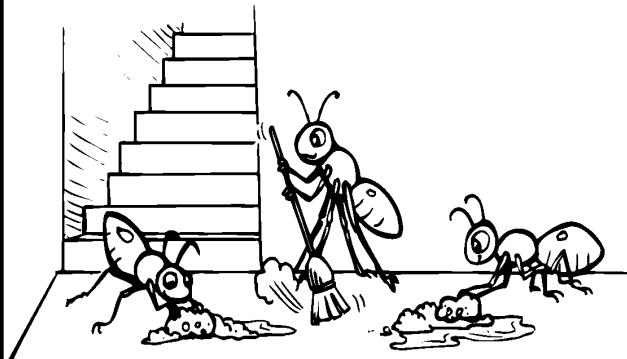
shout	noisy
happy	yell
loud	pals
friends	glad



large	hot
ground	stone
rock	big
warm	floor

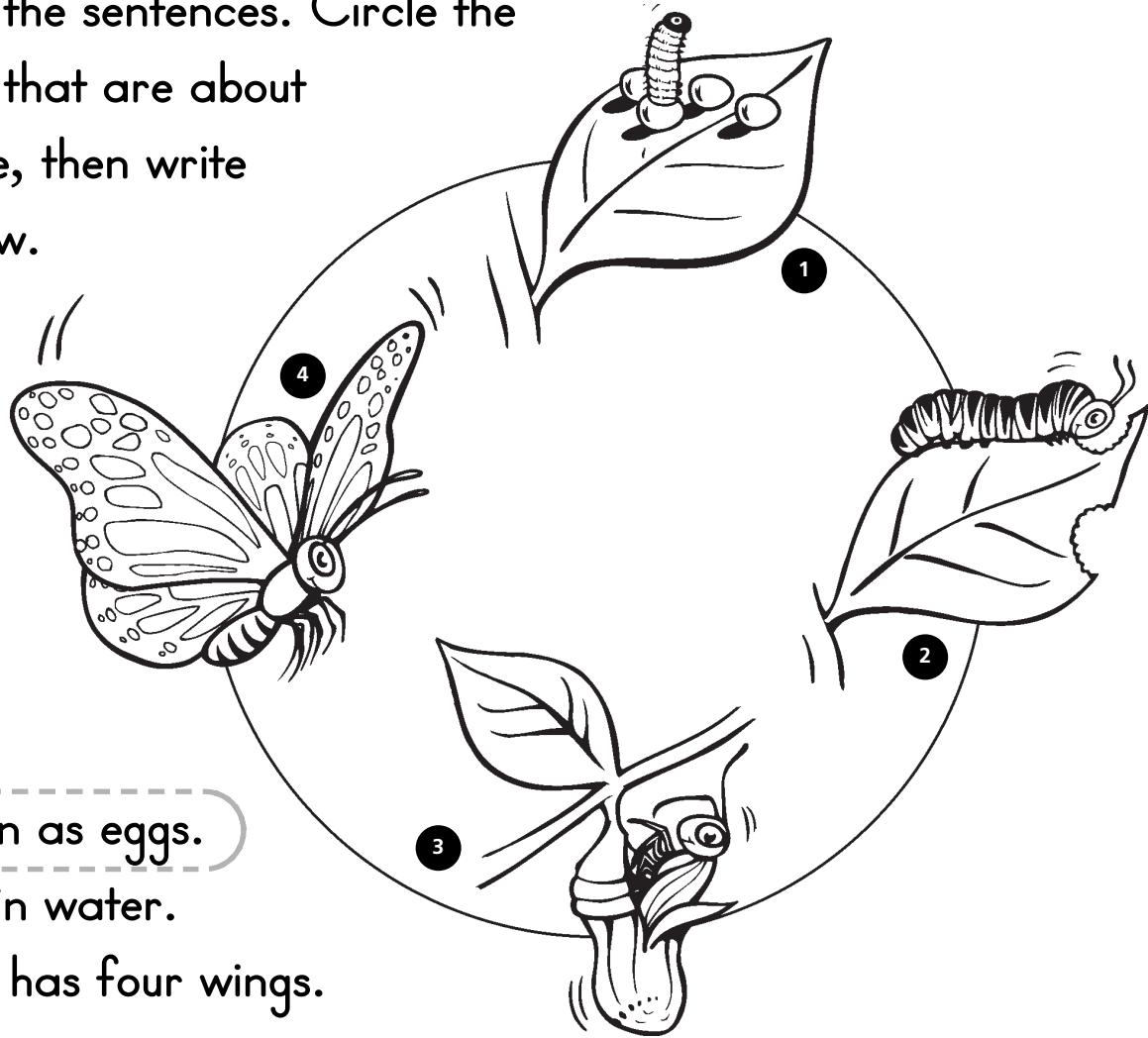


wash	brush
little	clean
sweep	stairs
steps	small



Name \_\_\_\_\_

Read the Butterfly Fact File. Look at the picture and read the sentences. Circle the sentences that are about the picture, then write them below.



They begin as eggs.

They live in water.

The adult has four wings.

They eat ants.

They begin as eggs.

Name \_\_\_\_\_

Below are true sentences about insects and spiders.

Circle the letter of the correctly punctuated sentence in each set.

- a. Insects have six legs
- b. insects have six legs
- c. Insects have six legs.

- a. Honeybees help our gardens.
- b. honeybees help our gardens
- c. Honeybees help our gardens

- a. All spiders spin silk.
- b. all spiders spin silk.
- c. All spiders spin silk

- a. ants live and work in colonies
- b. Ants live and work in colonies.
- c. Ants live and work in colonies

- a. Insects have three main body parts
- b. Insects have three main body parts.
- c. insects have three main body parts.

- a. A spider's body has two main parts
- b. a spider's body has two main parts.
- c. A spider's body has two main parts.

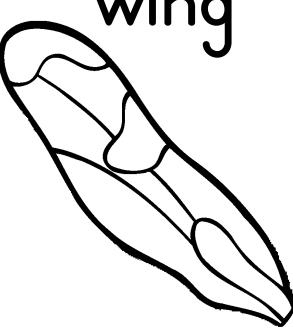
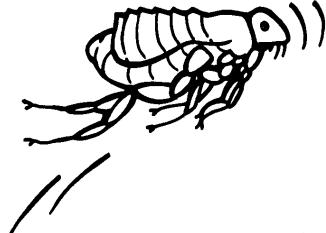
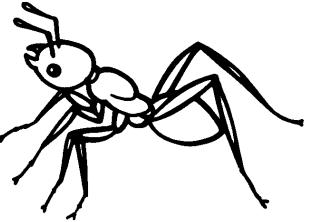
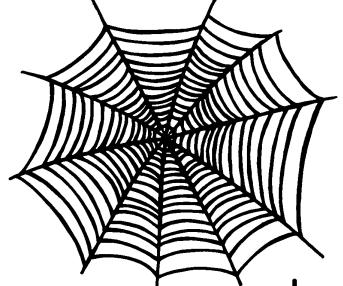
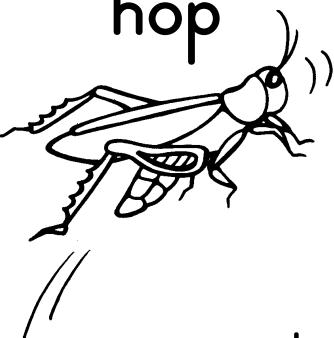
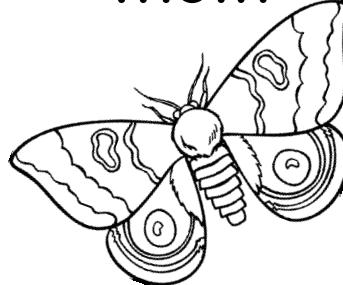
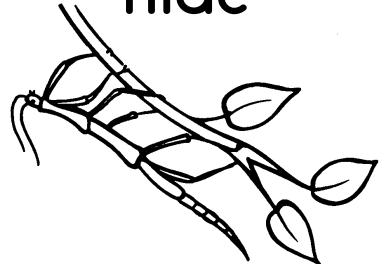
- a. flies have sticky foot pads so they can walk upside down
- b. Flies have sticky foot pads so they can walk upside down
- c. Flies have sticky foot pads so they can walk upside down.

- a. there are more than a million insect species
- b. There are more than a million insect species.
- c. there are more than a million insect species.

Name \_\_\_\_\_

Words that name persons, places or things, are called nouns. Action words are called verbs.

Look at the pictures and read the words. Then circle whether it is a thing (noun) or an action (verb).

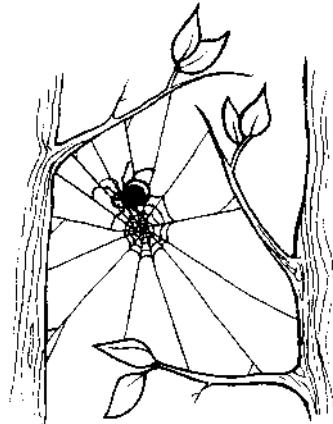
 <p>wing</p> <p>noun      verb</p>	 <p>jump</p> <p>noun      verb</p>	 <p>ant</p> <p>noun      verb</p>
 <p>eat</p> <p>noun      verb</p>	 <p>hive</p> <p>noun      verb</p>	 <p>web</p> <p>noun      verb</p>
 <p>hop</p> <p>noun      verb</p>	 <p>moth</p> <p>noun      verb</p>	 <p>hide</p> <p>noun      verb</p>

Name \_\_\_\_\_

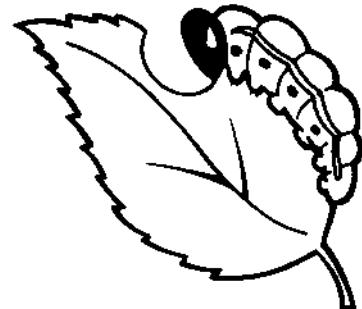
Read each sentence, then write it. Draw a line from the sentence to the picture that describes it.

She eats.

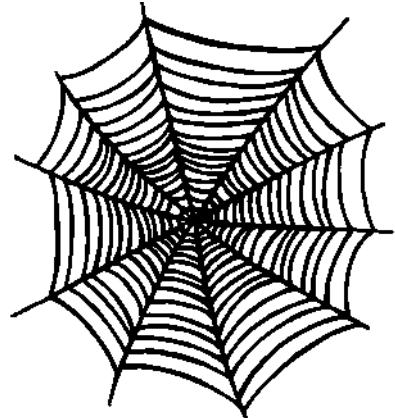
She eats.



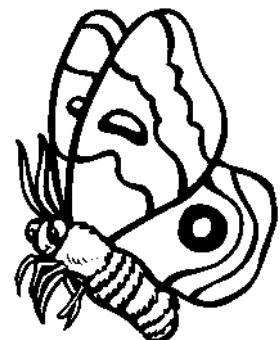
He flies.



She weaves



a big web.



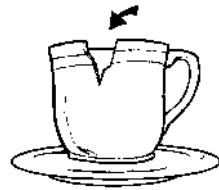
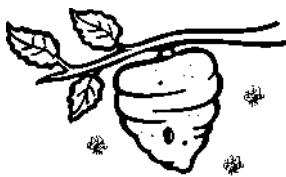
Name \_\_\_\_\_

Trace the letters. Circle the pictures with the beginning sound "ch."

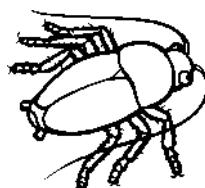
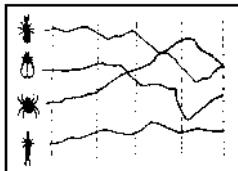
change



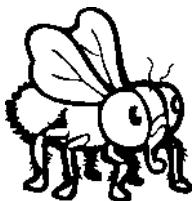
chip



chart



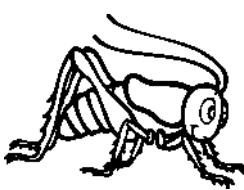
chat



chomp



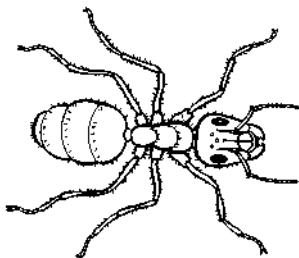
charm



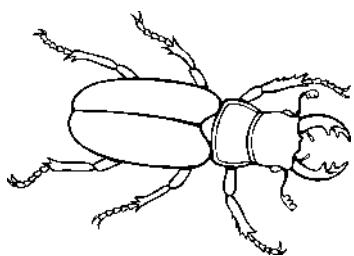
Name \_\_\_\_\_

There are millions of different insects and spiders.

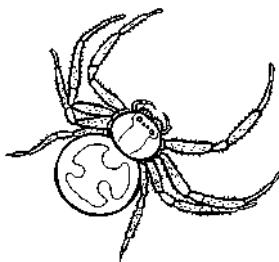
Use your fact files to find the ones below, then write  
the name.



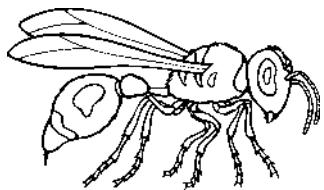
Carpenter ant



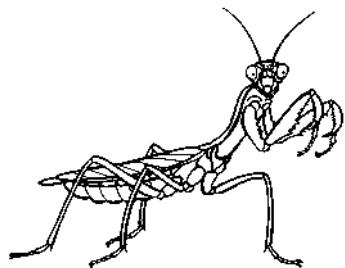
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

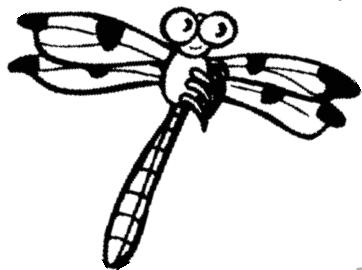


\_\_\_\_\_

Name \_\_\_\_\_

A word that has the opposite meaning of another word is an antonym. If a word has the same meaning as another, it is a synonym. Look at the word pairs below and tell whether they are antonyms or synonyms.

fly

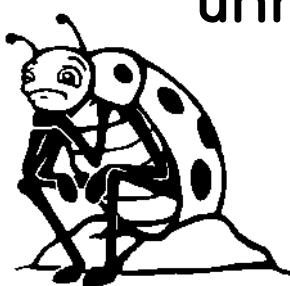


synonym

land

antonym

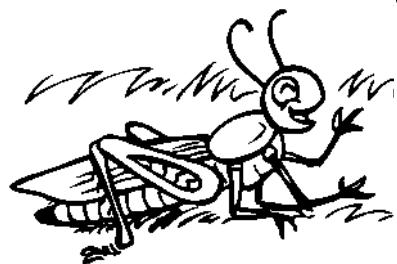
sad



unhappy

antonym

smile



synonym

grin

antonym

climb



fall

antonym

first



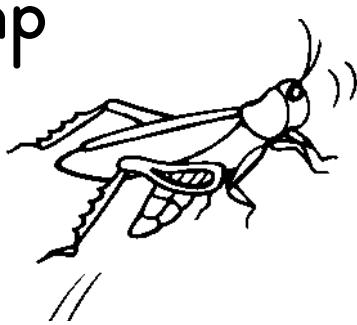
synonym

last



antonym

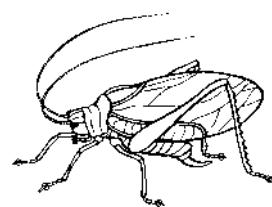
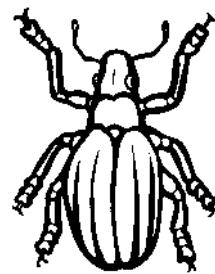
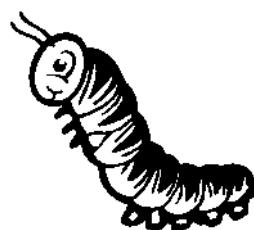
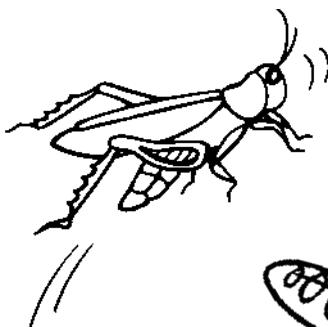
jump



hop

Name \_\_\_\_\_

Look at the pictures then unscramble the words and write the names of the insects in the boxes. Copy the letters in the numbered boxes into the boxes with the same number at the bottom of the page. This word will show you what all insects are.



APLCRILERAT

1					7				

VLEBLEOWIL

6									

MITERTE

2					3				

SARPHSROPEG

10					4		8		

DIKYDAT

								9	

Insects are

1	2	3	4	5	6	7	8	9	10

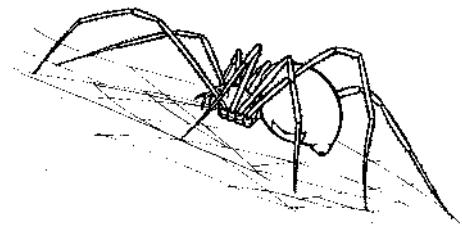
Name \_\_\_\_\_

How many words of 3 letters or more can you make using the letters in "black widow spider?" Write them on the lines below (there are at least 60).

black widow spider

ladder

arise



ladder

arise

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

These second-grade words are found in your  
Insects and Spiders Fact Files. Trace the word, then  
draw a line to the matching word in the right column.

**marshes**

emerge

nectar

bark

pollen

antenna

larva

**emerge**

**antenna**

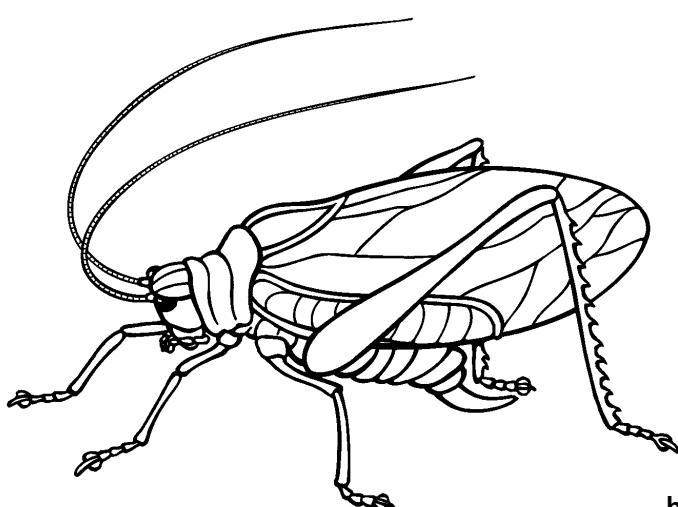
**bark**

**larva**

**marshes**

**nectar**

**pollen**



Name \_\_\_\_\_

Put the following words in  
A-B-C order.

Butterfly



1. \_\_\_\_\_

Tarantula

2. \_\_\_\_\_

Caterpillar

3. \_\_\_\_\_

Dragonfly

4. \_\_\_\_\_

Mosquito

5. \_\_\_\_\_

Inchworm

6. \_\_\_\_\_

Cicada

7. \_\_\_\_\_

Thorax

8. \_\_\_\_\_

Abdomen

9. \_\_\_\_\_

Mandible

10. \_\_\_\_\_

Wing

11. \_\_\_\_\_

Cocoon

12. \_\_\_\_\_

Hive

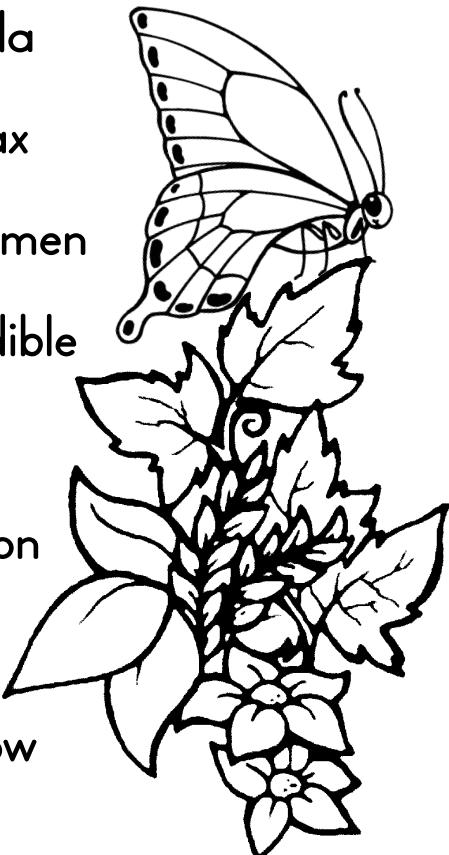
13. \_\_\_\_\_

Burrow

14. \_\_\_\_\_

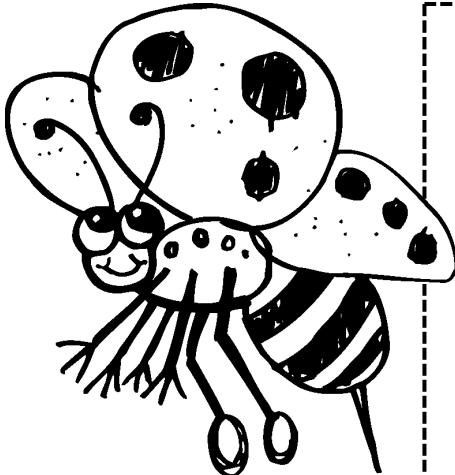
Web

15. \_\_\_\_\_



Name \_\_\_\_\_

Insect bodies have three main parts. Insects have six legs and adults have wings and antennas. Draw your own made-up insects below, each should have three main body parts, six legs, wings, and two antennas.



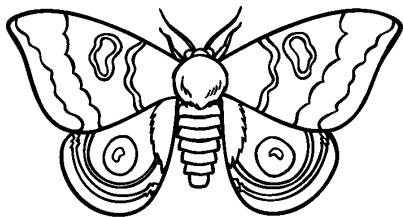
example

(Large dashed box for drawing an insect)

(Large dashed box for drawing an insect)

Name \_\_\_\_\_

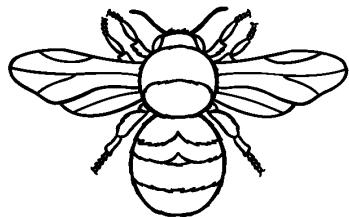
Write the names of the insects below.



\_\_\_\_\_

\_\_\_\_\_

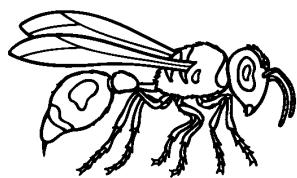
\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

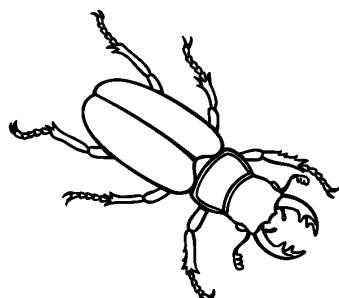
\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

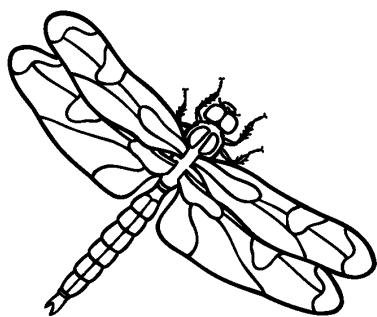
\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



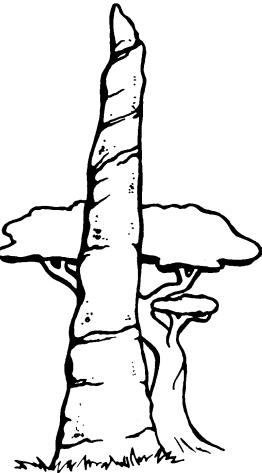
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

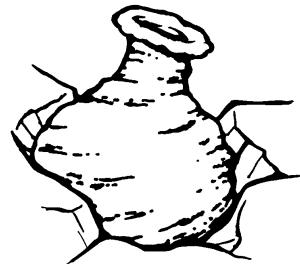
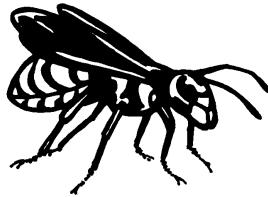
Some insects build "houses" while others build entire "cities." Read about the insects and write their names.



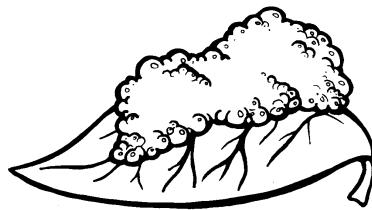
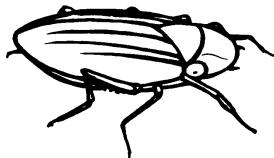
Some African termites build mounds over 40 feet high!

## African termites

The Potter Wasp makes a little clay pot for a nest.



The Spittle Bug builds a protective house of bubbles.

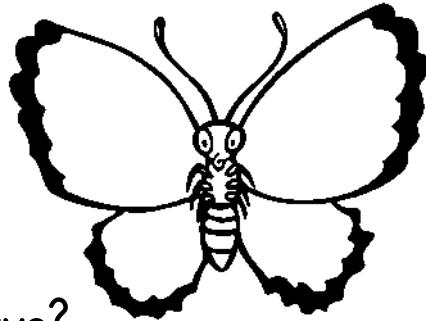


Name \_\_\_\_\_

Use your Fact Files to solve the crossword puzzle  
about insects.

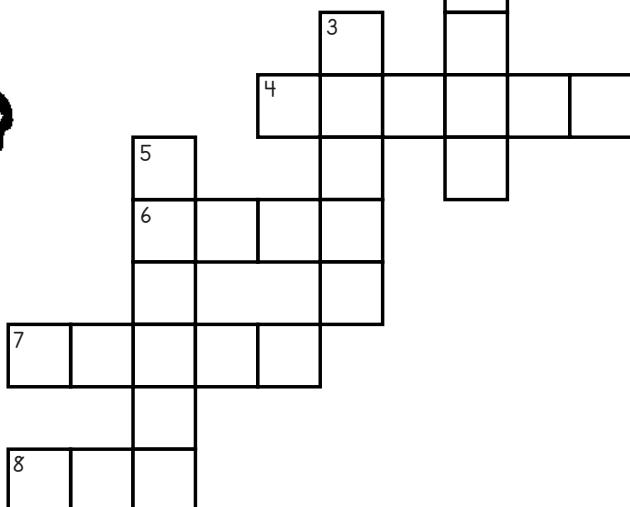
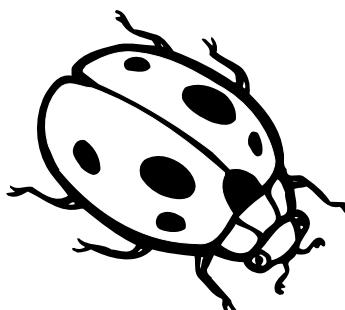
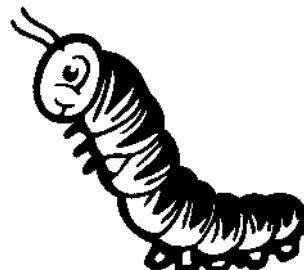
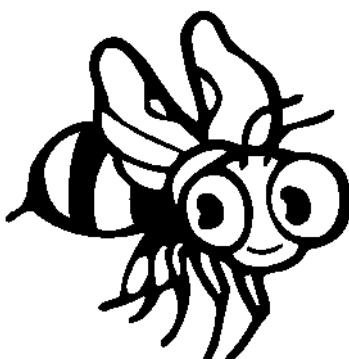
Across

1. Which insect is red with black spots?
4. What does a bee collect from flowers?
6. What is the name of a bee's home?
7. How many body parts does an insect have?
8. How many legs does an insect have?



Down

2. A caterpillar becomes one of these.
3. Bees make this.
5. The legs are joined to this body part.



Name \_\_\_\_\_

Spider bodies have two main parts. Spiders have eight legs and many eyes. Draw your own made-up spider below. It should have two main body parts, eight legs, and many eyes.



Name \_\_\_\_\_

Use the keywords list to fill in the blanks. Then find the words in the puzzle below.

millimeters	spider	desert	
Araneae	lizards	eight	poisonous

The tarantula is a \_\_\_\_\_.

The tarantula's order: \_\_\_\_\_.

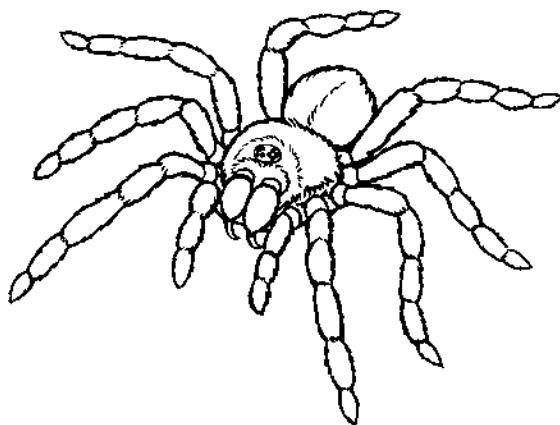
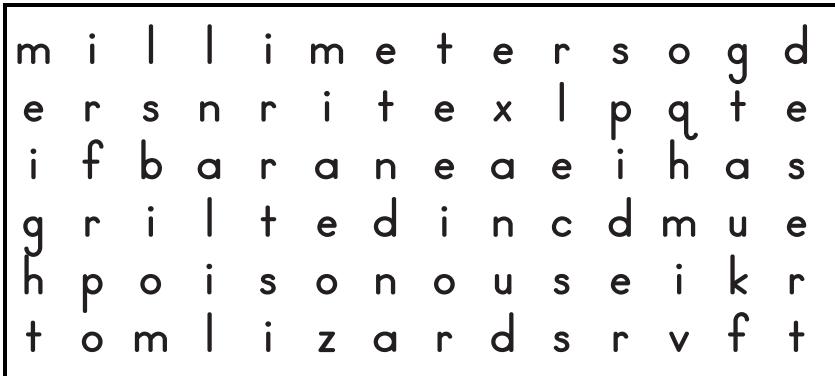
They can grow up to 100 \_\_\_\_\_ across.

Tarantulas eat \_\_\_\_\_, as well as insects and other animals.

All spiders have \_\_\_\_\_ legs.

Tarantulas live in the \_\_\_\_\_.

Tarantulas are \_\_\_\_\_, but their venom is mild.



SKILL: LEARN TARANTULA FACTS

Name \_\_\_\_\_

Write the name of each insect under its body part.

Choose insects from the list.

moth

ladybug

earwig

grasshopper

wasp

butterfly



butterfly

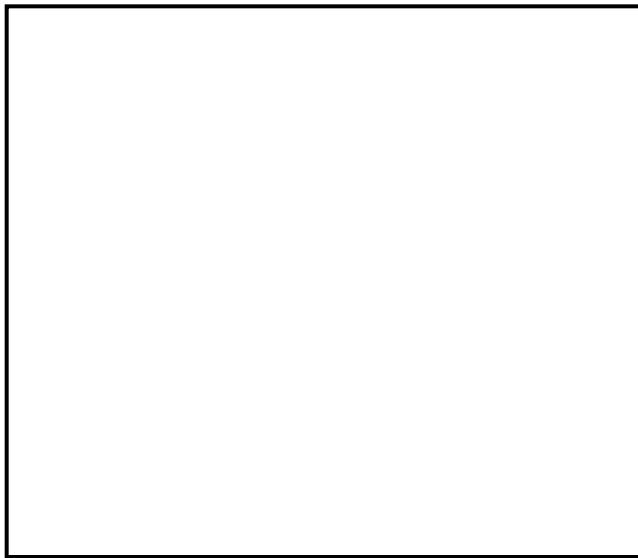
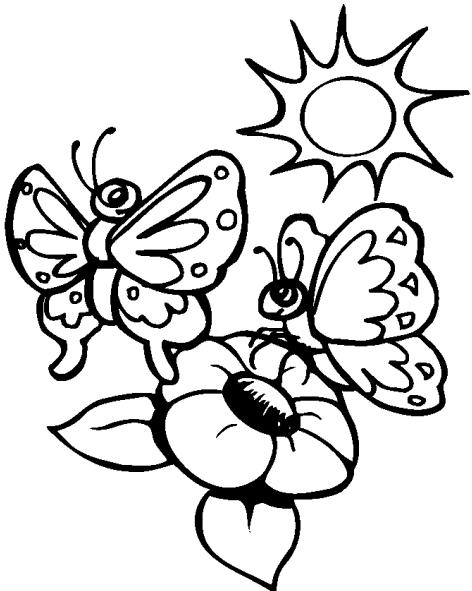


Name \_\_\_\_\_

Write a "T" next to each true statement about butterflies. Write an "F" if the statement is false.

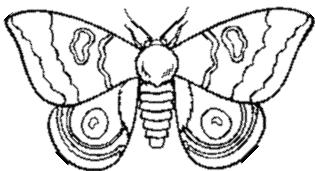
- \_\_\_\_\_ Butterflies have four wings.
- \_\_\_\_\_ Butterflies eat other small insects.
- \_\_\_\_\_ Butterflies can be very small or as large as a bird.
- \_\_\_\_\_ Butterflies are insects.
- \_\_\_\_\_ Many butterflies come out to feed at night.
- \_\_\_\_\_ Butterflies live in meadows, gardens, and fields.
- \_\_\_\_\_ Baby butterflies look just like adults.

Draw a picture of what I eat.

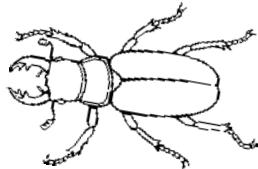


Name \_\_\_\_\_

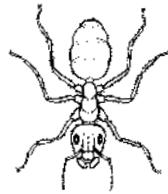
Under each order heading below, list at least 2 insects that belong to that order. Then write a characteristic of each order that is unique to that order.



Lepidoptera



Coleoptera



Hymenoptera

Lepidoptera \_\_\_\_\_

Coleoptera \_\_\_\_\_

Hymenoptera \_\_\_\_\_

Name \_\_\_\_\_

Spiders are different from insects in many ways.

Write the correct answers on the lines.

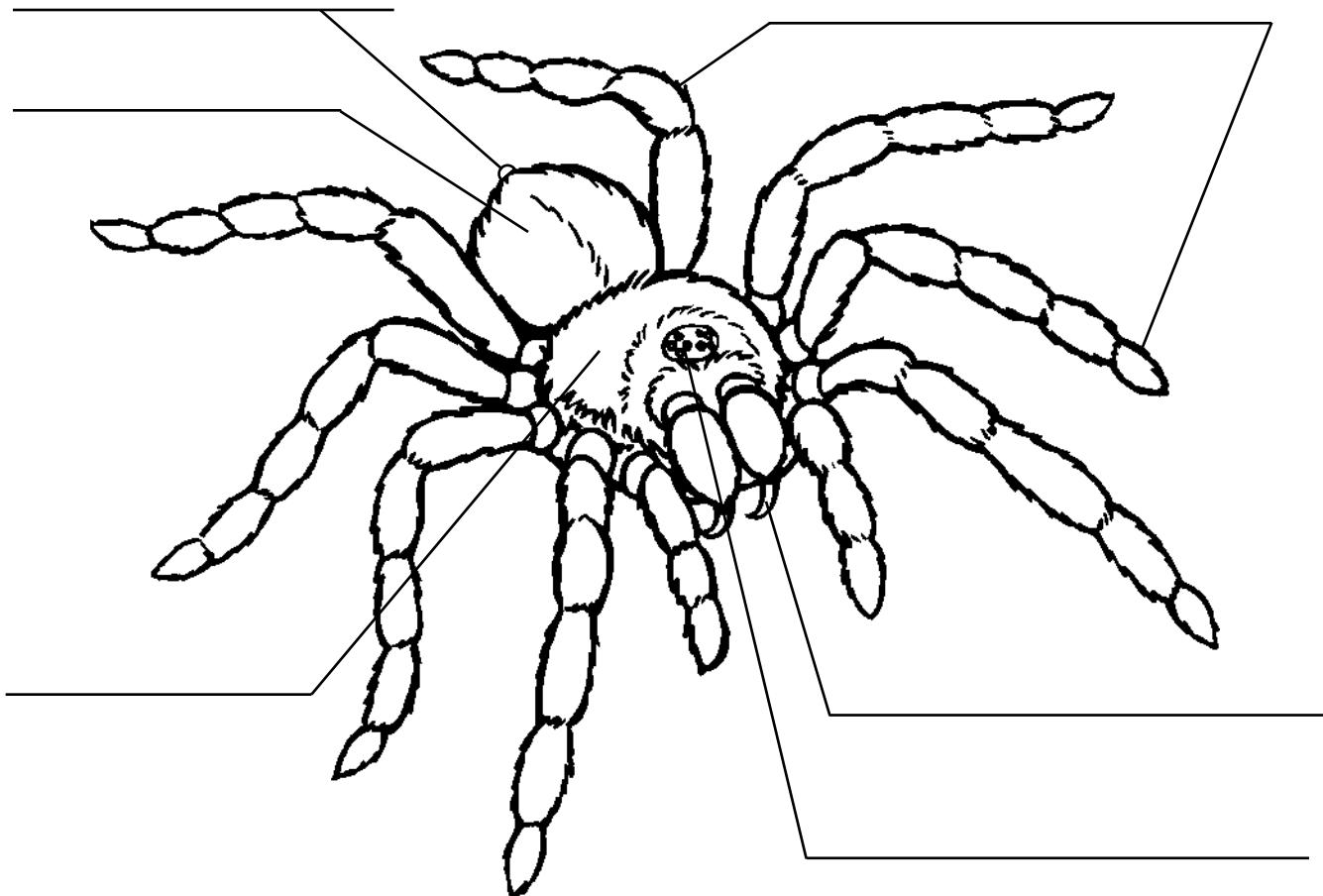
Spiders have \_\_\_\_\_ legs

Spiders have \_\_\_\_\_ body segments.

Spiders have \_\_\_\_\_ wings.

Spiders have \_\_\_\_\_ antennae.

Label the spider parts using the words in the box.



eyes	fangs	legs	abdomen	spinnerets	cephalothorax
------	-------	------	---------	------------	---------------

Hint: the cephalothorax is a combination head and thorax that contains the eyes, fangs, and four pairs of legs.

Name \_\_\_\_\_

Write a “T” next to each true statement about the order *Hymenoptera*. Write an “F” if the statement is false.

- \_\_\_ Some bees have a dangerous sting.
- \_\_\_ Bees lay eggs.
- \_\_\_ Ants live in groups or “colonies.”
- \_\_\_ Wasps have a thick, wide waistline.
- \_\_\_ Hornets have hair on their heads.
- \_\_\_ Bees bear live young.
- \_\_\_ Ants are always welcome at a picnic.
- \_\_\_ Bees have pollen baskets on their legs.

Draw a picture of  
your favorite insect  
from the order  
*Hymenoptera*.

Name \_\_\_\_\_

Write the answers to these addition problems.

$$\begin{array}{r} 127 \\ +132 \\ \hline \end{array}$$

$$\begin{array}{r} 313 \\ +216 \\ \hline \end{array}$$

$$\begin{array}{r} 551 \\ +438 \\ \hline \end{array}$$

$$\begin{array}{r} 234 \\ +352 \\ \hline \end{array}$$

$$\begin{array}{r} 146 \\ +543 \\ \hline \end{array}$$

$$\begin{array}{r} 358 \\ +131 \\ \hline \end{array}$$

$$\begin{array}{r} 754 \\ +344 \\ \hline \end{array}$$

$$\begin{array}{r} 330 \\ +675 \\ \hline \end{array}$$

$$\begin{array}{r} 496 \\ +326 \\ \hline \end{array}$$

$$\begin{array}{r} 654 \\ +720 \\ \hline \end{array}$$

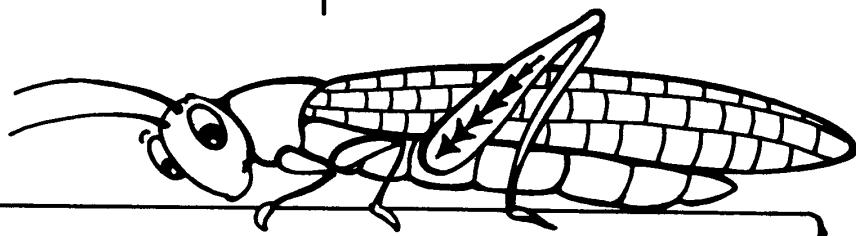
$$\begin{array}{r} 509 \\ +309 \\ \hline \end{array}$$

$$\begin{array}{r} 246 \\ +189 \\ \hline \end{array}$$

$$\begin{array}{r} 472 \\ +650 \\ \hline \end{array}$$

Name \_\_\_\_\_

Write the answers to these subtraction problems.



$$\begin{array}{r} 359 \\ -245 \\ \hline \end{array}$$

$$\begin{array}{r} 750 \\ -322 \\ \hline \end{array}$$

$$\begin{array}{r} 552 \\ -216 \\ \hline \end{array}$$

$$\begin{array}{r} 805 \\ -602 \\ \hline \end{array}$$

$$\begin{array}{r} 658 \\ -491 \\ \hline \end{array}$$

$$\begin{array}{r} 230 \\ -110 \\ \hline \end{array}$$

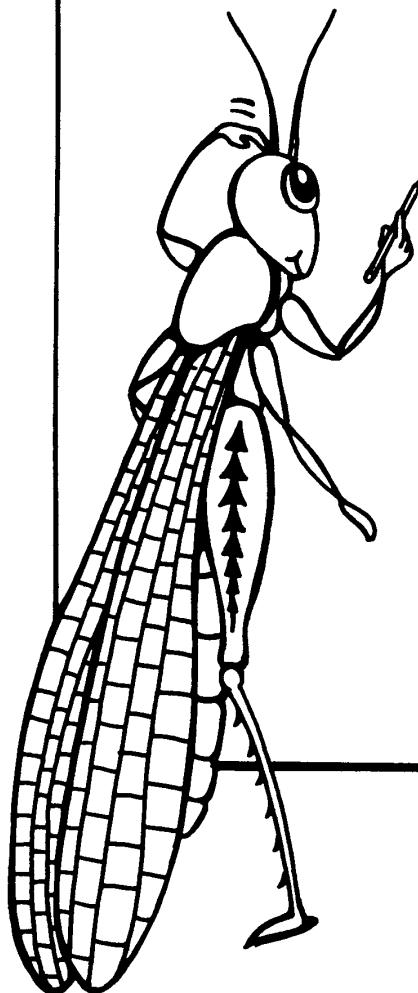
$$\begin{array}{r} 165 \\ -82 \\ \hline \end{array}$$

$$\begin{array}{r} 379 \\ -148 \\ \hline \end{array}$$

$$\begin{array}{r} 224 \\ -223 \\ \hline \end{array}$$

$$\begin{array}{r} 650 \\ -419 \\ \hline \end{array}$$

$$\begin{array}{r} 891 \\ -311 \\ \hline \end{array}$$



Name \_\_\_\_\_

Write the answers to these addition problems.

$$\begin{array}{r} 27 \\ + 51 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ + 26 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ + 38 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \\ + 26 \\ \hline \end{array}$$

$$\begin{array}{r} 44 \\ + 32 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ + 34 \\ \hline \end{array}$$

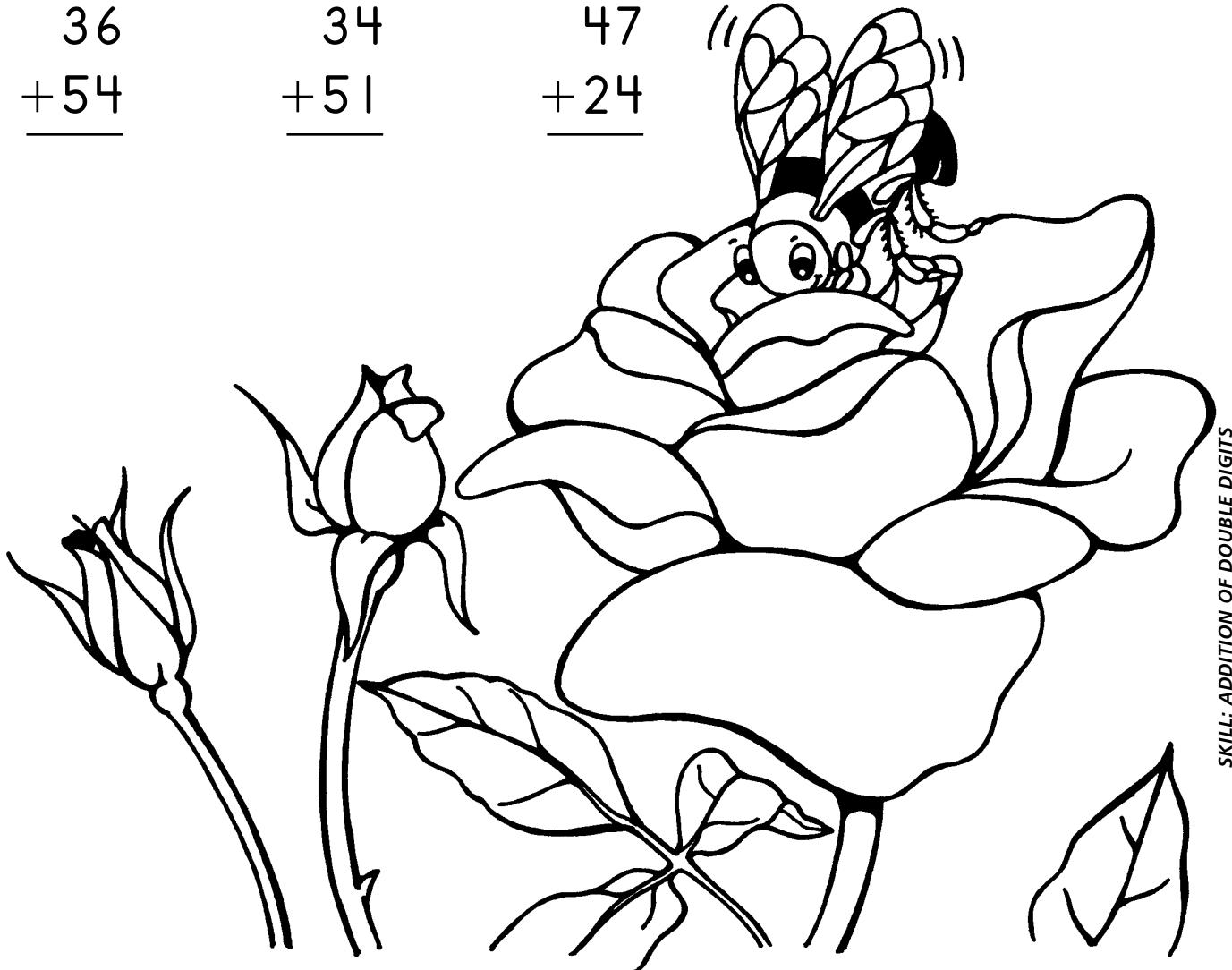
$$\begin{array}{r} 45 \\ + 18 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ + 45 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ + 54 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \\ + 51 \\ \hline \end{array}$$

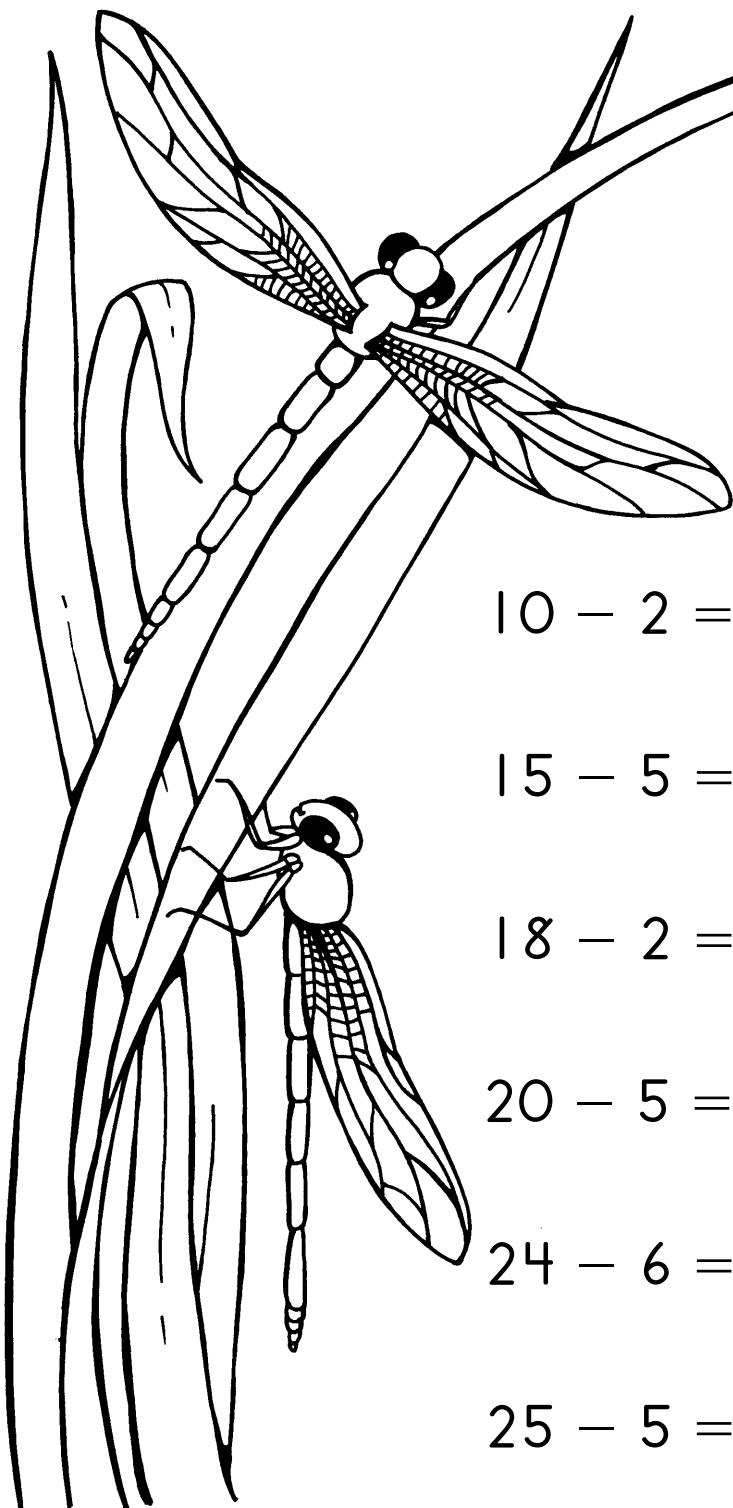
$$\begin{array}{r} 47 \\ + 24 \\ \hline \end{array}$$



SKILL: ADDITION OF DOUBLE DIGITS

Name \_\_\_\_\_

Write the answers to these subtraction problems.



$6 - 3 = \underline{\quad}$

$8 - 2 = \underline{\quad}$

$9 - 3 = \underline{\quad}$

$10 - 2 = \underline{\quad} \quad 12 - 4 = \underline{\quad}$

$15 - 5 = \underline{\quad} \quad 21 - 3 = \underline{\quad}$

$18 - 2 = \underline{\quad} \quad 15 - 3 = \underline{\quad}$

$20 - 5 = \underline{\quad} \quad 16 - 2 = \underline{\quad}$

$24 - 6 = \underline{\quad} \quad 30 - 5 = \underline{\quad}$

$25 - 5 = \underline{\quad} \quad 16 - 4 = \underline{\quad}$

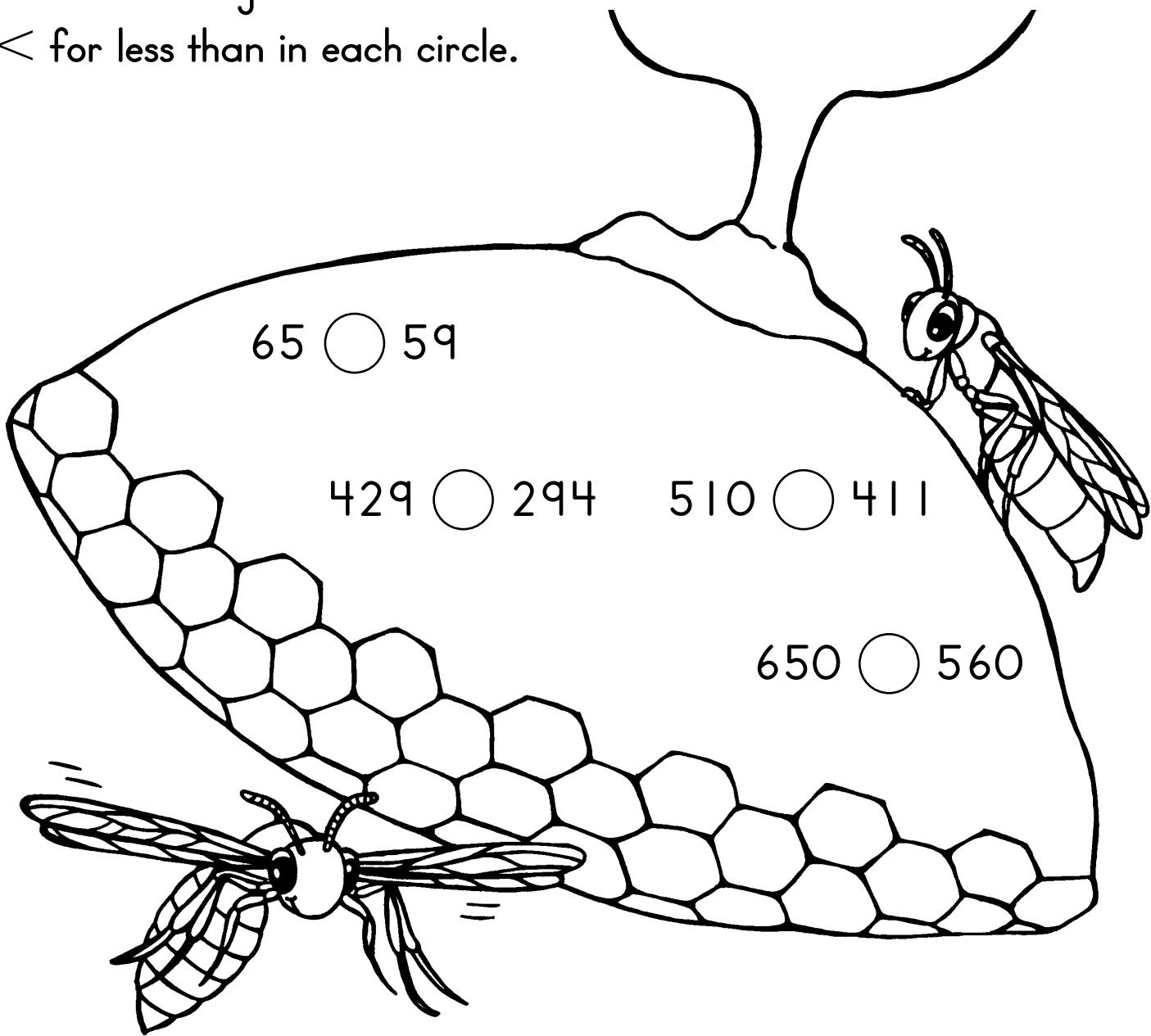
$14 - 2 = \underline{\quad} \quad 24 - 4 = \underline{\quad}$

Name \_\_\_\_\_

Compare each pair of numbers.

Write  $>$  for greater than or

$<$  for less than in each circle.



$545 \bigcirc 600$

$356 \bigcirc 349$

$281 \bigcirc 195$

$444 \bigcirc 450$

$105 \bigcirc 98$

$236 \bigcirc 326$

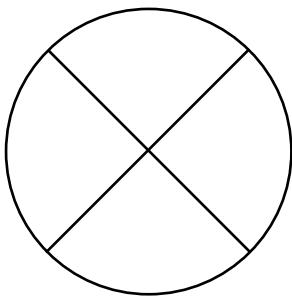
$112 \bigcirc 58$

$62 \bigcirc 41$

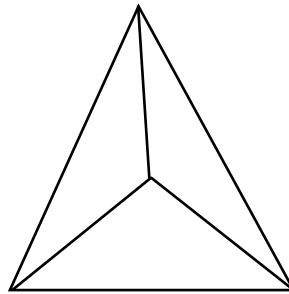
$901 \bigcirc 399$

Name \_\_\_\_\_

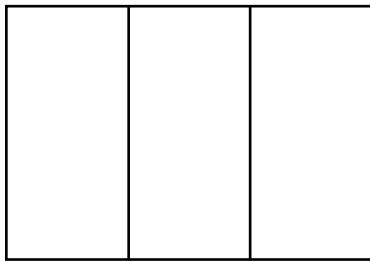
Shade  $\frac{1}{4}$  of the circle.



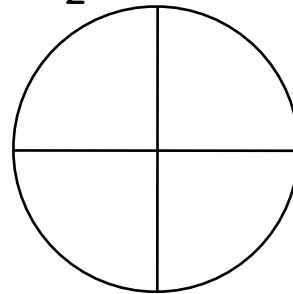
Shade  $\frac{1}{3}$  of the triangle.



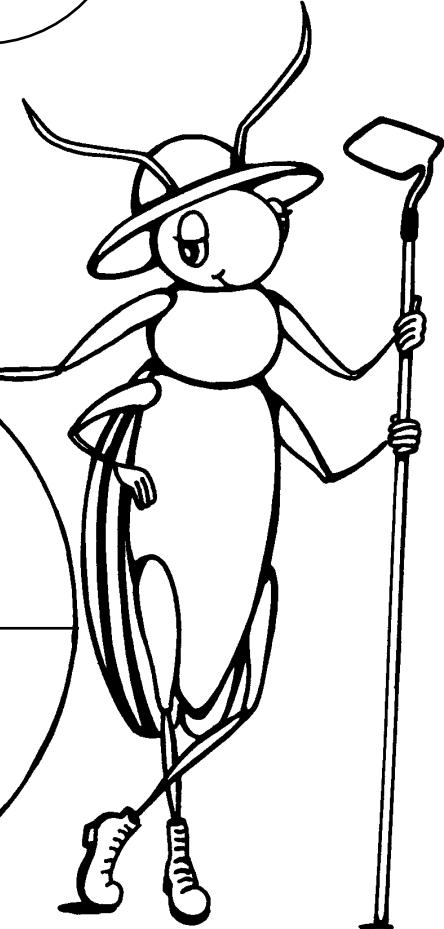
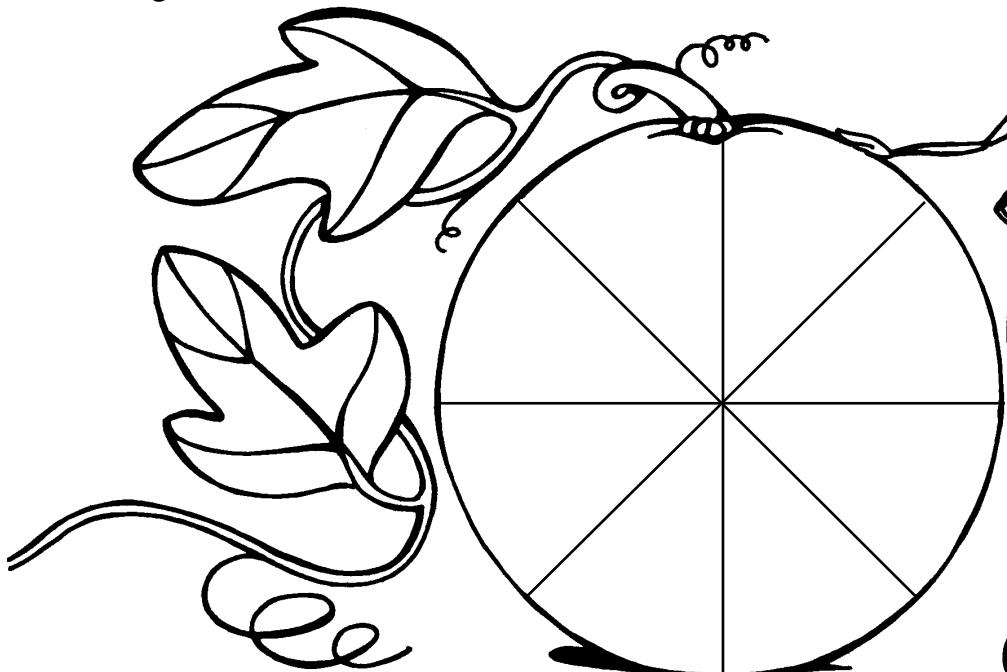
Shade  $\frac{2}{3}$  of the rectangle.



Shade  $\frac{1}{2}$  of the circle.



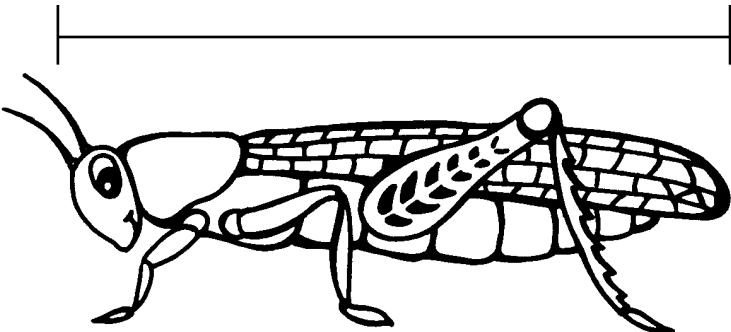
Shade  $\frac{5}{8}$  of the pumpkin.



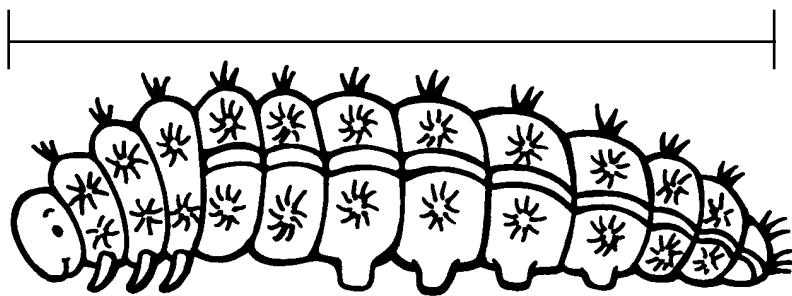
SKILL: SHAPES AND FRACTIONS

Name \_\_\_\_\_

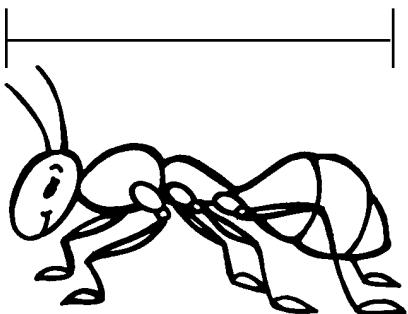
Using your ruler find the length of each insect.



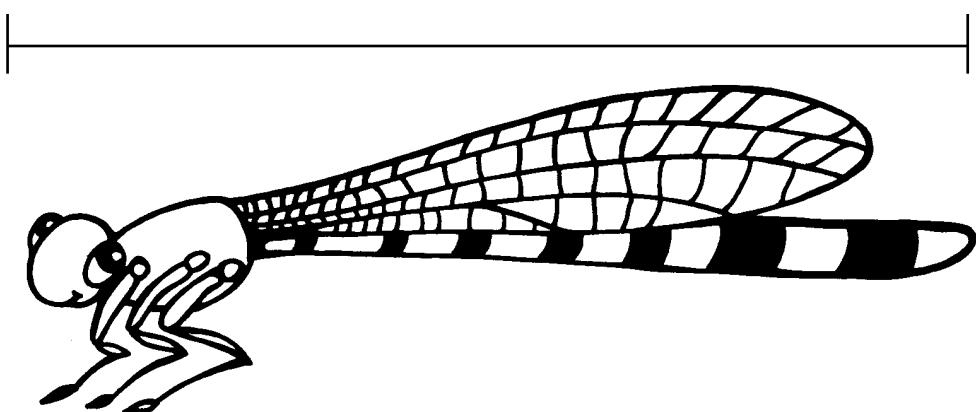
\_\_\_\_\_ inches



\_\_\_\_\_ inches



\_\_\_\_\_ inches



\_\_\_\_\_ inches

Name \_\_\_\_\_

Write the answer to each problem.

$3 + 6 = \underline{\quad}$

$6 + 6 = \underline{\quad}$

$18 - 2 = \underline{\quad}$

$14 - 3 = \underline{\quad}$

$2 + 8 = \underline{\quad}$

$5 + 6 = \underline{\quad}$

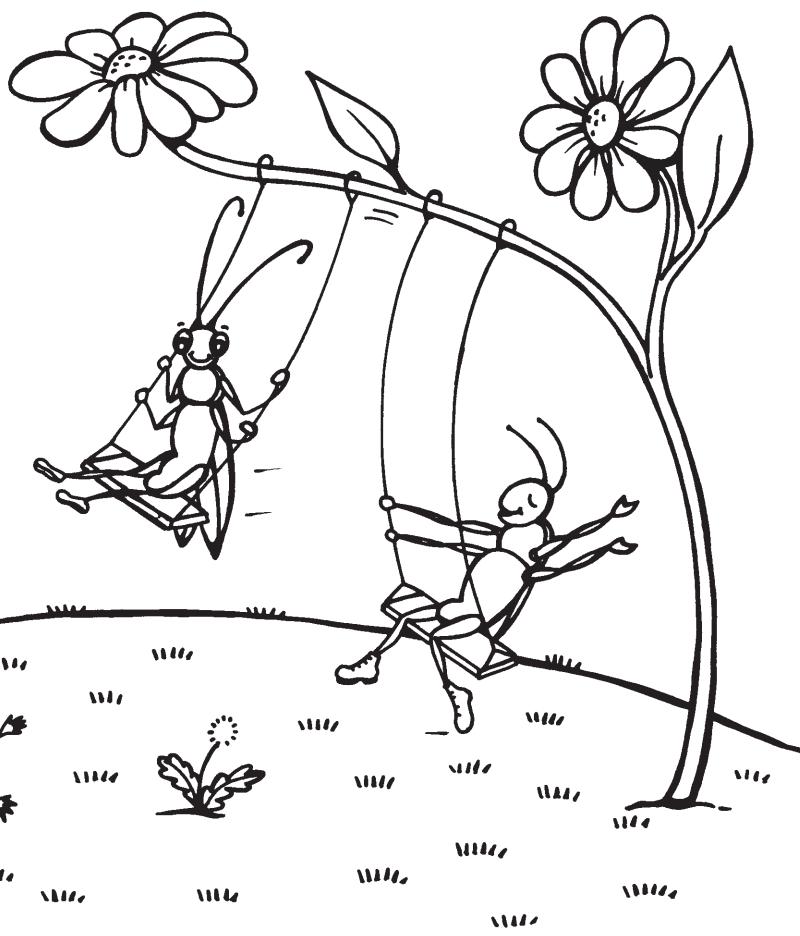
$14 + 4 = \underline{\quad}$

$9 - 2 = \underline{\quad}$

$5 - 5 = \underline{\quad}$

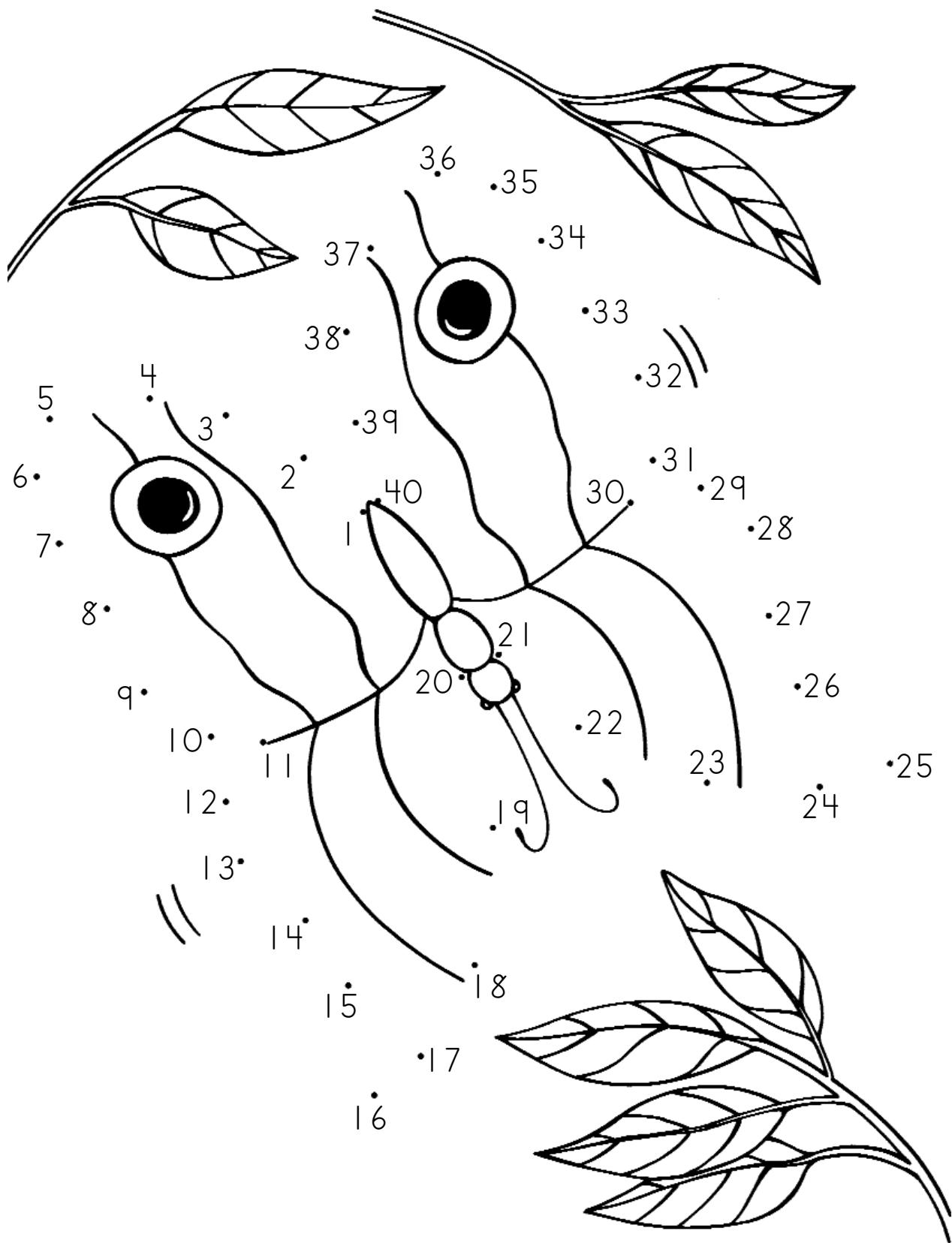
$5 + 7 = \underline{\quad}$

$9 - 3 = \underline{\quad}$



Name \_\_\_\_\_

Connect the dots, 1 through 40.

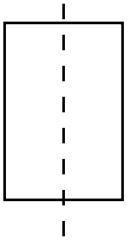


SKILL: CONNECT THE DOTS

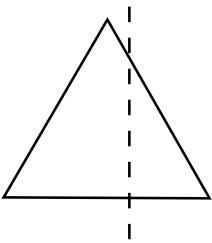
GRADE TWO • INSECTS/SPIDERS • MATH • 009

Name \_\_\_\_\_

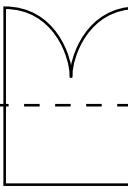
Is the dashed line a line of symmetry? Answer yes or no.



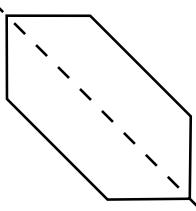
yes



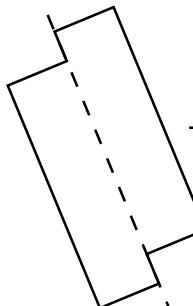
\_\_\_\_\_



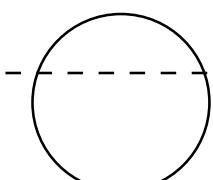
\_\_\_\_\_



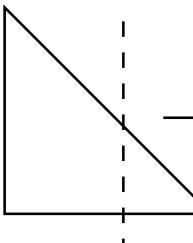
\_\_\_\_\_



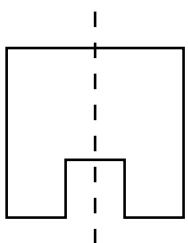
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



SKILL: SYMMETRY

Name \_\_\_\_\_

Can you color 8 things that are wrong in this picture?

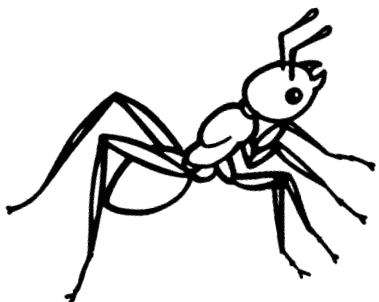


SKILL: COLOR OBJECTS THAT ARE DIFFERENT

Name \_\_\_\_\_

Circle the number words for 1-10 in the puzzle.

N	T	L	O	A	T	G	C	I
S	E	F	I	V	E	H	P	M
X	N	O	B	T	H	R	E	E
R	V	U	D	S	I	X	E	Q
T	U	R	Q	E	J	O	W	B
W	A	M	Z	V	N	G	E	S
O	B	E	F	E	I	G	H	T
B	P	T	X	N	N	N	I	K
S	L	U	O	N	E	H	J	L



ONE      TWO      THREE      FOUR  
FIVE      SIX      SEVEN  
EIGHT      NINE      TEN

Name \_\_\_\_\_

Write the answer to each problem.

$12 + 4 = \underline{\quad}$

$4 + 7 = \underline{\quad}$

$9 - 6 = \underline{\quad}$

$13 - 6 = \underline{\quad}$

$3 + 7 = \underline{\quad}$

$4 + 9 = \underline{\quad}$

$18 - 3 = \underline{\quad}$

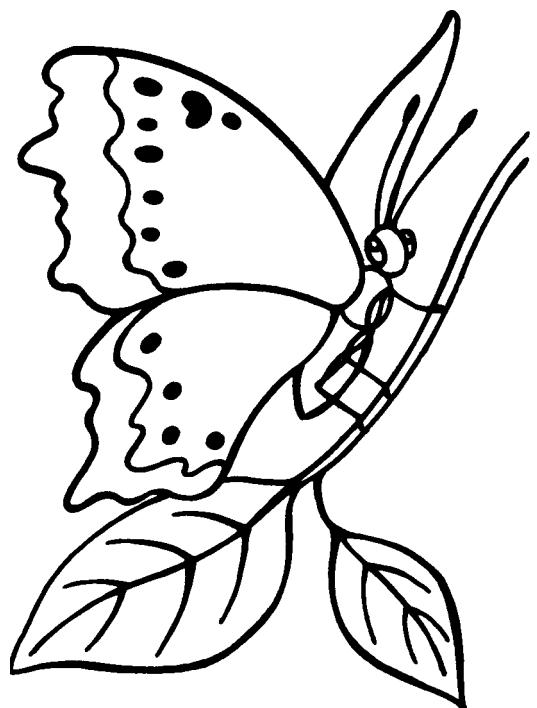
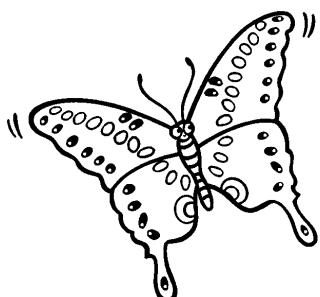
$6 - 5 = \underline{\quad}$

$8 - 5 = \underline{\quad}$

$14 - 8 = \underline{\quad}$

$5 + 8 = \underline{\quad}$

$15 - 3 = \underline{\quad}$



SKILL: ADD AND SUBTRACT

Name \_\_\_\_\_

Find the following insect and spider words  
in the word-find puzzle below.

BEEHIVE

BUTTERFLY

KATYDID

ANT

JUNE BEETLE

PRAYING MANTIS

WASP

BEETLE

EARWIG

SPIDER

BLACK WIDOW

CRICKET

LADYBUG

COCKROACH

MOTH

B	E	E	H	I	V	E	W	A	S	D	P
U	U	B	T	J	A	D	G	H	P	R	R
F	V	L	O	U	J	I	U	T	I	B	A
E	K	A	M	N	G	S	B	B	D	U	Y
R	T	C	Q	E	U	M	E	L	E	T	I
T	E	K	L	B	B	Z	E	A	R	T	N
P	K	W	M	E	Y	F	T	C	N	E	G
H	C	I	E	E	D	G	L	K	T	R	M
D	I	D	Y	T	A	K	E	Y	I	F	A
D	R	O	Y	L	L	N	Q	P	S	L	N
L	C	W	H	E	D	F	T	S	E	Y	T
T	Y	C	O	C	K	R	O	A	C	H	I
U	I	O	P	A	E	A	R	W	I	G	S

SKILL: SPELL INSECT WORDS

Name \_\_\_\_\_

Write the correct verb in the blank.

1. The dragonfly and the praying mantis \_\_\_\_\_ helpful to people. (to be)
2. The wasps \_\_\_\_\_ their nest under the eaves. (to build)
3. A cricket \_\_\_\_\_ a good meal for a tarantula. (to make)
4. Crickets \_\_\_\_\_ a good meal for tarantulas. (to make)
5. Beetles \_\_\_\_\_ all over the world. (to live)
6. A ladybug \_\_\_\_\_ in my garden. (to live)
7. The io moth \_\_\_\_\_ at night. (to fly)
8. Butterflies \_\_\_\_\_ in the daytime. (to fly)

Fill in the correct verb tense.

to play

I \_\_\_\_\_

he \_\_\_\_\_

they \_\_\_\_\_

everyone \_\_\_\_\_

to read

I \_\_\_\_\_

he \_\_\_\_\_

they \_\_\_\_\_

everyone \_\_\_\_\_

Name \_\_\_\_\_

Rearrange the letters to spell an insect from your Fact Files.

1. adccia

2. cctkrei

3. fngroadly

4. rcocohkca

5. irawge

6. spaw

cicada

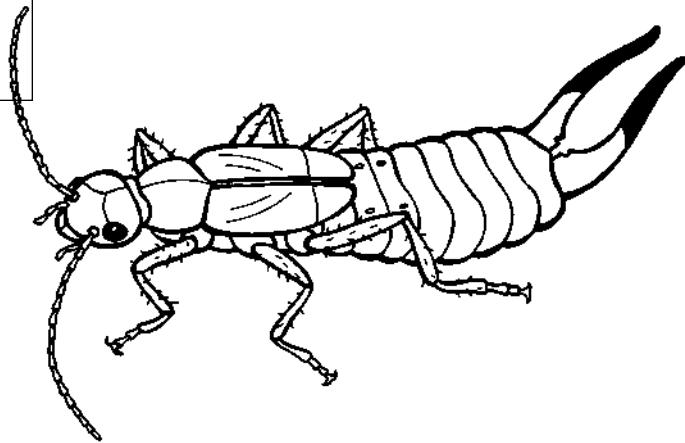
dragonfly

cockroach

wasp

earwig

cricket



Name \_\_\_\_\_

# Learning Page.com®

Write as many words as you can from the letters in these words.

# I. PRAYING MANTIS

may

## 2. GRASSHOPPER

hop

Name \_\_\_\_\_

Write each word in the box next to the number of syllables it has.

wasp

weevil

tarantula

cicada

katydid

earwig

ant

caterpillar

1 syllable \_\_\_\_\_

1 syllable \_\_\_\_\_

2 syllables \_\_\_\_\_

2 syllables \_\_\_\_\_

3 syllables \_\_\_\_\_

3 syllables \_\_\_\_\_

4 syllables \_\_\_\_\_

4 syllables \_\_\_\_\_

Write your own word next to the number of syllables it has.

1 syllable \_\_\_\_\_

2 syllables \_\_\_\_\_

3 syllables \_\_\_\_\_

4 syllables \_\_\_\_\_

Name \_\_\_\_\_

Rewrite the following sentences with correct capitalization and punctuation.

1. are carpenter ants bigger or smaller than fire ants

---

---

2. katydid chirped the katydid

---

3. fiona named her ladybug josie

---

4. run yelled randy when the bees swarmed near them

---

---

5. the praying mantis looked like it was a green leaf

---

---

6. i like dragonflies said mary they eat mosquitoes

---

---

Name \_\_\_\_\_

The s sound can be spelled in different ways.

S, ss, c and sc can all make the s sound.

In the following words, if the letter or letters circled make the s sound, circle the word. If they do not make the s sound, cross the word out.

cicada

share

cockroach

insects

grasshopper

crevices

scene

escape

school

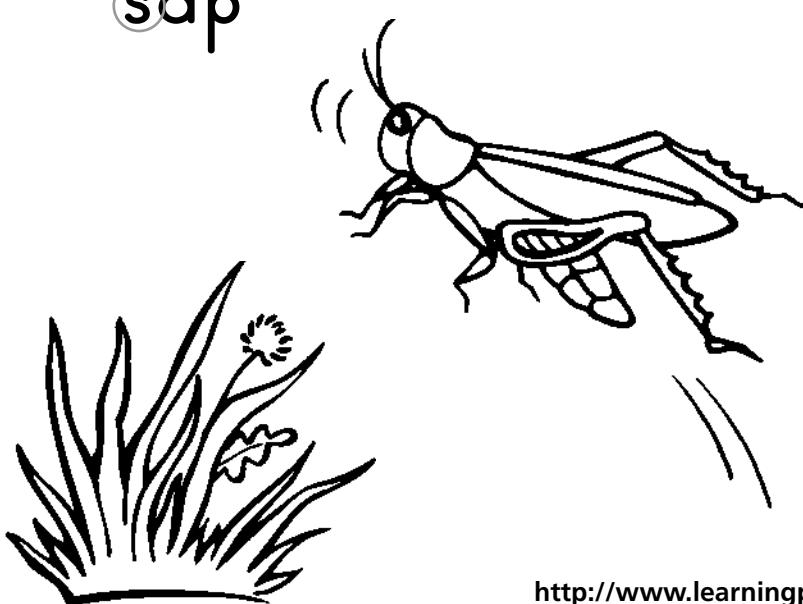
deserts

caterpillar

dress

center

sap



Name \_\_\_\_\_

Suffixes are letter groups that are added to the ends of words. Two suffixes are -ful and -less.

-ful means full of

-less means not having

Write the meaning of the underlined word on the line.

1. Be careful not to step on the spider. \_\_\_\_\_

2. When the bear took the hive, the bees were homeless.  
\_\_\_\_\_

3. I am thankful that the butterflies pollinate the flowers.  
\_\_\_\_\_

4. The number of insects seems endless because there are so many. \_\_\_\_\_

5. Josie was being careless when she stepped on the ant hill and smashed it. \_\_\_\_\_

6. The playful crickets jumped around the yard.  
\_\_\_\_\_

7. The girl was fearless as she rescued the kitten from the bees.  
\_\_\_\_\_

Name \_\_\_\_\_

The *f* sound can be spelled in different ways. *F, ph, ff, and gh* can all make the *f* sound. Fill in the blanks with the correct *f* sound letters.

\_\_\_\_ ood

e \_\_\_\_ ort

a \_\_\_\_ ids

\_\_\_\_ orest

enou \_\_\_\_

\_\_\_\_ lowers

o \_\_\_\_ ice

butter \_\_\_\_ ly

al \_\_\_\_ abet

\_\_\_\_ ase

tou \_\_\_\_

lau \_\_\_\_

stu \_\_\_\_



Name \_\_\_\_\_

These insect or spider names are misspelled. Write the correct spelling in the blank. Use your Fact Files if you need help. Then sort the words and write them in the correct column.

craab spyder \_\_\_\_\_

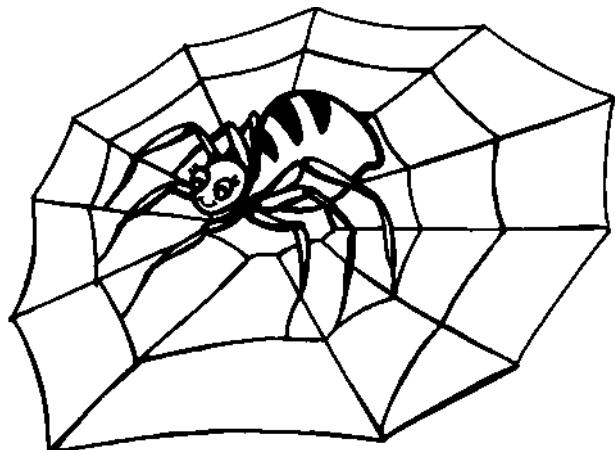
buterphly \_\_\_\_\_

crikit \_\_\_\_\_

black widough spidar \_\_\_\_\_

grasshawper \_\_\_\_\_

terantchula \_\_\_\_\_



6 legs

---

---

---

8 legs

---

---

---

Name \_\_\_\_\_

Write a rhyming word in the blank next to each word.

bug \_\_\_\_\_

butterfly \_\_\_\_\_

grasshopper \_\_\_\_\_

crickets \_\_\_\_\_

nectar \_\_\_\_\_

bee \_\_\_\_\_

tarantula \_\_\_\_\_

metamorphosis \_\_\_\_\_

Choose at least 2 of your rhyming word pairs. Use them to help you create a poem.

---

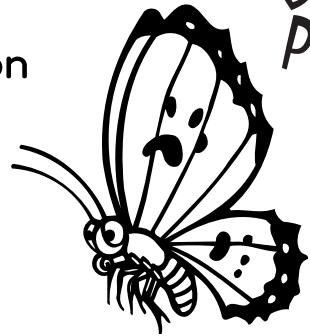
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---

Name \_\_\_\_\_

Read the sentences. Circle the capitalization errors. Write the sentence correctly.



1. the Ladybug is a beneficial insect.

---

2. she saw a Praying mantis on the wall of city hall.

---

---

3. the moth likes to fly at night.

---

4. the monarch butterfly migrates south in the fall.

---

---

5. the buzzing and humming of cicadas can be heard on Summer Nights.

---

---

6. the black widow Spider traps its prey in its Web.

---

---

Name \_\_\_\_\_

Read the sentences. Add the punctuation to the sentences.

1. The black widow can be found under the ledges rocks plants or debris
2. Dragonflies are usually found near ponds lakes and streams
3. Insects can be found almost everywhere in the world
4. Did you know that male mosquitoes don't bite asked the teacher
5. Insects have been on Earth for more than 300 million years
6. Are insects an important part of the food chain
7. An insect can be hard to see because of its camouflage
8. Do ants live in colonies or in private burrows
9. The exoskeleton is a strong flexible shell that protects the insect's organs
10. Ladybugs saved my garden from aphids



Name \_\_\_\_\_

Imagine you are an insect or spider.

What would you be? Describe yourself. Write about a day in your life as an insect or spider.

I am a(n) \_\_\_\_\_

This is what I look like: \_\_\_\_\_



(Use a separate piece of paper to draw what you look like.)

This is a story about my day. \_\_\_\_\_

Six horizontal lines spaced evenly apart, intended for a child to write a short story about their day as an insect or spider.

Name \_\_\_\_\_

A pronoun is a word you use in place of a noun.

A subject pronoun replaces the noun that is the subject.

Subject pronouns:

I      you      she      he      it      we      they

In each sentence, replace the underlined words with a subject pronoun.

1. Mona watched the ants carry the food. \_\_\_\_\_

2. Antonio saw the beehive in the tree. \_\_\_\_\_

3. Carol and Lynn rescued the spider. \_\_\_\_\_

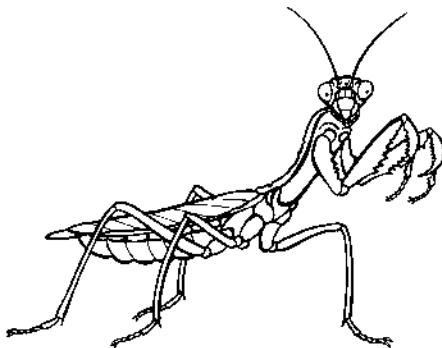
4. The praying mantis rested quietly on the twig. \_\_\_\_\_

In each sentence, fill in the blank with a subject pronoun.

1. “\_\_\_\_\_ have a pet tarantula,” said Nancy.

2. “\_\_\_\_\_ should be nice to insects,” said Jerry to Philip.

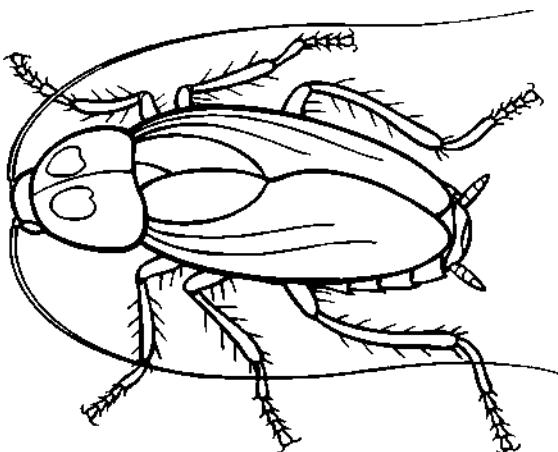
3. “\_\_\_\_\_ like studying spiders,” said Lucy and Leticia.



Name \_\_\_\_\_

Look at the underlined word. Write subject pronoun if it is a subject pronoun. Write object pronoun if it is an object pronoun.

1. The teacher taught them. \_\_\_\_\_
2. I answered the question. \_\_\_\_\_
3. My father and I baked it. \_\_\_\_\_
4. The cockroach scared her. \_\_\_\_\_
5. They chased the butterfly. \_\_\_\_\_
6. Spiders no longer scare me. \_\_\_\_\_
7. We used to collect cicada skeletons. \_\_\_\_\_
8. He has a collection of spiders. \_\_\_\_\_



Name \_\_\_\_\_

A pronoun is a word you use in place of a noun.

An object pronoun replaces a noun after an action verb in the predicate part of the sentence.

Object pronouns: me you she her him it us them

In each sentence, replace the underlined words with an object pronoun.

1. Anna jumped when she saw the spider. \_\_\_\_\_

2. Robert ran toward William. \_\_\_\_\_

3. The katydid flew in front of Jody and Isabel. \_\_\_\_\_

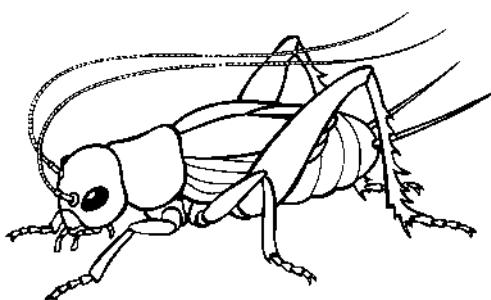
4. Sarah, that tarantula scared Emily. \_\_\_\_\_

In each sentence, fill in the blank with an object pronoun.

1. I think that spider likes \_\_\_\_\_. .

2. We laughed until the butterfly flew in front of \_\_\_\_\_. .

3. The kids listened as the crickets chirped to \_\_\_\_\_. .



Name \_\_\_\_\_

A haiku poem has three lines. Each line contains a set number of syllables.

Line 1: five syllables

Line 2: seven syllables

Line 3: five syllables

Example:    The praying mantis  
                 turned his head and looked at me  
                 with questioning eyes.

Write a haiku poem about an insect or spider.

Draw a picture to illustrate your poem, using a separate sheet.

Name \_\_\_\_\_

Add the numbers.

$$\begin{array}{r} 12 \\ 10 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \\ 20 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ 6 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ 23 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ 45 \\ + 16 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ 25 \\ + 13 \\ \hline \end{array}$$

$$\begin{array}{r} 72 \\ 11 \\ + 33 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ 25 \\ + 75 \\ \hline \end{array}$$

$$\begin{array}{r} 79 \\ 46 \\ + 31 \\ \hline \end{array}$$

$$\begin{array}{r} 51 \\ 24 \\ + 64 \\ \hline \end{array}$$

$$\begin{array}{r} 62 \\ 14 \\ + 38 \\ \hline \end{array}$$

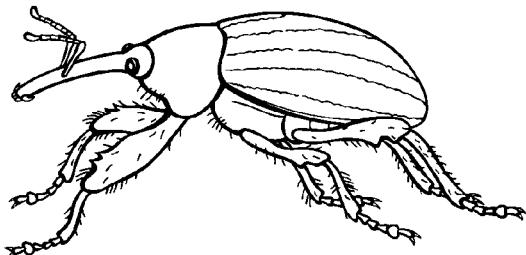
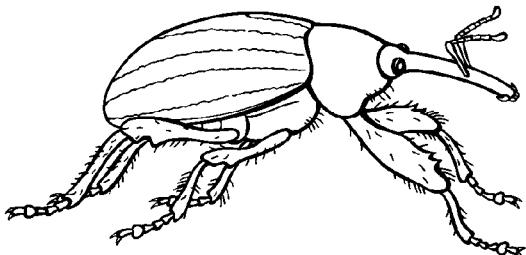
$$\begin{array}{r} 19 \\ 48 \\ + 25 \\ \hline \end{array}$$

$$\begin{array}{r} 64 \\ 52 \\ + 27 \\ \hline \end{array}$$

$$\begin{array}{r} 57 \\ 52 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 97 \\ 84 \\ + 46 \\ \hline \end{array}$$

$$\begin{array}{r} 89 \\ 77 \\ + 50 \\ \hline \end{array}$$



Name \_\_\_\_\_

Subtract the numbers.

$$\begin{array}{r} 22 \\ - 15 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \\ - 21 \\ \hline \end{array}$$

$$\begin{array}{r} 56 \\ - 19 \\ \hline \end{array}$$

$$\begin{array}{r} 96 \\ - 27 \\ \hline \end{array}$$

$$\begin{array}{r} 49 \\ - 45 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ - 25 \\ \hline \end{array}$$

$$\begin{array}{r} 55 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 28 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 63 \\ - 45 \\ \hline \end{array}$$

$$\begin{array}{r} 81 \\ - 76 \\ \hline \end{array}$$

$$\begin{array}{r} 92 \\ - 49 \\ \hline \end{array}$$

$$\begin{array}{r} 68 \\ - 44 \\ \hline \end{array}$$



$$\begin{array}{r} 16 \\ - 11 \\ \hline \end{array}$$

$$\begin{array}{r} 27 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \\ - 13 \\ \hline \end{array}$$

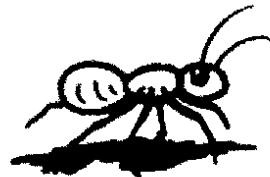
$$\begin{array}{r} 87 \\ - 64 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ - 15 \\ \hline \end{array}$$

$$\begin{array}{r} 58 \\ - 29 \\ \hline \end{array}$$

$$\begin{array}{r} 76 \\ - 48 \\ \hline \end{array}$$

$$\begin{array}{r} 77 \\ - 68 \\ \hline \end{array}$$



Name \_\_\_\_\_

Round the numbers to the nearest ten.

1. 54 \_\_\_\_\_

6. 28 \_\_\_\_\_

2. 62 \_\_\_\_\_

7. 8 \_\_\_\_\_

3. 79 \_\_\_\_\_

8. 122 \_\_\_\_\_

4. 112 \_\_\_\_\_

9. 259 \_\_\_\_\_

5. 391 \_\_\_\_\_

10. 323 \_\_\_\_\_

Round the numbers to the nearest hundred.

1. 651 \_\_\_\_\_

6. 492 \_\_\_\_\_

2. 223 \_\_\_\_\_

7. 310 \_\_\_\_\_

3. 891 \_\_\_\_\_

8. 8437 \_\_\_\_\_

4. 1244 \_\_\_\_\_

9. 6542 \_\_\_\_\_

5. 3689 \_\_\_\_\_

10. 2230 \_\_\_\_\_

Round the numbers to the nearest thousand.

1. 3561 \_\_\_\_\_

6. 892 \_\_\_\_\_

2. 2873 \_\_\_\_\_

7. 6601 \_\_\_\_\_

3. 7291 \_\_\_\_\_

8. 8437 \_\_\_\_\_

4. 11244 \_\_\_\_\_

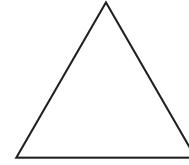
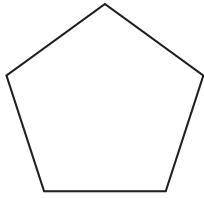
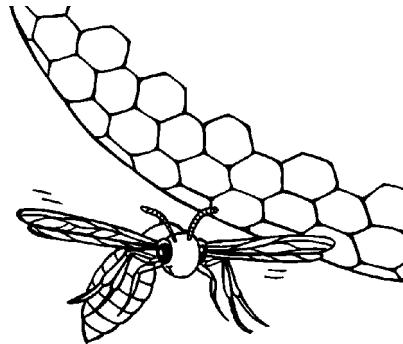
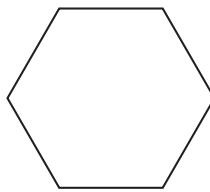
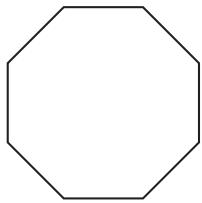
9. 46542 \_\_\_\_\_

5. 23689 \_\_\_\_\_

10. 12230 \_\_\_\_\_

Name \_\_\_\_\_

Write the correct name under the geometric shapes.



1. Which shape is a quadrilateral? \_\_\_\_\_
2. Which shape is used for stop signs? \_\_\_\_\_
3. How many sides does a pentagon have? \_\_\_\_\_
4. How many sides does a hexagon have? \_\_\_\_\_
5. Draw a line through each shape to make it symmetrical.
6. On a separate piece of paper, draw 6 equilateral triangles that are the same size. Discover how many different shapes you can make by arranging different numbers of them. Can you make a square? A hexagon? What other shapes can you make?

Hexagon   Rectangle   Pentagon   Equilateral Triangle   Octagon

Name \_\_\_\_\_

Subtract the numbers.

$$\begin{array}{r} 1. \ 250 \\ - 25 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \ 167 \\ - 23 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \ 629 \\ - 29 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \ 222 \\ - 80 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \ 472 \\ - 85 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ 700 \\ - 12 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \ 963 \\ - 260 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \ 826 \\ - 605 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \ 637 \\ - 259 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \ 558 \\ - 329 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \ 573 \\ - 463 \\ \hline \end{array}$$

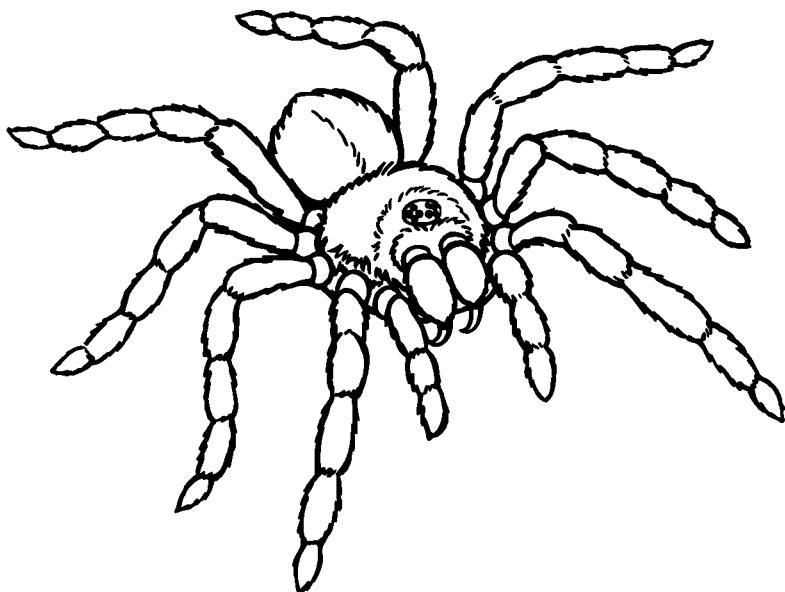
$$\begin{array}{r} 12. \ 349 \\ - 168 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \ 692 \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \ 727 \\ - 58 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \ 488 \\ - 189 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \ 195 \\ - 117 \\ \hline \end{array}$$



Name \_\_\_\_\_

Sometimes when you divide numbers there are numbers left over. The leftover numbers are called remainders.

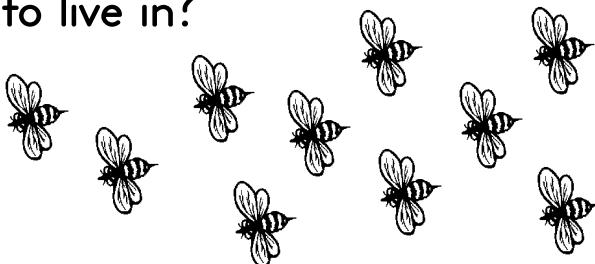
Example:  $13 \div 3 = ?$

$$\begin{array}{r} 4 \\ 3) 13 \\ -12 \\ \hline 1 \end{array}$$

$13 \div 3 = 4$  with a remainder of 1

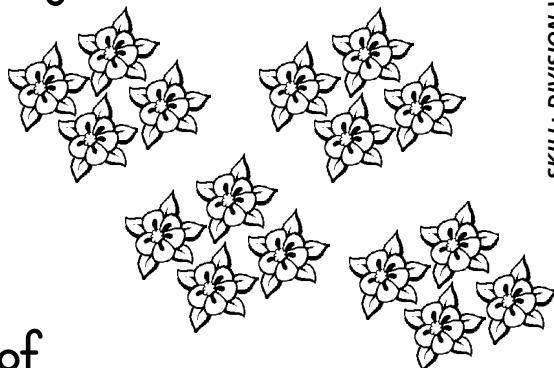
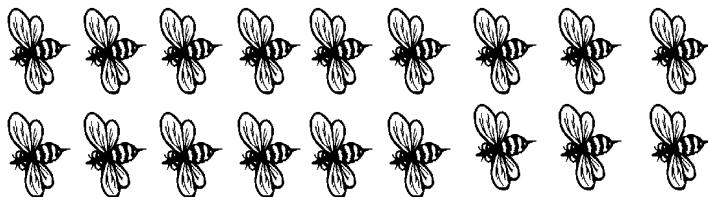
Show the answers to the problems.

1. 10 traveling bees need to find a home. Each hive can only take in 3 more bees. Are there enough hives for all the bees to live in?



$10 \div 3 =$  with a remainder of

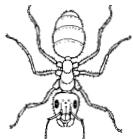
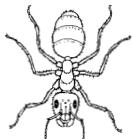
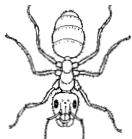
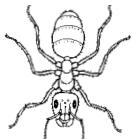
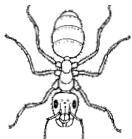
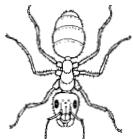
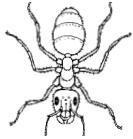
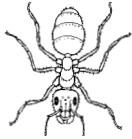
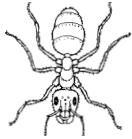
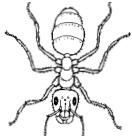
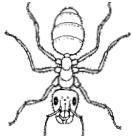
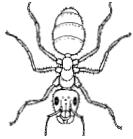
2. 18 bees are looking for flowers. They see 4 groups of flowers, with 4 flowers in each group. Each flower can only have one bee on it. Are there enough flowers for all the bees?



$18 \div 4 =$  with a remainder of

Name \_\_\_\_\_

There are 12 carpenter ants building a tunnel in a dead tree. Divide these ants to represent the following fractions. Write how many ants equals each fraction.



$\frac{1}{4}$  of the ants = \_\_\_\_\_

$\frac{1}{2}$  of the ants = \_\_\_\_\_

$\frac{3}{4}$  of the ants = \_\_\_\_\_

$\frac{4}{4}$  of the ants = \_\_\_\_\_

$\frac{1}{3}$  of the ants = \_\_\_\_\_

$\frac{2}{3}$  of the ants = \_\_\_\_\_

$\frac{1}{6}$  of the ants = \_\_\_\_\_

$\frac{5}{6}$  of the ants = \_\_\_\_\_

$\frac{2}{6}$  of the ants = \_\_\_\_\_

$\frac{4}{6}$  of the ants = \_\_\_\_\_

$\frac{1}{12}$  of the ants = \_\_\_\_\_

$\frac{11}{12}$  of the ants = \_\_\_\_\_

Name \_\_\_\_\_

Amanda found a deserted house in the woods. There were four rooms in the house, and each room had bugs in it. Amanda went through each room, caught the bugs, and put them in cages. She gave them each something to eat. Find out which bugs she found, how many there were, and what they like to eat. Read the clues and write the information in the chart.

There were bees in the room between the bathroom and the bedroom. The bugs that were in the bedroom liked to eat seeds and small fruits. The June beetles were in the bathroom. There were 20 crickets. There were 10 fewer bugs in the kitchen than in the bedroom. Cockroaches like eating leftover human food. The cockroaches were not in the bedroom. There were 5 bugs that like to eat nectar and honey. Amanda fed ripe fruit to the bugs she caught in the bathroom. Bees like to eat nectar and honey. There were 70 bugs in all. The June beetles equaled half of all the bugs found.

	Kitchen	Bathroom	Living room	Bedroom
Bug				
How many				
Food				

Good job! Now show what fraction of bugs each type of bug represents.

Cockroaches \_\_\_\_\_

June beetles \_\_\_\_\_

Bees \_\_\_\_\_

Crickets \_\_\_\_\_

Name \_\_\_\_\_

The four butterflies started their metamorphosis at different times. They are in the same tree but on different branches. Find out which butterfly is at which stage. Read the clues and write the information in the chart.

Betty is on branch 2. She will only be 1 inch long. Brandon is a caterpillar right now. He is on the branch to the right of Betty. Belinda is just an egg on branch 1. She will be twice the size of Betty. Brett is a big butterfly. He is 3 inches smaller than the biggest butterfly around, who is 10 inches. Brett can fly around now. Brandon will be 4 inches bigger than Belinda. The butterfly that is in the chrysalis stage is on the branch in between Belinda and Brandon. Brett is on branch 4.

	Branch 1	Branch 2	Branch 3	Branch 4
Butterfly				
Stage				
Size				

Write the name of the butterfly on the line that is pointing to the stage the butterfly is in.

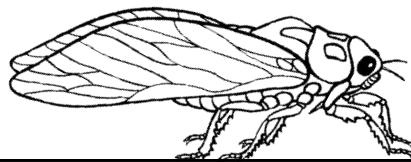
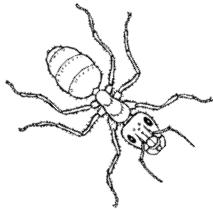


Name \_\_\_\_\_

A group of insects were fighting over a group of trees. The insects decided that each kind of insect would eat at only one of the trees. Read the clues and write the information in the chart.

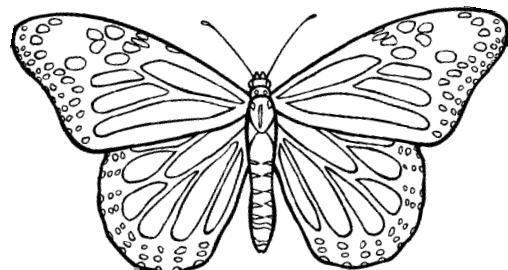


The ladybugs went to tree number 2. The cicadas went to tree number 3. The butterflies flew to the tree to the left of tree number 2. The bugs in tree number 2 eat small insects. The ladybugs are in an oak tree. Tree number 4 has carpenter ants in it. The carpenter ants like to eat the apple juice from the apples in their apple tree. The cicadas like to eat the sap from their maple tree. The dogwood tree flowers gave the butterflies a good meal of nectar to eat.



	Tree 1	Tree 2	Tree 3	Tree 4
Insect				
Type of tree				
Food				

From which tree would you want to eat? \_\_\_\_\_



Name \_\_\_\_\_

Write the missing number in these equations.



Example:  $4 \times \underline{\hspace{2cm}} = 12$

1.  $4 \times \underline{\hspace{2cm}} = 24$

11.  $6 \times 8 = \underline{\hspace{2cm}}$

2.  $\underline{\hspace{2cm}} \times 3 = 15$

12.  $6 \times \underline{\hspace{2cm}} = 6$

3.  $2 \times 8 = \underline{\hspace{2cm}}$

13.  $\underline{\hspace{2cm}} \times 4 = 28$

4.  $7 \times \underline{\hspace{2cm}} = 42$

14.  $9 \times 7 = \underline{\hspace{2cm}}$

5.  $\underline{\hspace{2cm}} \times 2 = 12$

15.  $3 \times \underline{\hspace{2cm}} = 27$

6.  $4 \times 4 = \underline{\hspace{2cm}}$

16.  $5 \times \underline{\hspace{2cm}} = 35$

7.  $\underline{\hspace{2cm}} \times 8 = 72$

17.  $9 \times \underline{\hspace{2cm}} = 81$

8.  $3 \times \underline{\hspace{2cm}} = 30$

18.  $7 \times 8 = \underline{\hspace{2cm}}$

9.  $\underline{\hspace{2cm}} \times 6 = 54$

19.  $7 \times \underline{\hspace{2cm}} = 21$

10.  $4 \times 8 = \underline{\hspace{2cm}}$

20.  $6 \times \underline{\hspace{2cm}} = 48$

Name \_\_\_\_\_

Write the money value for the following fractions.

1.  $\frac{1}{2}$  dollar = 50¢

5.  $\frac{1}{100}$  dollar = \_\_\_\_\_

2.  $\frac{3}{4}$  dollar = \_\_\_\_\_

6.  $\frac{1}{10}$  dollar = \_\_\_\_\_

3.  $\frac{9}{10}$  dollar = \_\_\_\_\_

7.  $\frac{9}{100}$  dollar = \_\_\_\_\_

4.  $\frac{1}{20}$  dollar = \_\_\_\_\_

8.  $\frac{5}{100}$  dollar = \_\_\_\_\_

Write the fraction of a dollar for each amount of money.

Reduce to lowest terms.

1. 25¢ = \_\_\_\_\_

5. 30¢ = \_\_\_\_\_

2. 6¢ = \_\_\_\_\_

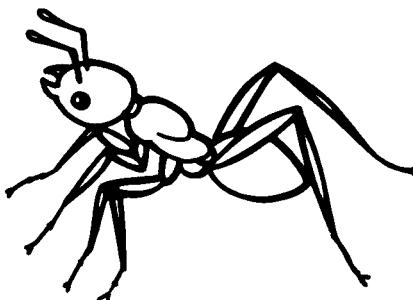
6. 80¢ = \_\_\_\_\_

3. 100¢ = \_\_\_\_\_

7. 15¢ = \_\_\_\_\_

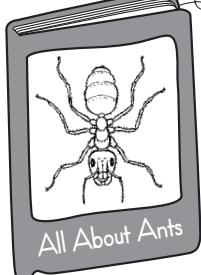
4. 40¢ = \_\_\_\_\_

8. 95¢ = \_\_\_\_\_

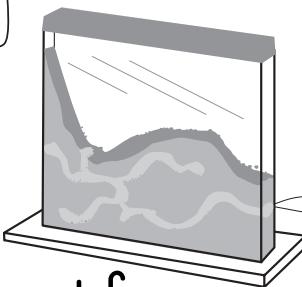


Name \_\_\_\_\_

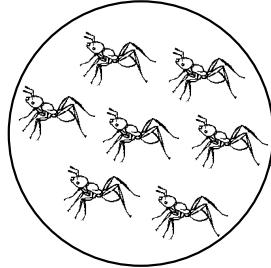
Count the money and circle the item closest to each amount at the pet store.



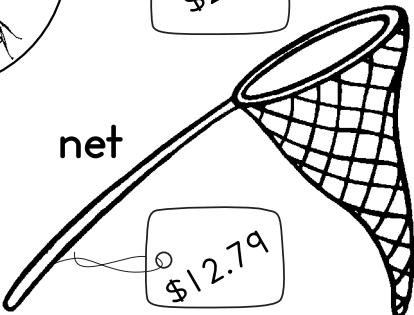
book



ant farm



ants



net

1.



\$ \_\_\_\_\_

2.



\$ \_\_\_\_\_

3.



\$ \_\_\_\_\_

4.



\$ \_\_\_\_\_

Name \_\_\_\_\_

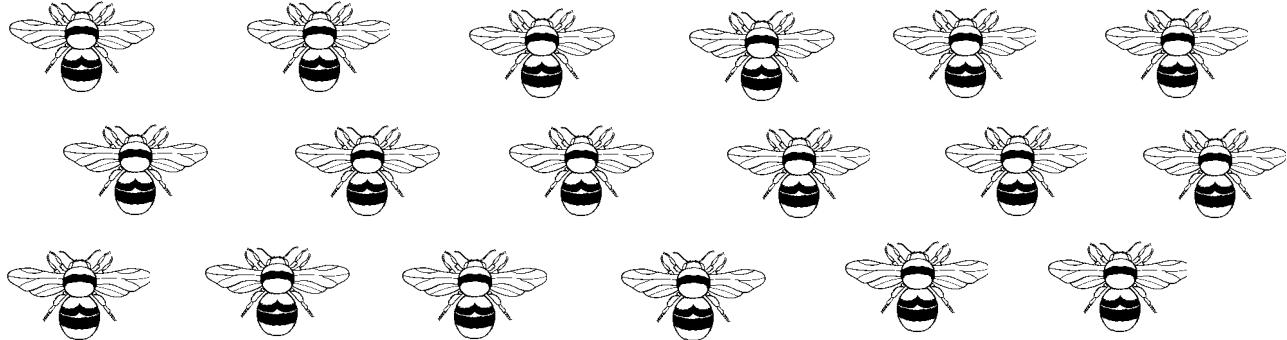


You have \$7.65 in your wallet. If you were to buy one of the following items, what amount would you give the salesclerk and how much change would you get back?

Item	Cost	Money paid	Change back
10 Crickets	10/\$1.20		
Caterpillar	\$3.75		
100 Ladybugs	100/\$6.40		
100 Ants	100/\$3.00		
Praying mantis	\$2.37		
25 Dragonfly eggs	25/\$6.40		
10 Moths	10/\$4.75		
Butterfly	\$2.86		

Name \_\_\_\_\_

Solve the equations. Use the pictures to help you see  
the division.



Example: 18 bees divided into 3 groups = 6 bees in each group.

$$18 \div 3 = \underline{6}$$

1. 18 bees divided into 9 groups = \_\_\_\_\_ bees in each group.

$$18 \div 9 = \underline{\quad}$$

2. 12 bees divided into 2 groups = \_\_\_\_\_ bees in each group.

$$12 \div 2 = \underline{\quad}$$

3. \_\_\_\_\_ bees divided into 4 groups = 3 bees in each group.

$$\underline{\quad} \div 4 = 3$$

4. 9 bees divided into 3 groups = \_\_\_\_\_ bees in each group.

$$9 \div 3 = \underline{\quad}$$

5. 15 bees divided into \_\_\_\_\_ groups = 5 bees in each group.

$$15 \div \underline{\quad} = 5$$

Name \_\_\_\_\_

Read each number word. Write the number in the blank.

four hundred seventeen \_\_\_\_\_

two thousand, six hundred forty-five \_\_\_\_\_

nine hundred eighty-one \_\_\_\_\_

five thousand, two hundred thirty \_\_\_\_\_

one hundred ninety-seven \_\_\_\_\_

six thousand, twenty-nine \_\_\_\_\_

Read the sentence. Write the underlined number word in the blank as you would say it.

A midge fly beats its wings 1,046 times a second.

Look at each number. Write the number word in the blank as you would say it.

187 \_\_\_\_\_

6,810 \_\_\_\_\_

341 \_\_\_\_\_

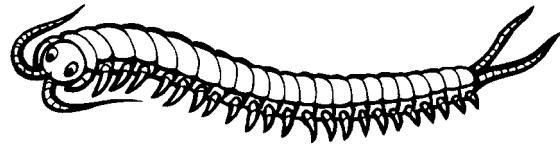
572 \_\_\_\_\_

7,943 \_\_\_\_\_

Name \_\_\_\_\_

Solve the word problems.

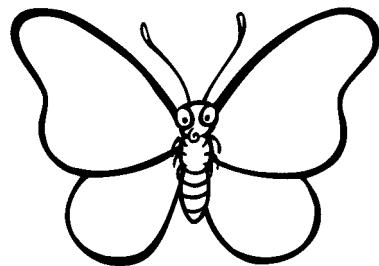
1. A centipede has 177 pairs of legs. How many legs does the centipede have? \_\_\_\_\_



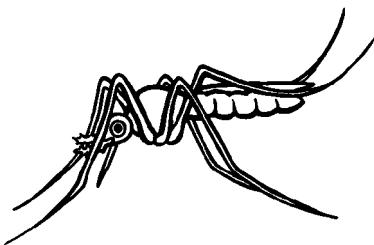
2. Six spiders and three ants sat on the leaf. How many legs did they all have together? \_\_\_\_\_

3. There were fourteen bees. Each bee flew to sixteen flowers. How many flowers were visited by the bees? \_\_\_\_\_

4. If one butterfly lays 62 eggs, how many eggs do seven butterflies lay?  
\_\_\_\_\_

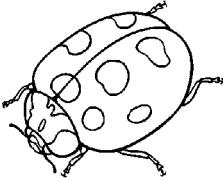


5. Eleven mosquitoes bit Ellen eleven times. How many bug bites does Ellen have? \_\_\_\_\_



Name \_\_\_\_\_

Convert inches to centimeters and centimeters to inches using the number guide.

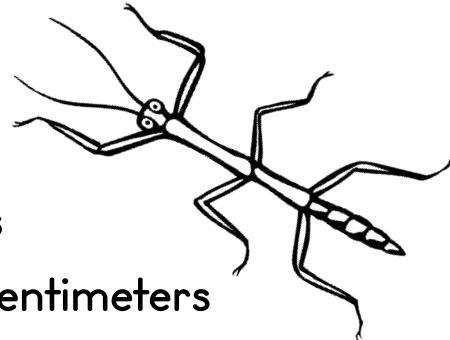


1 inch = 2.54 centimeters

1 centimeter = 0.3937 inches

40 inches =  $2.54 \text{ cm} \times 40 = 101.6$  centimeters

40 centimeters =  $0.3937 \text{ in} \times 40 = 15.748$  inches



The world's longest insect is the walking stick. The walking stick is 36 centimeters long, and \_\_\_\_\_ inches long.

A butterfly with a wingspan of 11 inches has a wingspan of \_\_\_\_\_ centimeters.

If a beehive is 25 inches long, it is \_\_\_\_\_ centimeters long.

A beetle 9 centimeters long is \_\_\_\_\_ inches long.

Name \_\_\_\_\_

Each fact family uses the same numbers  
in each equation.

For each equation, write the other 3 equations for the fact family.

1. 
$$\begin{array}{r} 8 \\ + 3 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 3 \\ + 8 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 11 \\ - 3 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 11 \\ - 8 \\ \hline 3 \end{array}$$

5. 
$$\begin{array}{r} 14 \\ + 2 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 14 \\ - 2 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 12 \\ + 2 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 12 \\ - 2 \\ \hline 10 \end{array}$$

2. 
$$\begin{array}{r} 1 \\ + 6 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 6 \\ + 1 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 7 \\ - 6 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 7 \\ - 1 \\ \hline 6 \end{array}$$

6. 
$$\begin{array}{r} 9 \\ + 7 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 9 \\ - 7 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 2 \\ + 7 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 2 \\ - 7 \\ \hline 15 \end{array}$$

3. 
$$\begin{array}{r} 19 \\ + 8 \\ \hline 27 \end{array}$$

$$\begin{array}{r} 8 \\ + 19 \\ \hline 27 \end{array}$$

$$\begin{array}{r} 27 \\ - 8 \\ \hline 19 \end{array}$$

$$\begin{array}{r} 27 \\ - 19 \\ \hline 8 \end{array}$$

7. 
$$\begin{array}{r} 12 \\ + 6 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 12 \\ - 6 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 6 \\ + 12 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 6 \\ - 12 \\ \hline 12 \end{array}$$

4. 
$$\begin{array}{r} 2 \\ + 5 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 5 \\ + 2 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 7 \\ - 5 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 7 \\ - 2 \\ \hline 5 \end{array}$$

8. 
$$\begin{array}{r} 11 \\ + 2 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 11 \\ - 2 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 9 \\ + 2 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 9 \\ - 2 \\ \hline 7 \end{array}$$

Write the equations for the following fact families.

1. 5, 8, 13       $+ \quad \quad + \quad \quad - \quad \quad -$   
 $\underline{\quad\quad\quad}$        $\underline{\quad\quad\quad}$        $\underline{\quad\quad\quad}$        $\underline{\quad\quad\quad}$

2. 4, 13, 17       $+ \quad \quad + \quad \quad - \quad \quad -$   
 $\underline{\quad\quad\quad}$        $\underline{\quad\quad\quad}$        $\underline{\quad\quad\quad}$        $\underline{\quad\quad\quad}$

Name \_\_\_\_\_

Solve the problems.

$$6) \overline{42}$$

$$2) \overline{24}$$

$$3) \overline{15}$$

$$7) \overline{7}$$

$$9) \overline{36}$$

$$8) \overline{32}$$

$$5) \overline{35}$$

$$3) \overline{18}$$

$$5) \overline{20}$$

$$4) \overline{40}$$

$$6) \overline{36}$$

$$2) \overline{48}$$

$$7) \overline{21}$$

$$5) \overline{55}$$

$$5) \overline{25}$$

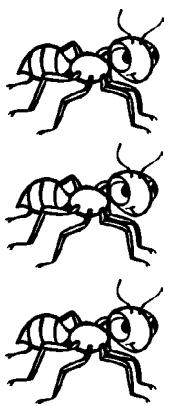
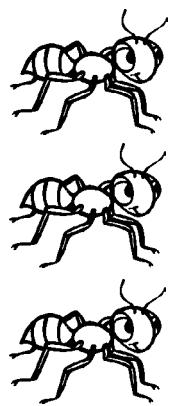
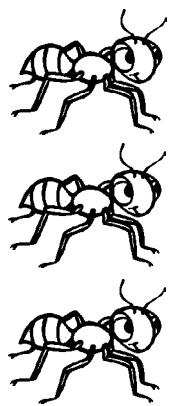
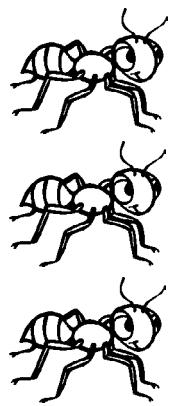
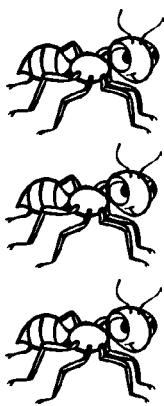
$$3) \overline{45}$$

$$1) \overline{13}$$

$$5) \overline{10}$$

$$9) \overline{81}$$

$$4) \overline{28}$$



Circle the ants to show this equation:  $15 \div 3 = 5$

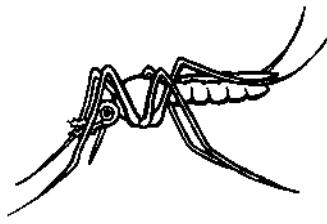
Name \_\_\_\_\_

Insects affect our lives in both good and bad ways.

Determine whether each of the following are good or bad.

Write good or bad after each statement.

1. Spread disease \_\_\_\_\_



2. Pollinate crops \_\_\_\_\_

3. Destroy pests \_\_\_\_\_

4. Destroy crops \_\_\_\_\_

5. Recycle animal and plant waste \_\_\_\_\_

6. Damage wood \_\_\_\_\_

Write at least 3 beneficial insects and 3 pests.

Beneficial

Pests

1. \_\_\_\_\_

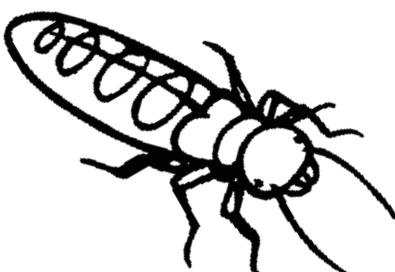
1. \_\_\_\_\_

2. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

3. \_\_\_\_\_



Name \_\_\_\_\_

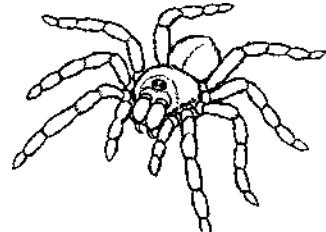


Use your Fact Files on spiders. Fill in the blanks.

1. The \_\_\_\_\_ is the most feared of spiders.

2. Spiders \_\_\_\_\_ attack people.  
They often try to \_\_\_\_\_ rather than bite.

3. Most spiders have \_\_\_\_\_ eyes and \_\_\_\_\_ legs.

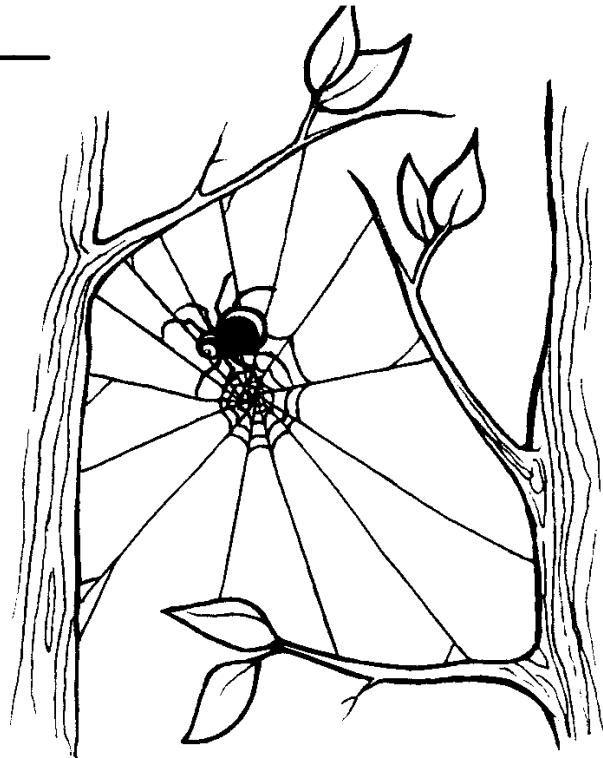


4. The black widow has an \_\_\_\_\_ shape on its abdomen.

5. The crab spider uses \_\_\_\_\_ rather than a web to catch its prey.

6. Most spiders eat \_\_\_\_\_.

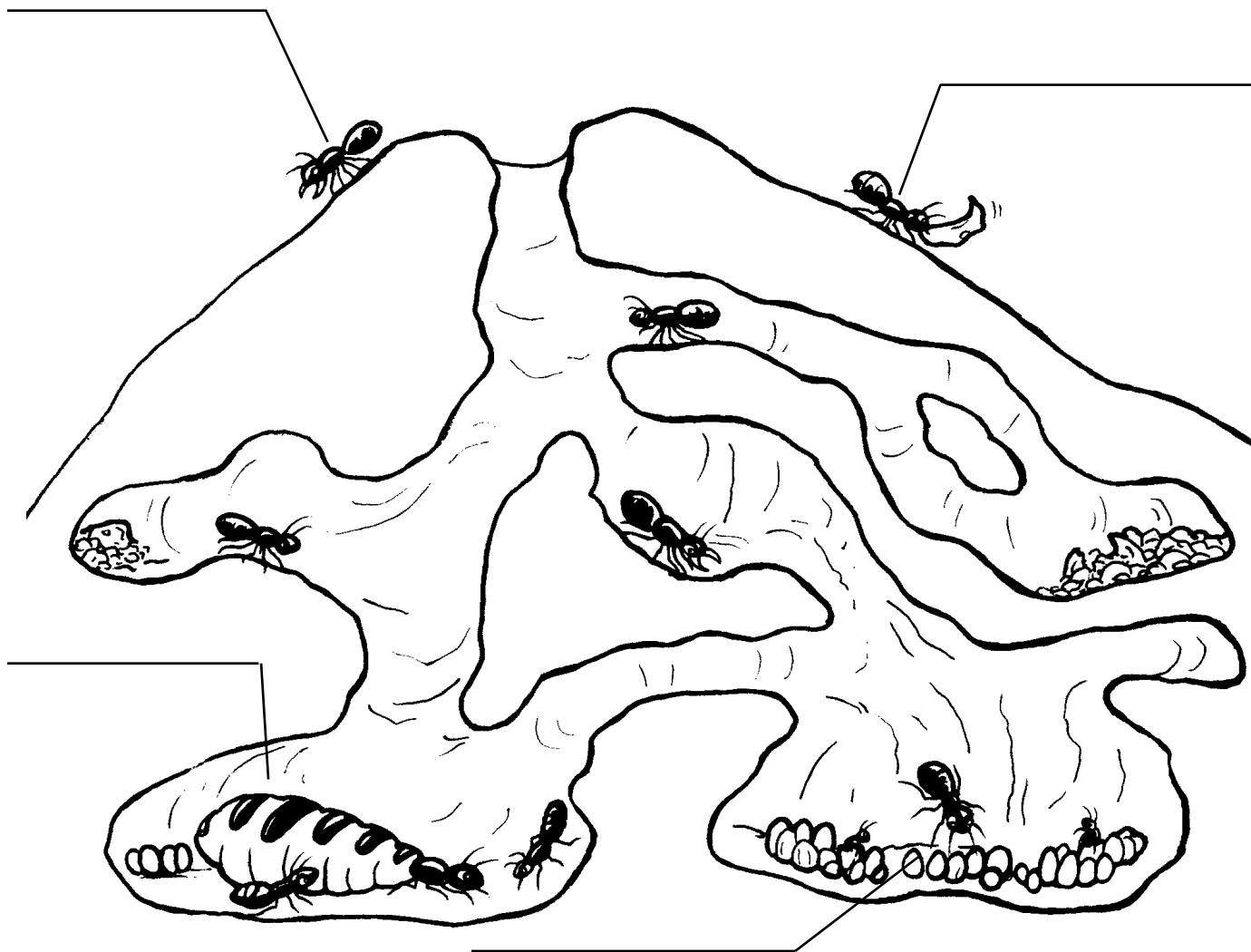
7. \_\_\_\_\_ eat insects, lizards, and small animals.



Name \_\_\_\_\_

Some insects live in communities. These communities are called colonies. Each insect in a colony has a job.

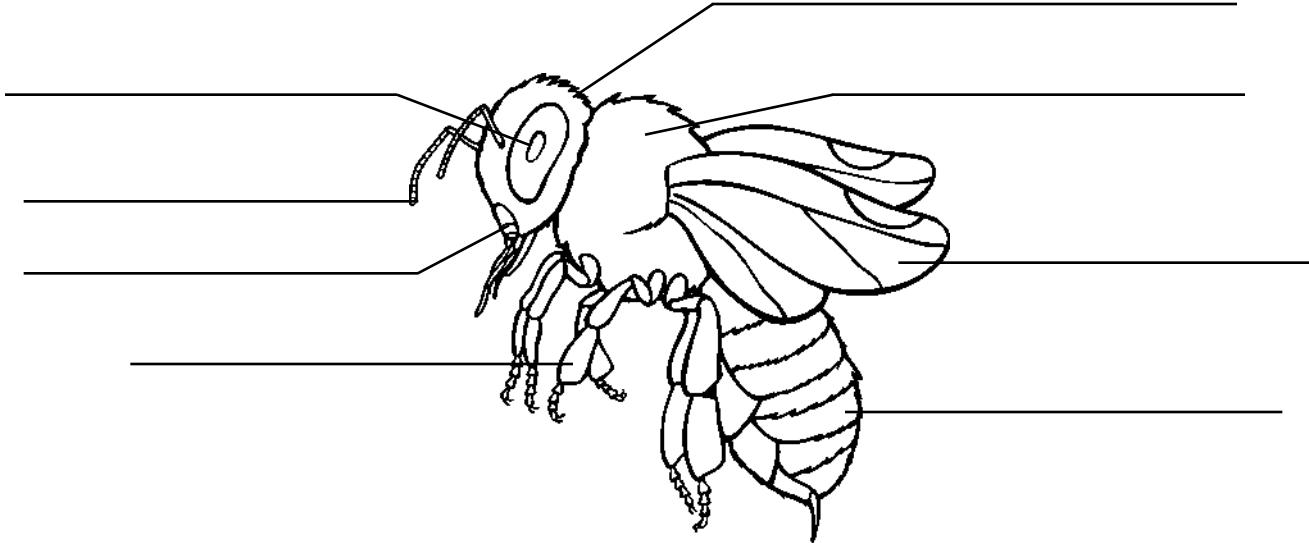
In an ant colony there is usually one queen and many workers, who are all female. The queen lays the eggs and the workers do specialized work such as gathering food, building the nest, and taking care of the queen and the eggs. The workers who are soldiers protect the nest. The male ants are used only for mating with new queens and do not live long.



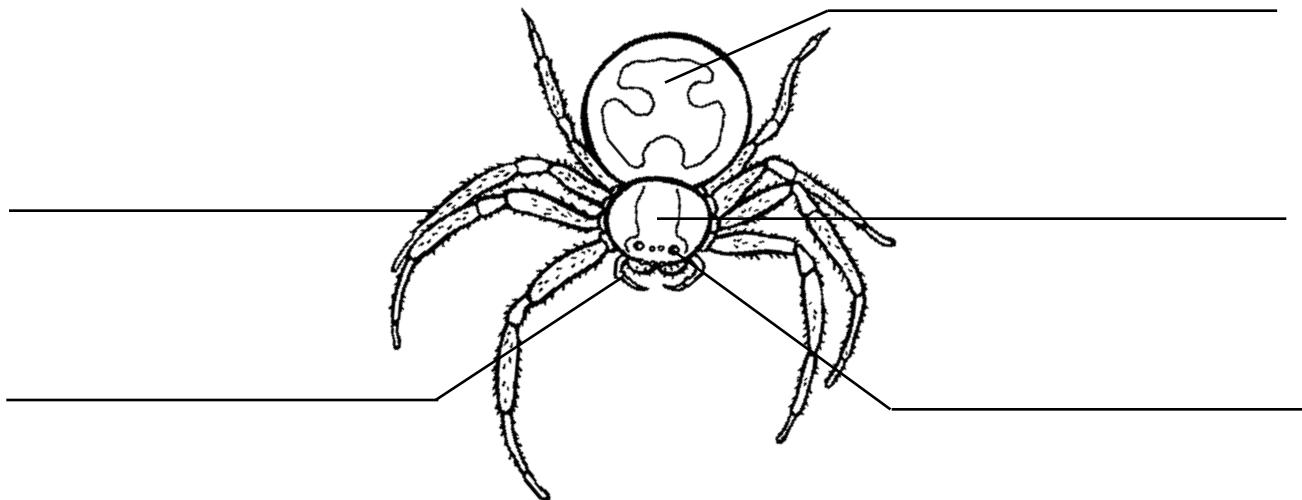
Name \_\_\_\_\_

Spiders are not insects.

Label the parts of an insect.



Label the parts of a spider.



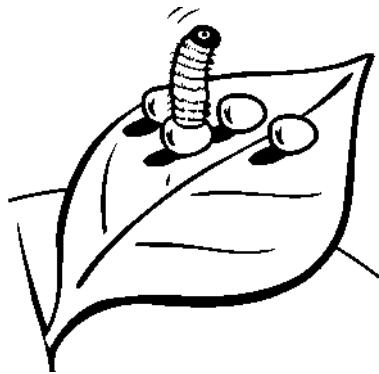
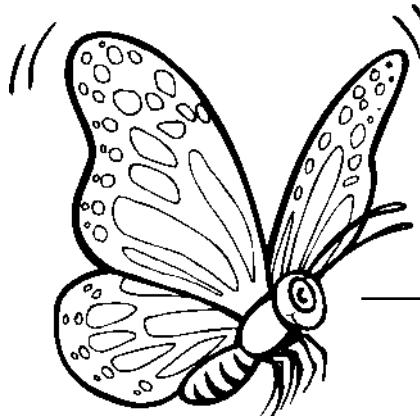
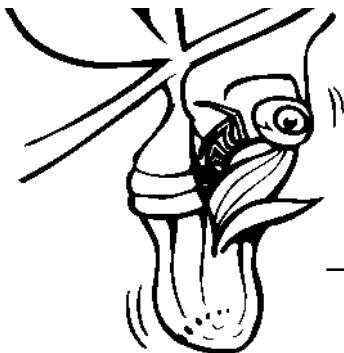
List the differences between insects and spiders.

	How many?			
	Legs	Body Sections	Antennae	Wings
Insects				
Spiders				

Name \_\_\_\_\_

The butterfly starts as an egg and develops into a butterfly through stages. This is called complete metamorphosis and consists of 4 stages.

Put the stages below in sequence using the numbers 1 - 4.



Describe the stages the butterfly goes through, starting with the eggs. \_\_\_\_\_

\_\_\_\_\_

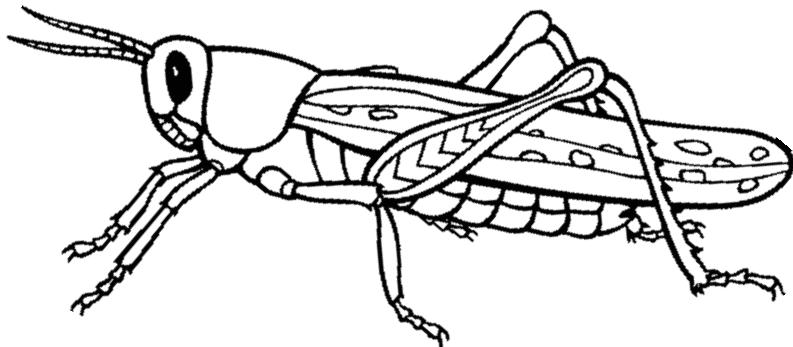
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

## Grasshoppers



Draw a line to the following body parts on the grasshopper. Label each line.

thorax	leg	head	eye
abdomen	wing	antenna	mouth

Use your Fact Files to answer the following questions.

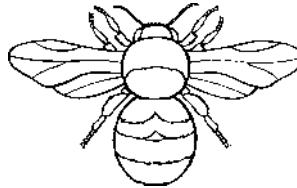
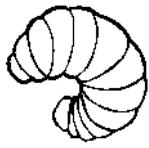
1. Why are grasshoppers good jumpers? \_\_\_\_\_
  
2. Are grasshoppers bigger or smaller than tarantulas? \_\_\_\_\_ cicadas? \_\_\_\_\_
  
3. If you hear a grasshopper sing, is it a boy or a girl? \_\_\_\_\_  
How do they sing? \_\_\_\_\_
  
4. What is a typical meal for a grasshopper? \_\_\_\_\_

SKILL: GRASSHOPPER CHARACTERISTICS

Name \_\_\_\_\_

Some insects go through complete metamorphosis to reach the adult stage. There are four stages to go through: egg, larva, pupa, and adult. The larva does not look like its parents. The larva spends its time eating. When it is big enough it moves to the pupa stage. During the pupa stage it is protected by a cocoon or chamber. While it is inside the cocoon or chamber its body changes shape. When it breaks out of the cocoon or chamber it is an adult.

The bee is an insect that goes through complete metamorphosis. Label the stages it goes through.



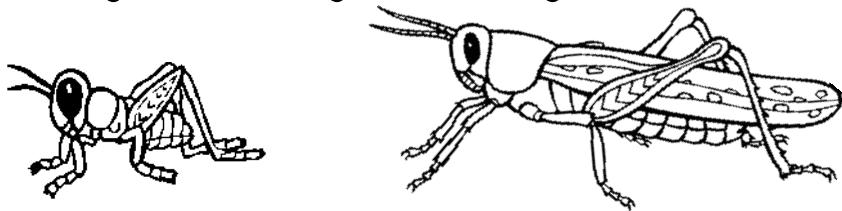
Define metamorphosis. \_\_\_\_\_

Describe complete metamorphosis. \_\_\_\_\_

Name \_\_\_\_\_

Some insects go through incomplete metamorphosis to reach the adult stage. There are three stages in incomplete metamorphosis: egg, nymph, and adult. The nymph looks like its parents but it cannot reproduce and has no wings. The nymph goes through many molts, changing each time until it reaches the final molt. After the final molt it is an adult.

The grasshopper is an insect that goes through incomplete metamorphosis. Label the stages that it goes through.



0

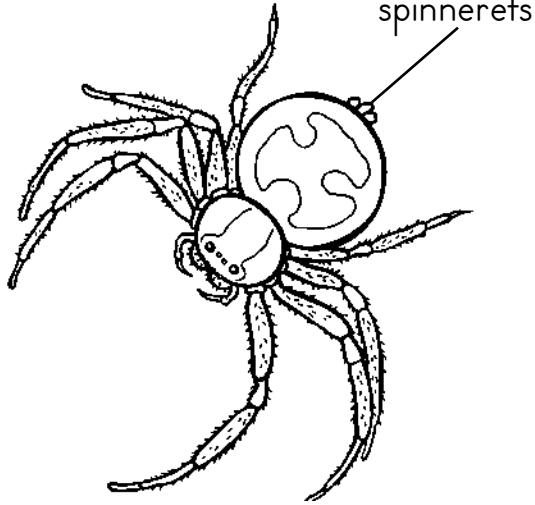
Describe incomplete metamorphosis. \_\_\_\_\_

How is incomplete metamorphosis different from complete metamorphosis? \_\_\_\_\_

Name \_\_\_\_\_

## Spider Silk

Spider silk comes from the spinnerets, which are found at the back end of the spider's abdomen. This silk starts as a liquid and hardens as it is pulled from the spinnerets. Spider silk can be used for many things, such as for draglines, wrapping trapped insects, building webs, and building nests. Female spiders use the silk to build cocoons for their eggs. Baby spiders use it as a parachute to travel.



The ability to build a web is an inborn skill. The spider does not learn how to make the web, it just automatically knows how to make the web. This is called instinctive behavior.

Answer the questions.

1. Where does spider silk come from? \_\_\_\_\_

\_\_\_\_\_

2. What form does silk start as? \_\_\_\_\_

\_\_\_\_\_

3. What are some different uses of spider silk? \_\_\_\_\_

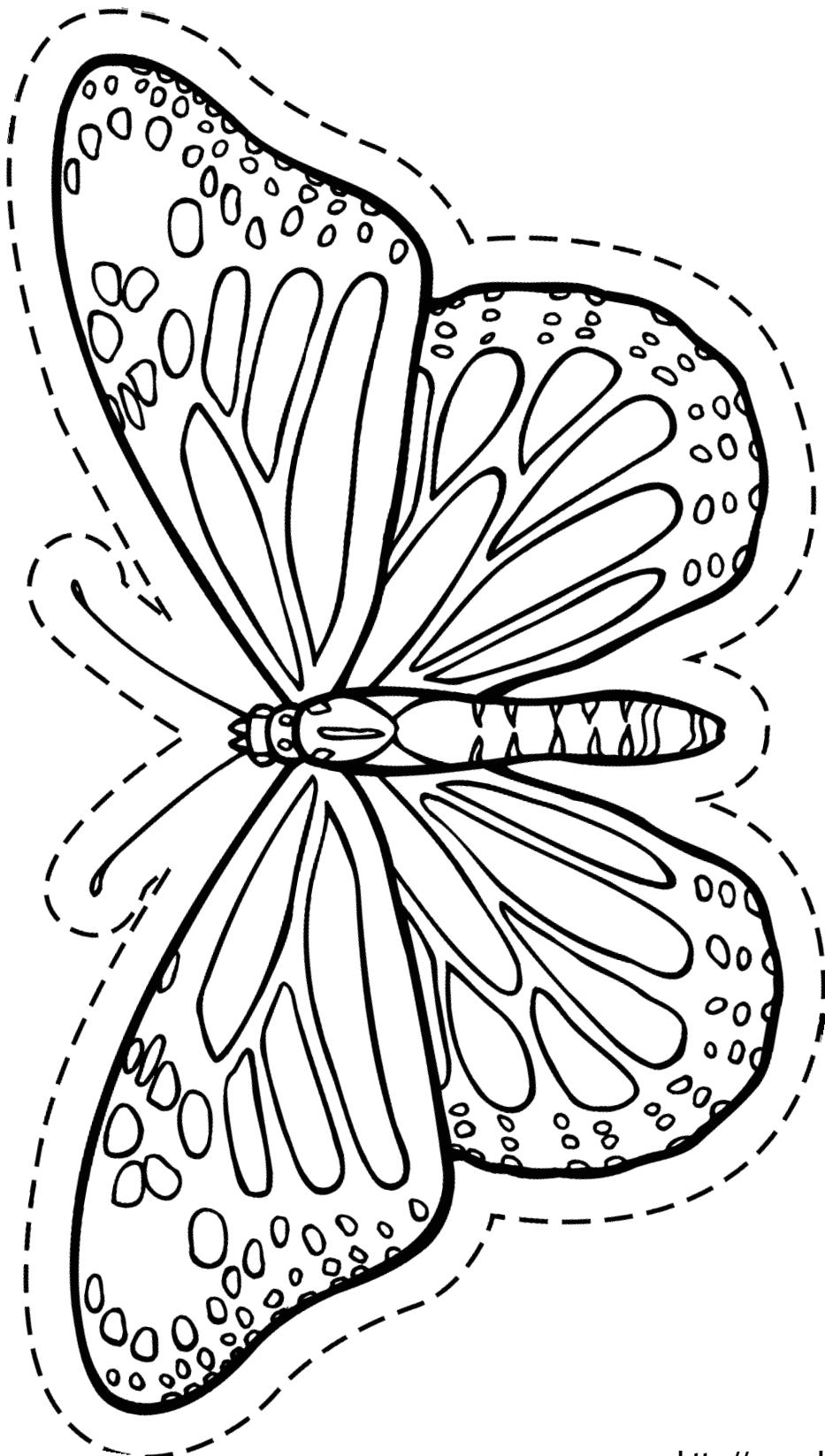
\_\_\_\_\_

4. Spiders know how to make a web. This is called \_\_\_\_\_

\_\_\_\_\_

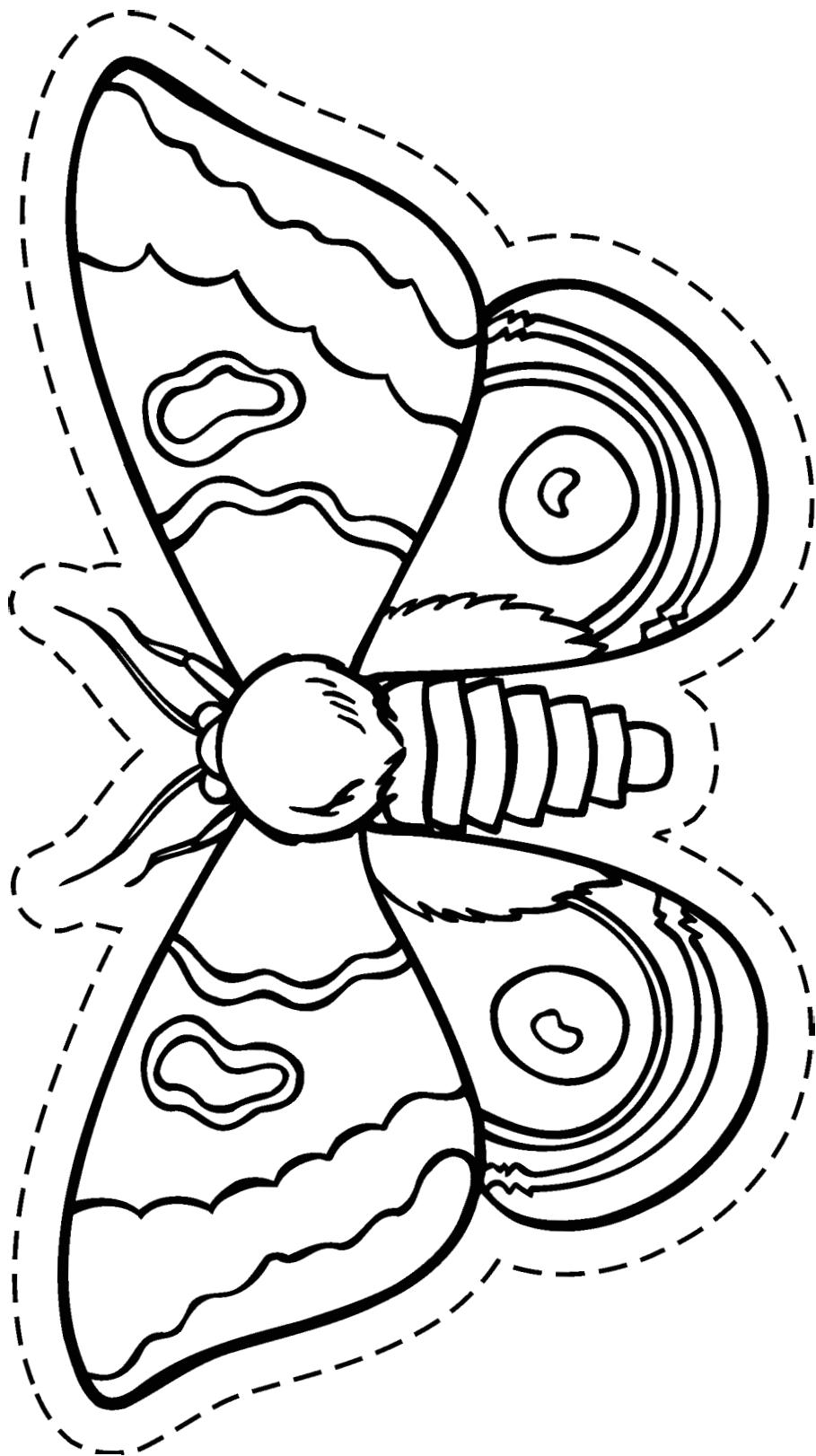
Name \_\_\_\_\_

# Butterfly



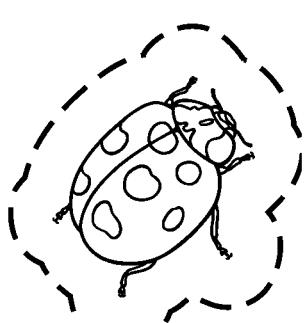
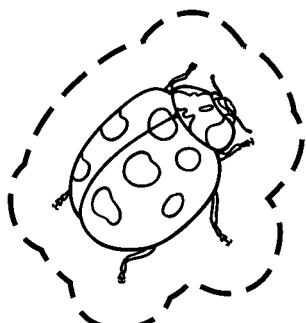
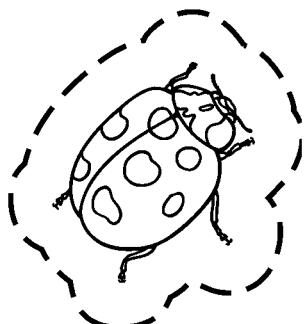
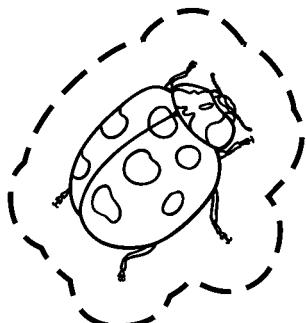
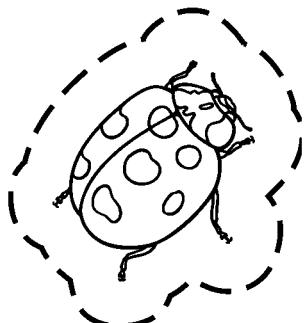
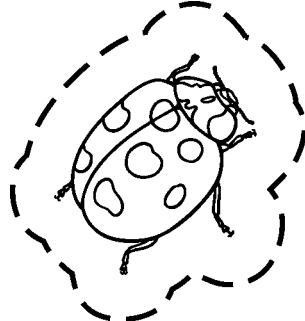
Name \_\_\_\_\_

# Moth



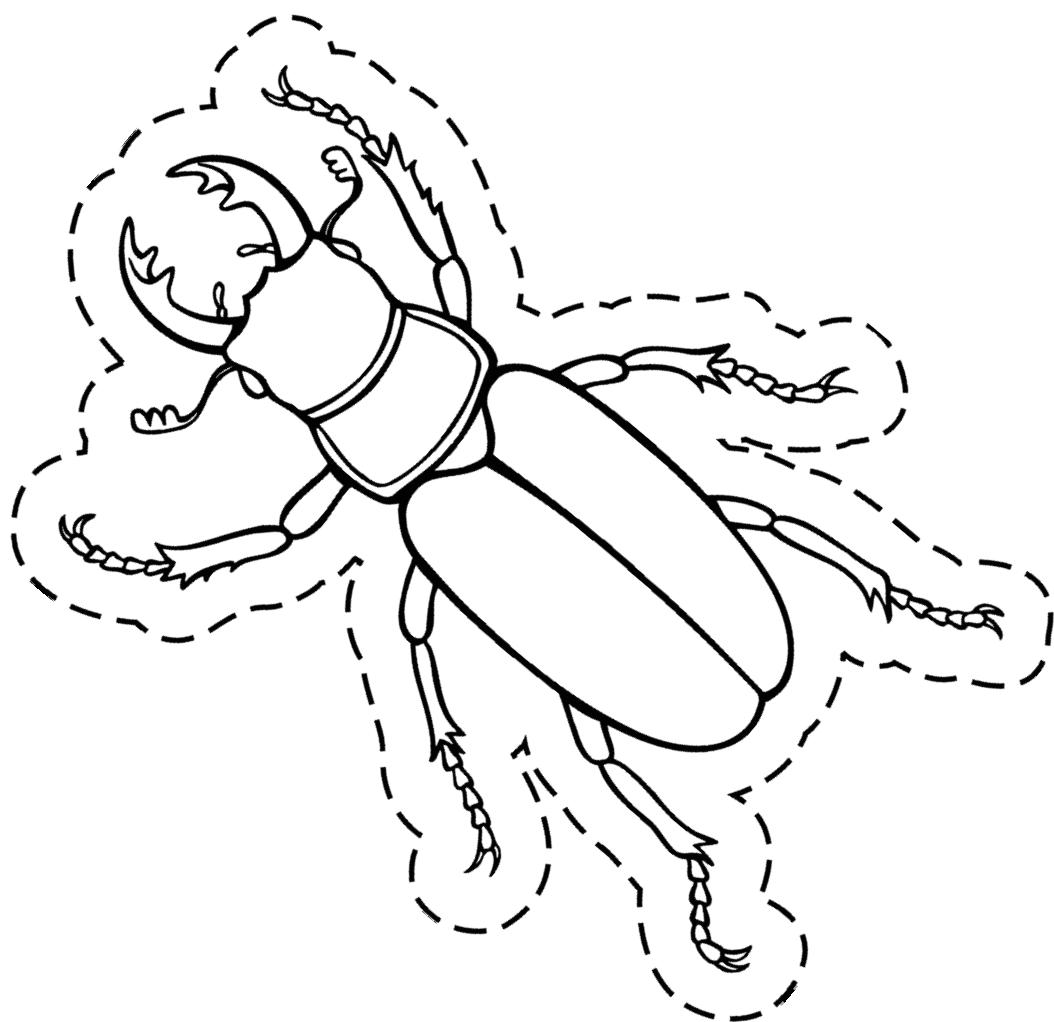
Name \_\_\_\_\_

# Ladybug



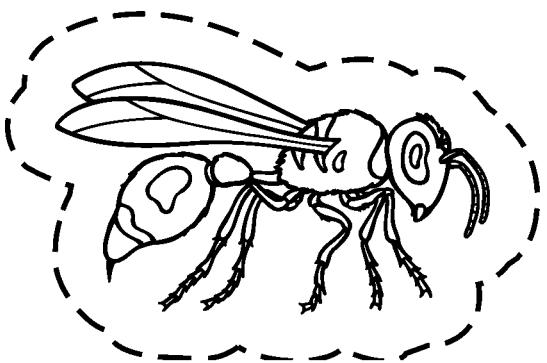
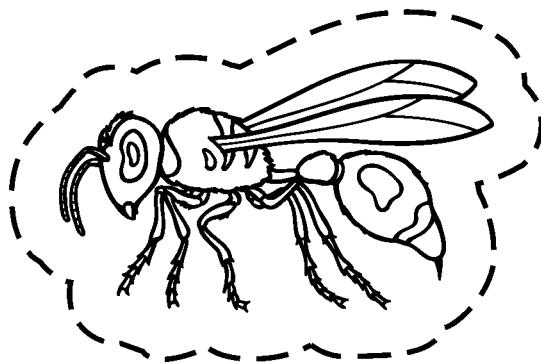
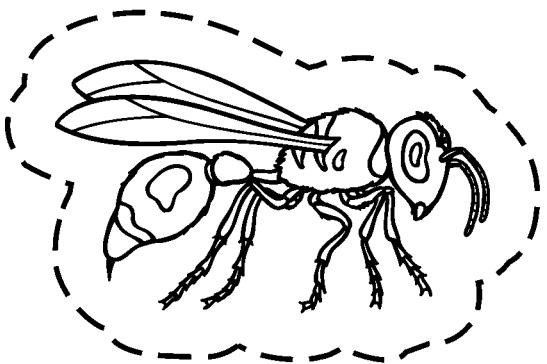
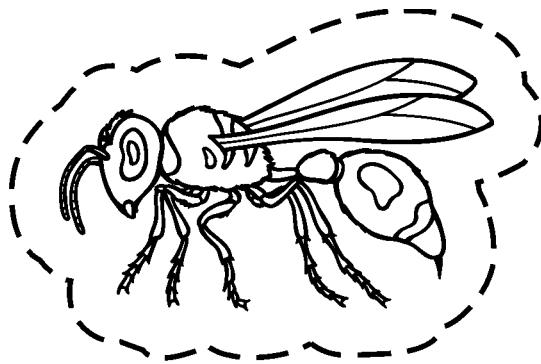
Name \_\_\_\_\_

# Beetle



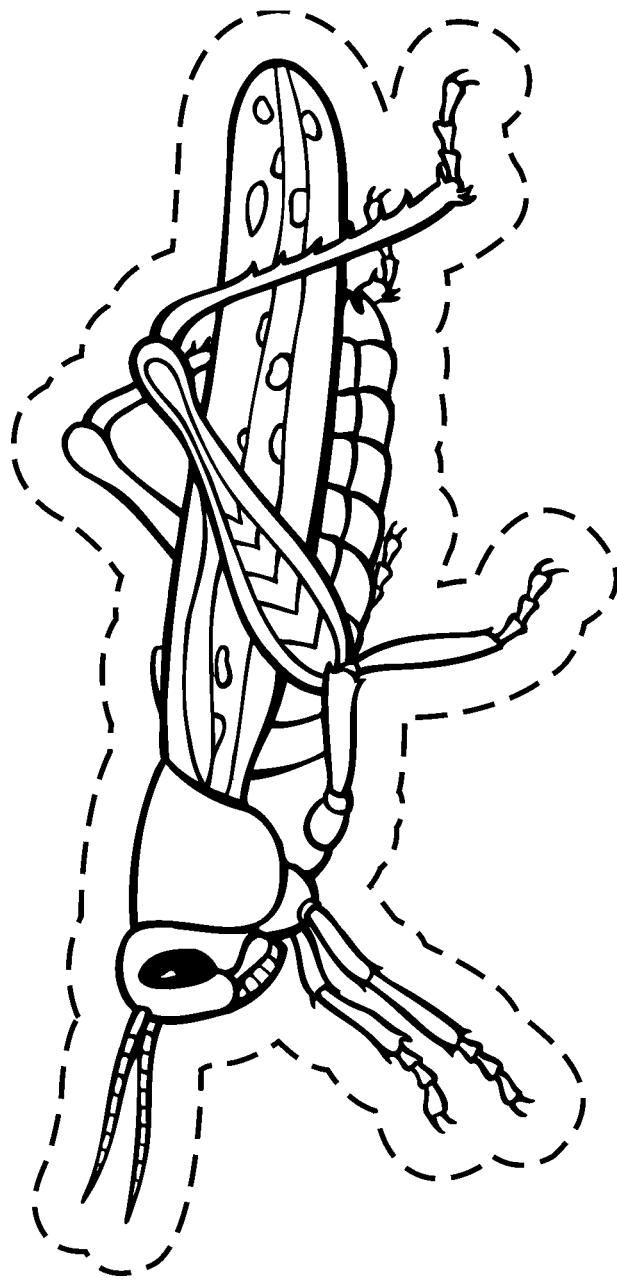
Name \_\_\_\_\_

# Wasp



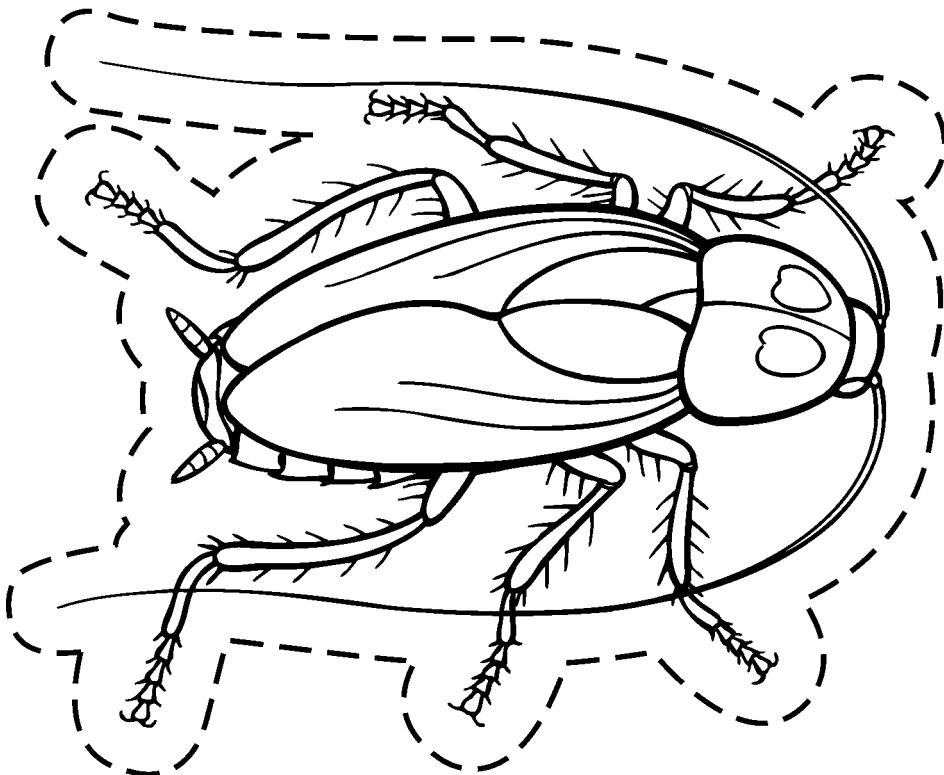
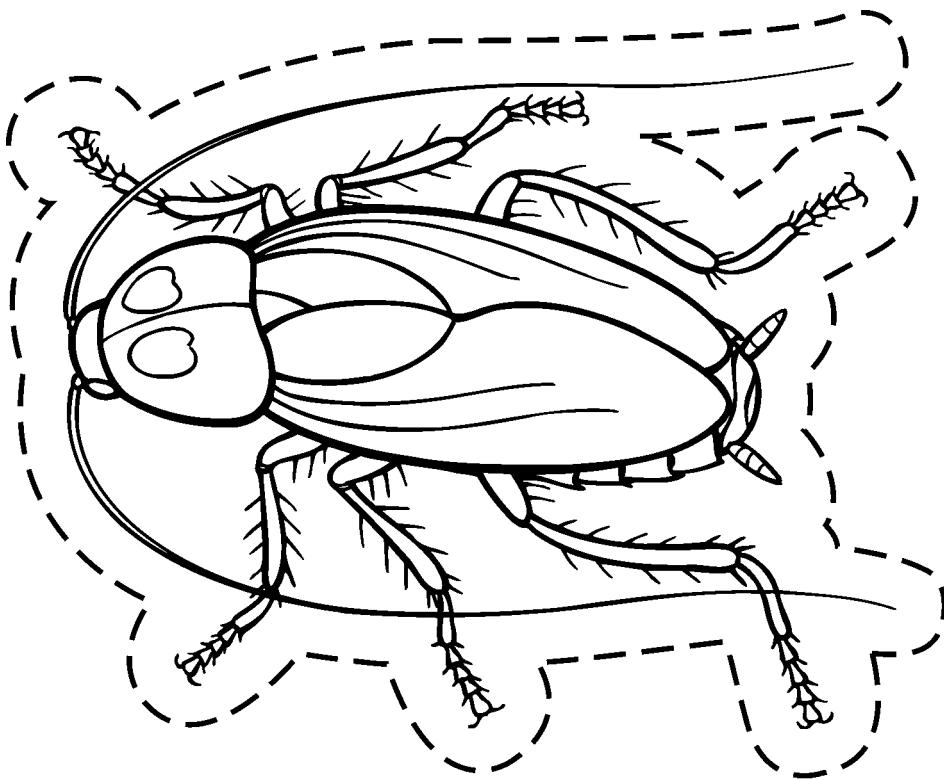
Name \_\_\_\_\_

# Grasshopper



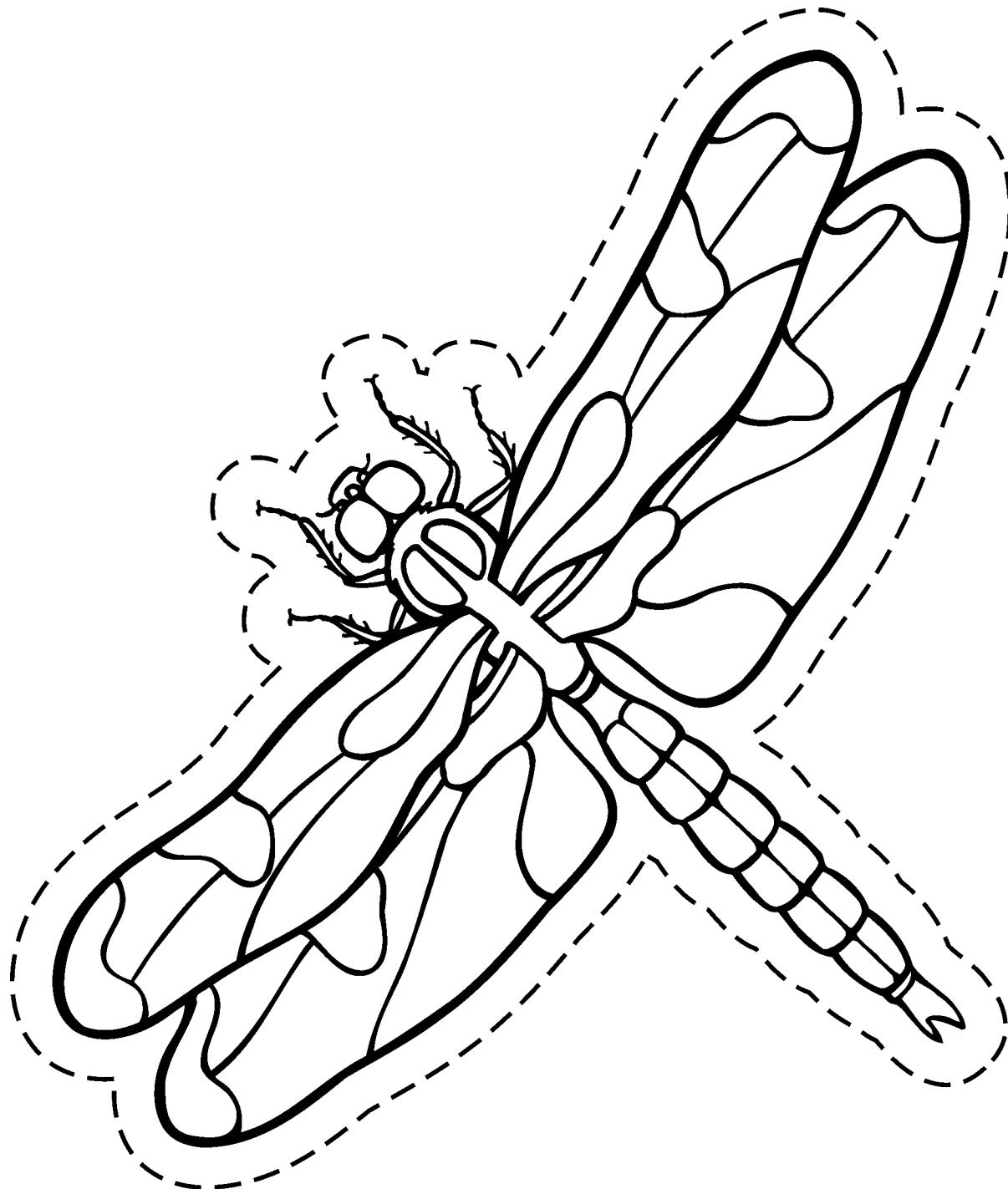
Name \_\_\_\_\_

# Cockroach



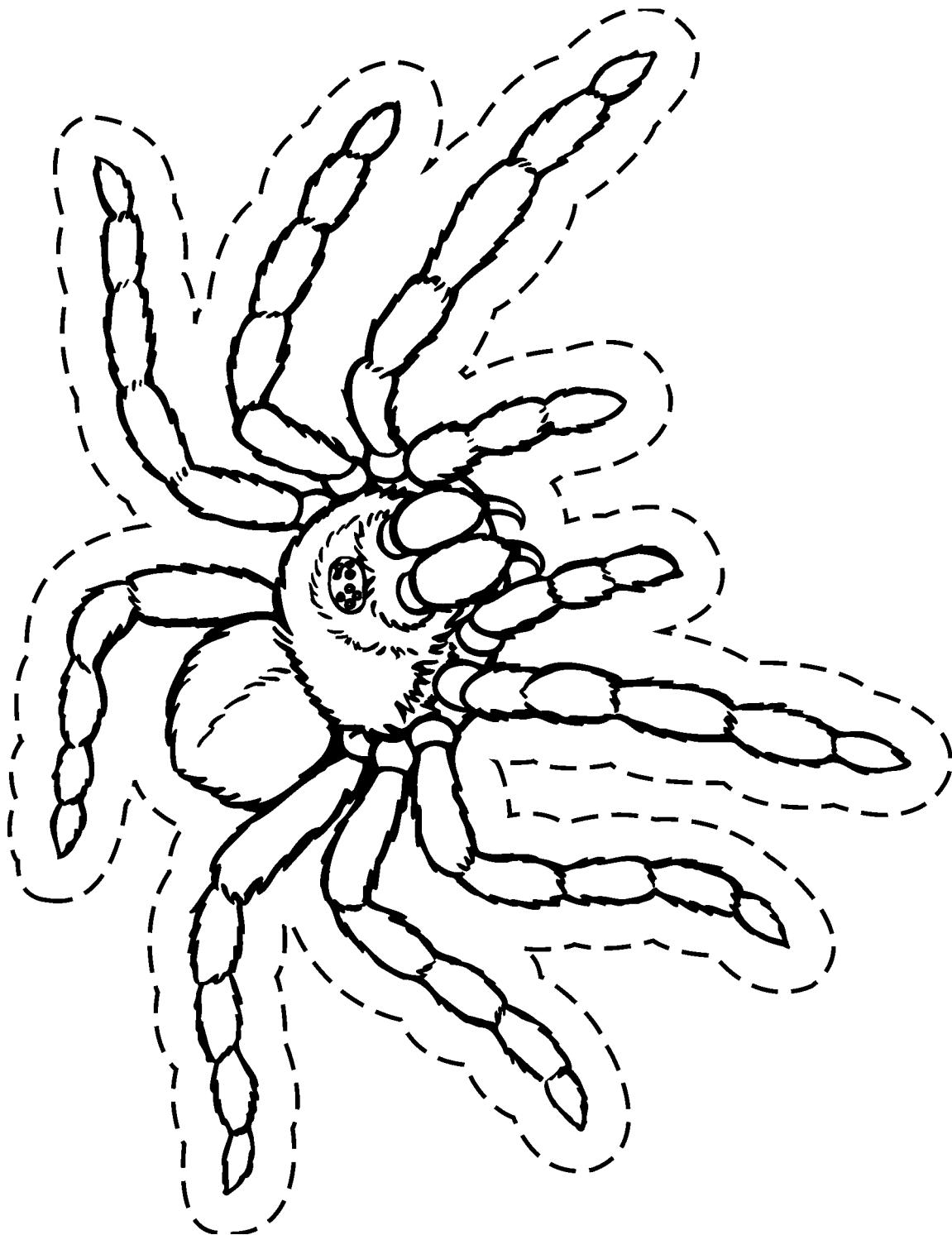
Name \_\_\_\_\_

# Dragonfly



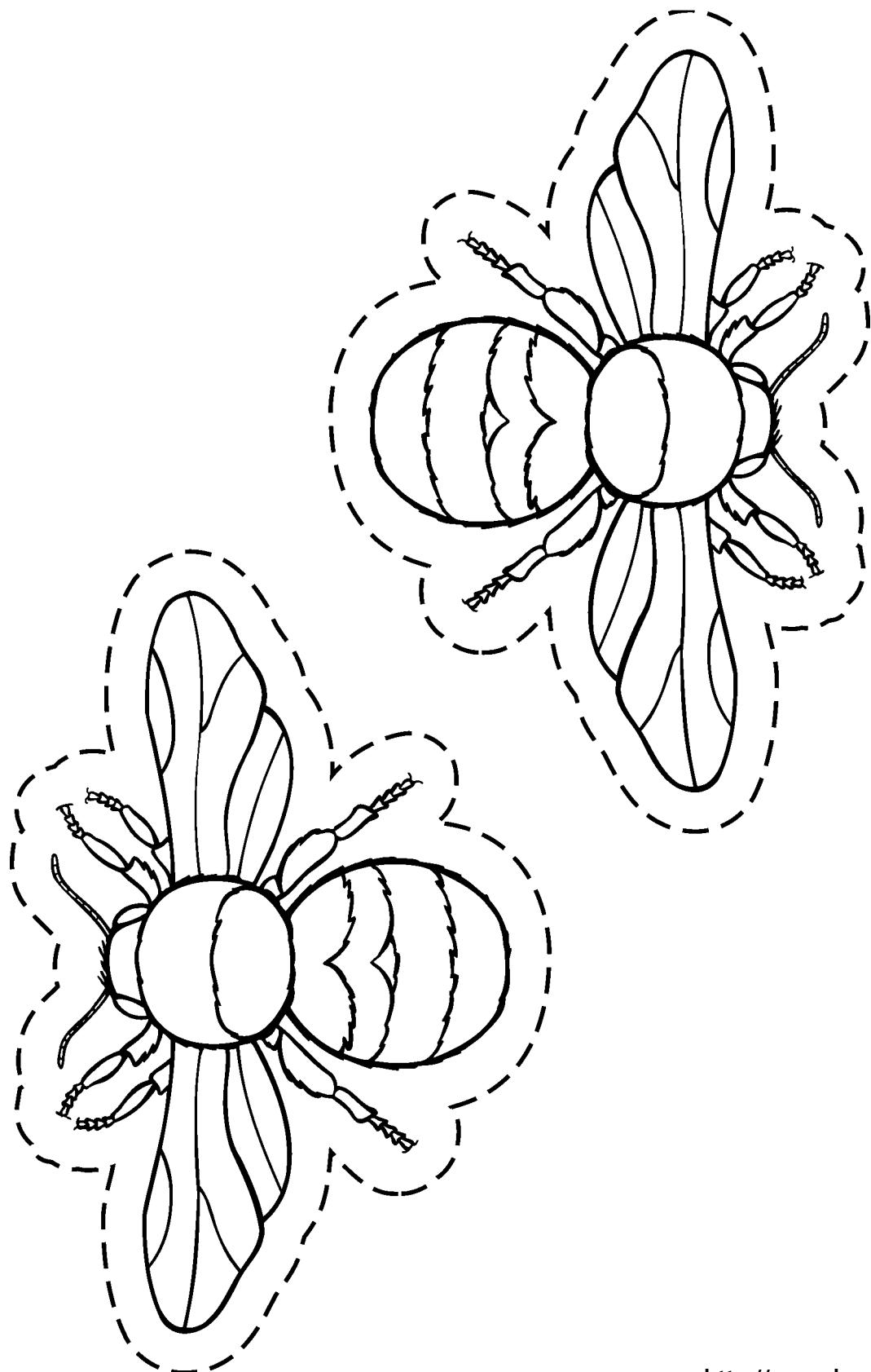
Name \_\_\_\_\_

# Spider



Name \_\_\_\_\_

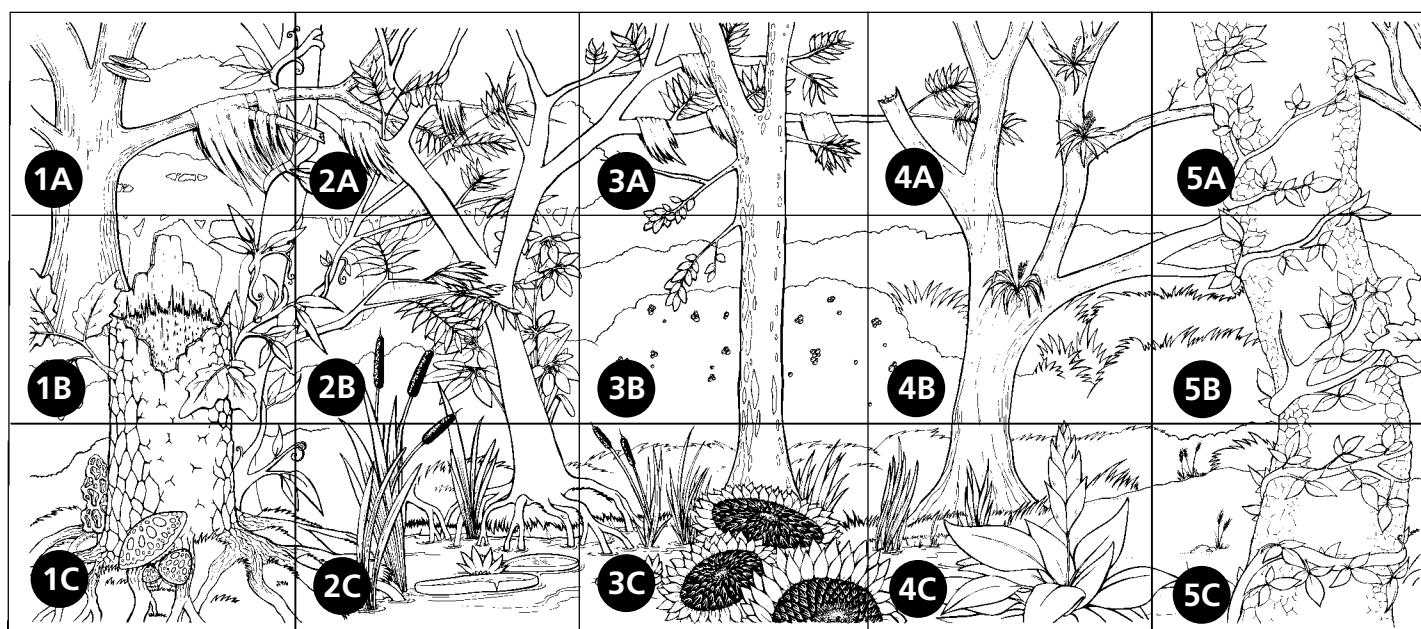
# Bee



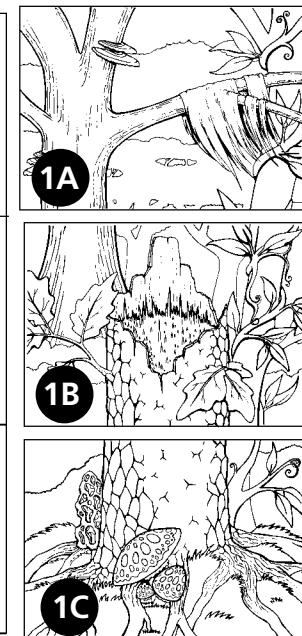
## Teaching Notes

### Insects and Spiders Mural

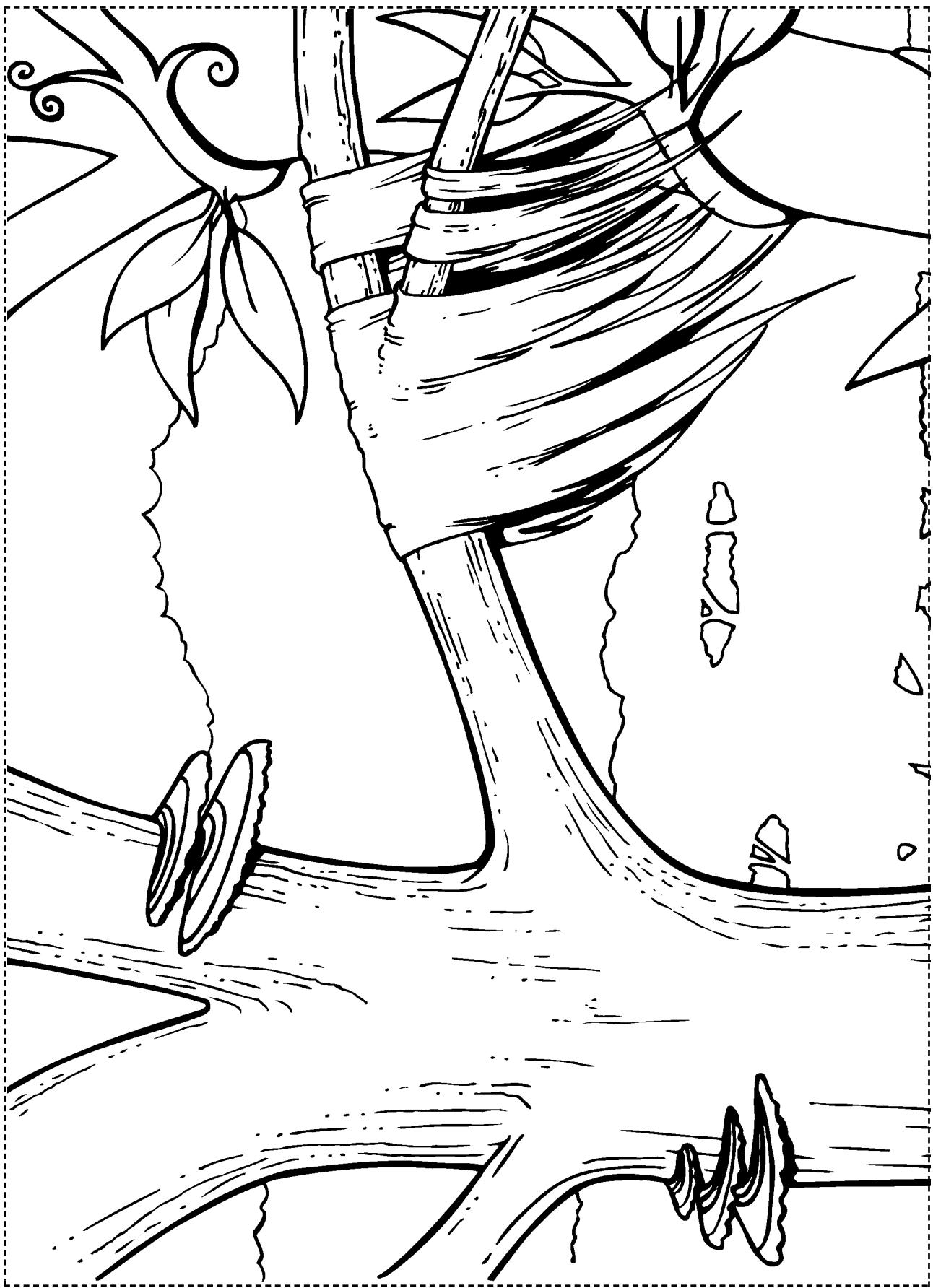
Print out the 15 sheets which make up the mural. Each sheet has a code printed in the bottom left corner, which corresponds to those on the key below. Have your students color the sheets before cutting off the edges and taping together. Tape on the back of the sheets. To make a longer mural, you can print another set, which you can attach to the right side of the existing one. Once the mural is assembled and attached to the wall, students can place their cut out insects and spiders on the mural.



For a longer mural, start again with the first column



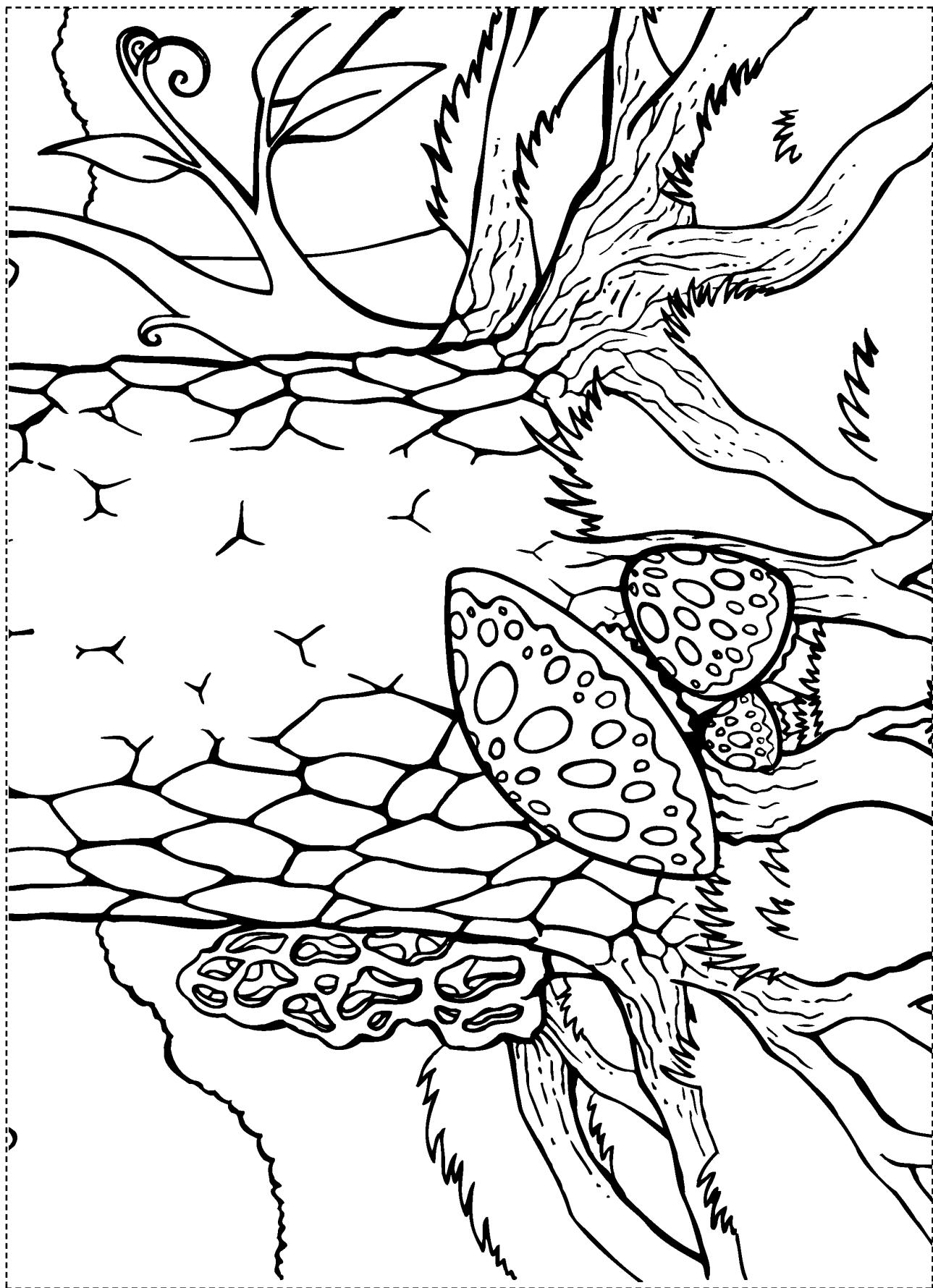
Name \_\_\_\_\_



Name \_\_\_\_\_



Name \_\_\_\_\_



Name \_\_\_\_\_



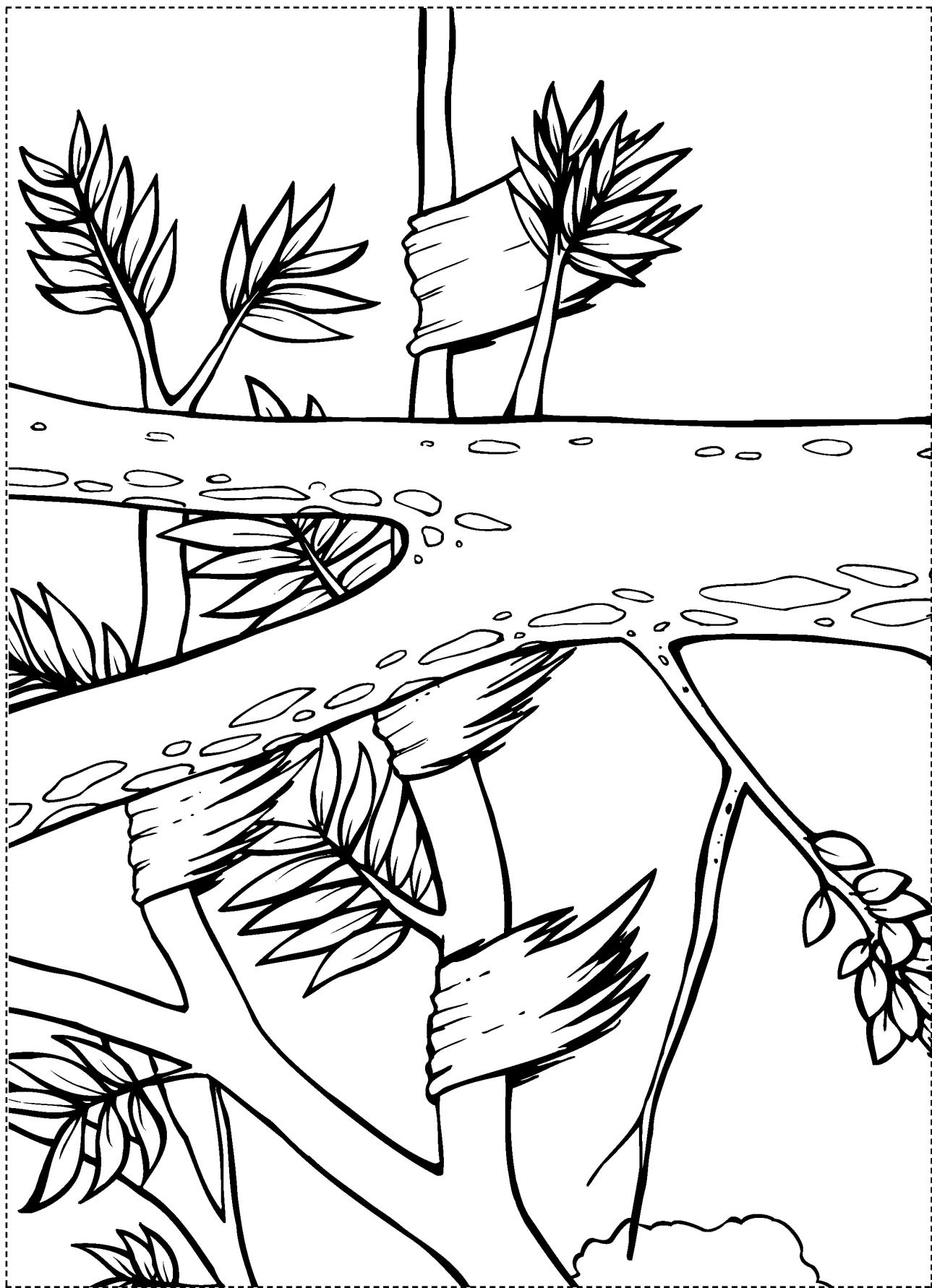
Name \_\_\_\_\_



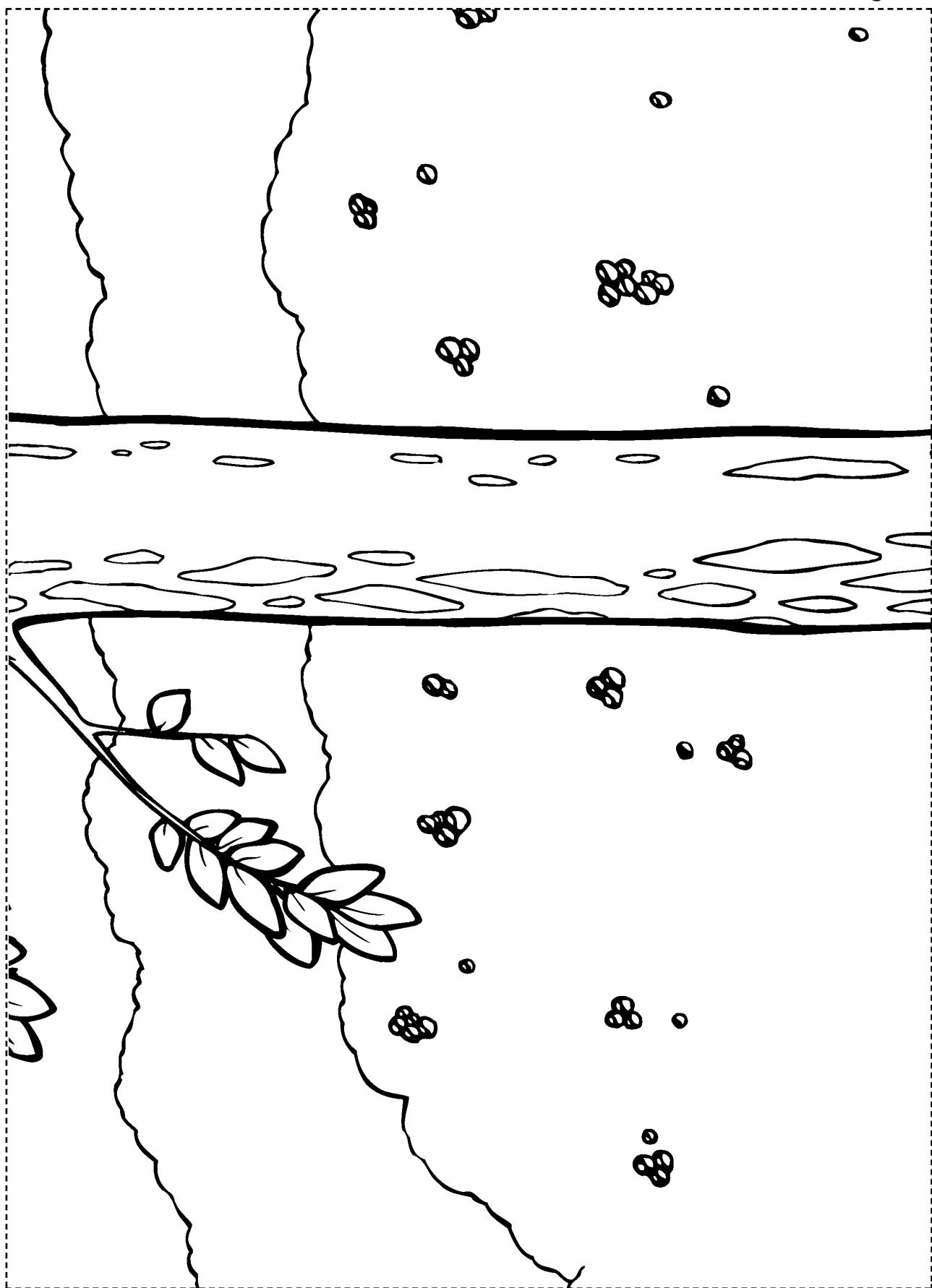
Name \_\_\_\_\_



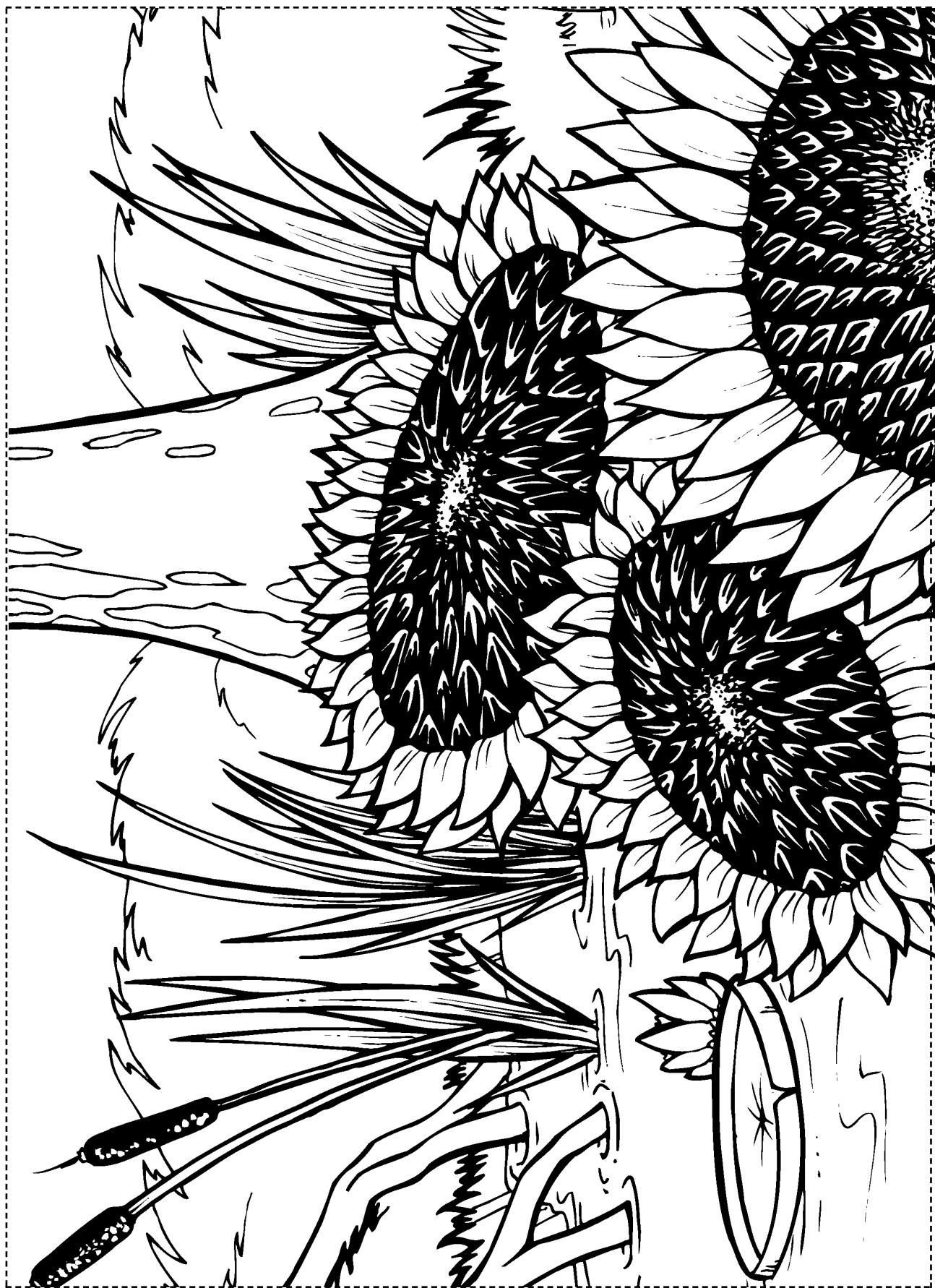
Name \_\_\_\_\_



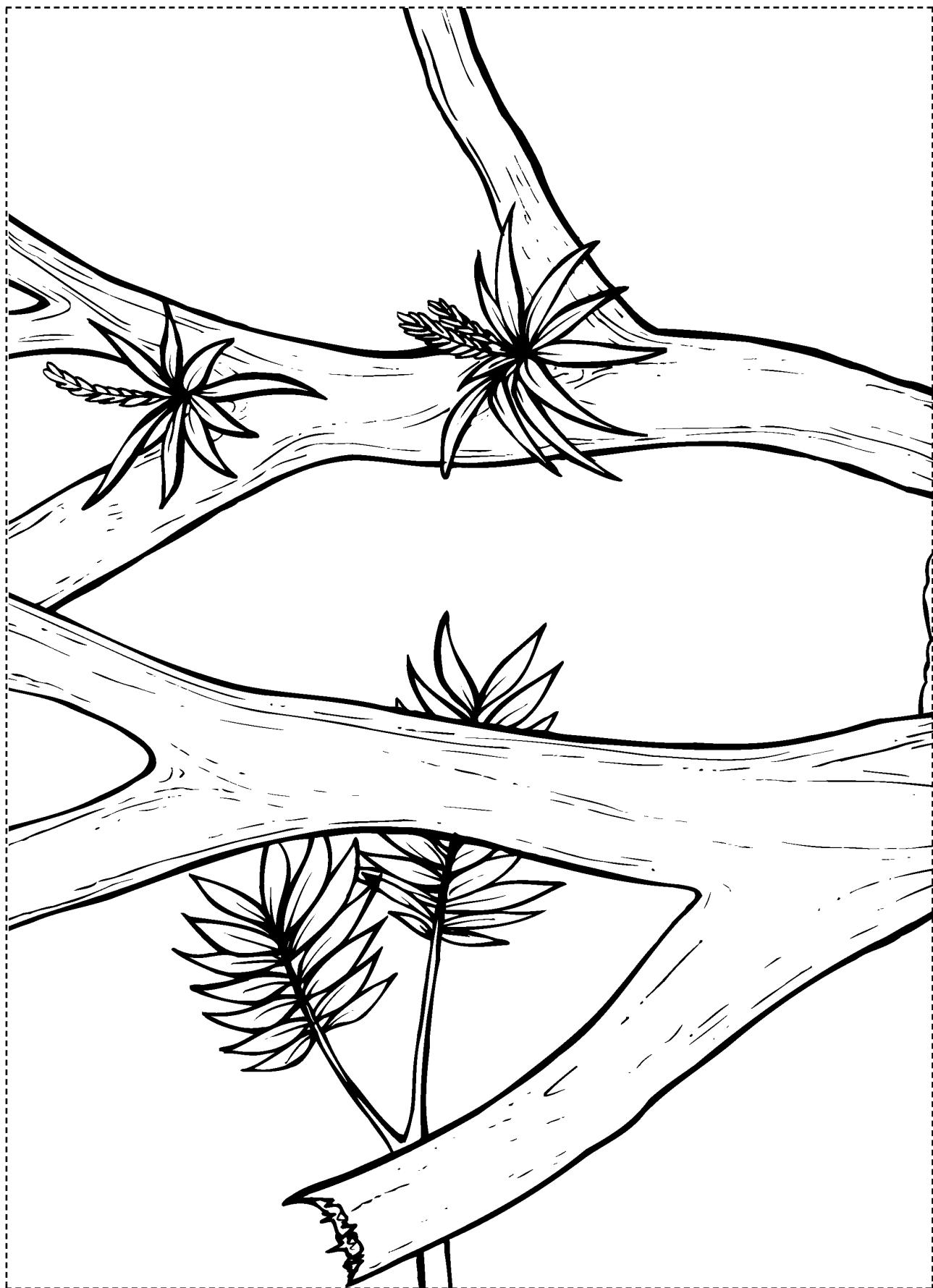
Name \_\_\_\_\_



Name \_\_\_\_\_



Name \_\_\_\_\_



Name \_\_\_\_\_



Name \_\_\_\_\_



Name \_\_\_\_\_



Name \_\_\_\_\_



Name \_\_\_\_\_

