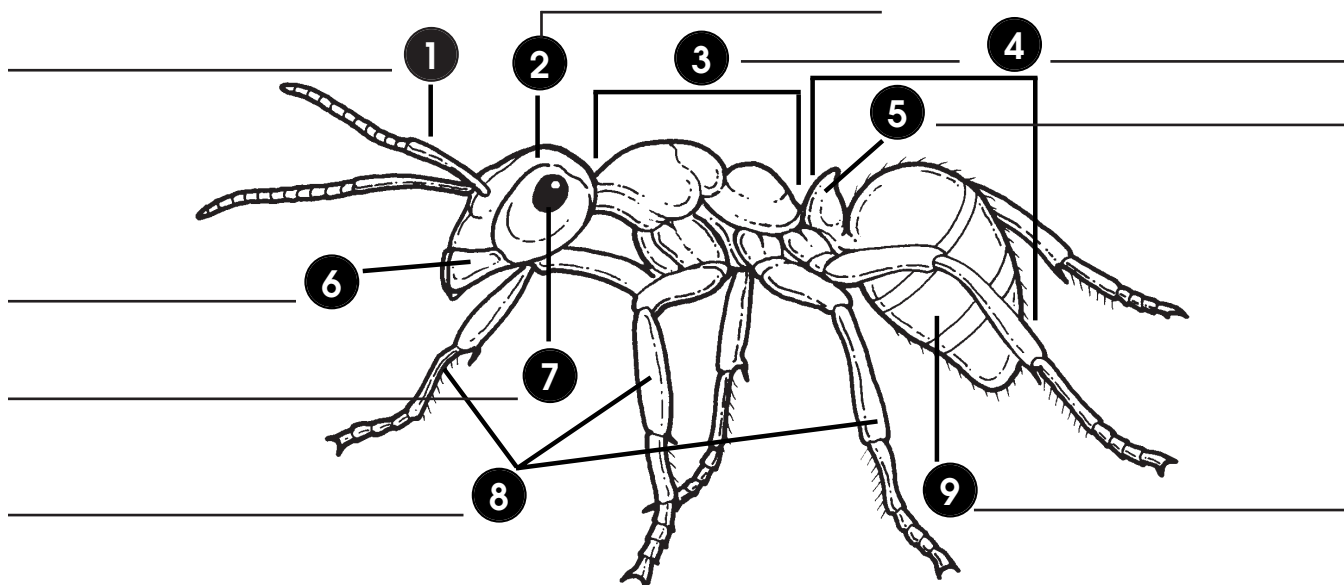


Table Of Contents

Introduction	3
<i>Insects Around the House</i> and <i>Insects in the Garden</i> by D.M. Souza (Carolrhoda Books, Inc., 1991)	5
<i>(Available in Canada from Riverwood Pub; UK: Turnaround; AUS: Stafford Books)</i>	
Summaries — Sample Plan — Overview of Activities — Completion Puzzle — <i>Natural Science Journal</i> Magazine Article — Venn Diagram — Ant Colonies — Ant Anatomy — Beetles — Unscramble — Butterfly/Moth Creations — Planting a Butterfly Garden — Big Brother/Big Sister: Teach Us! — Insect Bingo	
<i>James and the Giant Peach</i> by Roald Dahl (Puffin, 1988)	23
<i>(Available in Canada from Penguin; UK and AUS: Penguin Ltd.)</i>	
Summary — Sample Plan — Overview of Activities — Where’s Everybody? — Scale Drawings — Start Spinning! — Stridulation (Grasshopper Music) — Giants in the Insect World	
Writing	30
Writer’s Workbook — Daily Writing Topics — Making Books: Big, Shape, and Wheel Books	
Across the Curriculum	37
Language Arts:	Word Bank—Crossword Puzzle—Butterfly and Moth Word Search—Homonym “Cents” About Honeybees—The Body of a Grasshopper—Migrating Monarchs—Rain Forest Gardeners—Living Light: Fireflies—Team Writing and the Main Idea
Math:	Insect Computations—Honeycomb Addition—The Long and Short of Insect Measuring—Insect Facts—Plot the Answers: Insects of The Rain Forest—Bar Graph—Shape and Space—Firefly Story Problems
Science:	Scientific Classification—Scientific Classification and Identification Form—Growth of an Insect: The Life Cycle—Controlling Insect Pests—Insect Collecting—Mounting Insect Collections—Collecting Cocoons—A Pond Insect Aquarium—Scientific Crossword Puzzle
Social Studies:	U.S. Map—World Map—Insects in Your Neighborhood—Living Fossils: Dragonflies—The Fact Pyramid Insect Game
Art:	Insect Invention—Insect Crafts
Life Skills:	Careers in Entomology—Thanks, Honey!
Culminating Activity:	73
Metamorphosis Play	
Unit Management:	75
Bulletin Board Ideas — Awards	
Bibliography	77
Answer Key	78

Ant Anatomy



After reading the article below about the ant's anatomy, fill in the blanks above to identify the various parts of an ant.

Like other insects, the ant is covered with a hard covering called an *exoskeleton*. The body is divided into three main parts: the *head*, the *thorax*, and the *abdomen*.

On the head is a pair of *antennae*. They are sense organs that allow ants to touch, taste, smell, feel vibrations, and to communicate with each other. Also on the head are two *compound eyes*, made up of many lenses. Mouthparts include *mandibles*, which are a pair of jaws that move from side to side.

The *thorax* is the middle section of the ant. Its three pairs of legs are attached here. If the ant is an unmated queen or male, it will have wings attached to the thorax also.

The third section is called the *abdomen*. It is made up of the *petiole* (pet'i-ol'), or waist, and the *gaster*, or enlarged part of the abdomen. The petiole connects the thorax to the gaster. It is also known as a *peduncle* or a *pedicel*. An ant's gaster contains the *crop* and the *intestine*. Some ants (like the red ant) have a poison gland in their gasters also. The crop is a liquid-food storage area. The intestine is where the food travels to be used by the ant's body.

Internet Extender

Ant Colony

http://research.amnh.org/entomology/social_insects/ants/ant_colony_cycle.html

Activity Summary: Learn the step-by-step cycle of ants. Begin on this Web page and click on each picture of the cycle in order to enlarge it and see more details.

Frequent Asked Questions About Fire Ants

<http://uts.cc.utexas.edu/~gilbert/research/fireants/faqans.htm#quail>

Summary: Here you will find answers to questions regarding the dangers of fire ants and how to control them. Pictures are sometimes used to illustrate the answers, which are informative and factual rather than sensational.

Firefly Story Problems

Lampyridae

There are 1,500 different kinds of Lampyridae (Lam-PIR-i-dye). That is a special family of beetles that fireflies belong to.

A least half of them appear in the Americas. Of the half that appear in the Americas, eight percent of them are found in the United States alone.

1. How many kinds of fireflies are there? _____
2. How many kinds are in the Americas? _____
3. How many kinds of fireflies are found in the U.S.? _____
4. Write a math number problem that shows how to find the answer to question two. _____

5. Write a number problem for question three. _____

Flash Speeds

A firefly flashed eight times a minute when the temperature was 70 degrees F. When the temperature went to 84 degrees F, it flashed twice as long as it did at 70 degrees F.

1. How many degrees was the temperature change? _____
2. How many times a minute did the firefly flash at 84 degrees F? _____
3. If the pattern remains the same, what will the temperature be at the next increase? _____
4. If it doubles again, how many times a minute will the firefly flash? _____
5. If the patterns remained the same, what would the temperature have been before it went up to 70 degrees F? _____
6. How often would it flash in a minute? _____