A Total Curriculum Guide to Teach Your Child at Home

From the Editors of American Education Publishing

GRADE 6

Learn at Home

Reading, Language Skills, Spelling, Math, Science & Social Studies

A Full School Year of Lesson Plans • Teaching Suggestions • Reproducible Activity Sheets • Full Color

	Language Skills	Spelling	Reading
Monday	Have your child write a review about a fiction book that he/she read recently. *See* Language Skills, Week 28, number 1.	Pretest your child on the following words: authorize hypnotize pasteurize burglarize idolize patronize capsize immunize plagiarize characterize memorize recognize emphasize modernize summarize harmonize organize terrorize Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Introduce this week's reading selection.
Tuesday	**Writing a Narrative:** Teach your child the elements of a narrative. *See* Language Skills, Week 28, number 2. Have your child write a narrative about a personal experience that was enjoyable, funny, frightening or unusual.	Review this week's spelling words. Have your child complete **Organize or Capsize** (p. 282).	**Comprehension:** Discuss the current reading book in a conference. Focus on reading comprehension. Ask pointed questions to test your child's understanding of the text.
Wednesday	Discuss perspective. *Perspective* is the point of view from which a story is told. Review the meaning of first, second and third person. Have your child rewrite the narrative from yesterday in the third person.	Have your child use each of this week's spelling words correctly in a sentence.	With your child, discuss the need to draw conclusions from a text while reading. Give your child a list of facts and conclusions. Have him/her determine which conclusion is correct. *See* Reading, Week 28, numbers 1–3 for examples.
Thursday	Newspaper articles are very often narratives. Discuss the 5 W's of a news article. Provide your child with a list of facts and ask him/her to write a news article about them. *See* Language Skills, Week 28, number 3. Have your child use his/her imagination to fill in details for the facts provided. Have your child write a narrative about the event in the third person.	Have your child study this week's spelling words.	Stress the importance of reading carefully so as not to misinterpret information. Have your child complete **Timely Words** (p. 283).
Friday	Show your child a picture that tells a story. Have your child write four paragraphs about the picture: one descriptive, one persuasive, one narrative and one expository.	Give your child the final spelling test. Have your child record pretest and final test words in his/her word bank.	Hold a conference to discuss the current reading book.

Math	Science	Social Studies
Percents Discuss practical applications of percentages. To find the percentage of a given number, convert the percentage back to a decimal and multiply by the given number. **Example:** Find 20% of 45. 45 x .20 = 9.00 20% of 45 is 9 Have your child complete **Percentages** (p. 284).	**Ecology** With your child, discuss the meaning of the term *ecology*. *See* Science, Week 28. Ecology is the study of the interrelationships of organisms and the environment. Have your child define *environment*. Have your child complete **Enlightening Information** (p. 285).	**Western Hemisphere** Study the regions of North America. *See* Social Studies, Week 28, number 1. Give your child a copy of **North and Central America** (p. 286). Have him/her color-code the political regions of North and Central America and create a key.
Teach your child about savings accounts and earning interest. If your child doesn't have a savings account at a bank, help him/her open one. Write several situational problems related to interest for your child to solve. See Math, Week 28 for sample problems.	Have your child write a description of his/her environment. Since your child may be a part of more than one environment, ask him/her to choose the environment in which he/she spends the most time. What are the *biotic* and *abiotic factors* in your child's environment?	With your child, study a physical map of North America. Ask him/her questions about North America's location, size, regions and land formations. Have your child name lines of latitude and longitude; locate rivers, mountains and oceans; name borders and other features. Give your child a second copy of **North and Central America** (p. 286). Have him/her label at least ten physical features on the map.
Take your child to a store where they are offering 25% or 30% discounts off original prices. Have your child calculate the sale prices of a variety of items. To find the sale price, have your child calculate the discount (e.g., 25% of $32 is $8), then subtract the discount from the original price (e.g., $32 – $8 = $24).	Have your child make a glossary of ecology-related terms in his/her Science Log. *See* Science, Week 28, number 1.	Have your child study the political regions of South America. *See* Social Studies, Week 28, number 2. Give your child a copy of **South America** (p. 287). Have him/her color-code the political regions of South America and create a key.
Your child has already learned how to calculate the percentage of a number. Now, challenge him/her to figure out what percentage one number is to another. **Example:** 5 is ____% of 25 (20%) Give your child several problems like this one to solve.	**Soil:** Introduce your child to the study of *soil*, one of the earth's most important land resources. Collect samples of *clay*, *loam*, *sand* and *humus*. Ask your child to observe each soil sample with a magnifying glass and look for color, smell, texture and components of the soils. Soils may be mixtures of many materials, both inorganic and organic. *See* Science, Week 28, number 2.	With your child, study a physical map of South America. Ask him/her questions about South America's location, size, regions and land formations. Have your child name lines of latitude and longitude; locate rivers, mountains and oceans; name borders and other features. Give your child a second copy of **South America** (p. 287). Have your child label at least ten physical features on the map.
Teach your child to estimate percentages. This has its most practical applications when estimating sales tax or the appropriate amount to tip. Think in terms of 10% when estimating. Finding 10% is easy—simply move the decimal point to the left one place. Estimate other percentages by thinking about how they relate to 10%. For example, 10% of $15.29 is about $1.50, so 20% would be about $3.00.	Help your child compose a letter to a state or local soil conservation service, requesting information about the soils of your state or area.	Arrange for your child to perform a community service. Have your child write in his/her Social Studies Journal.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Writing a Narrative)

1. Show your child examples of book reviews from newspapers or magazines. Most book reviews include a summary of the plot (characters, setting, problem), as well as opinions and recommendations. The reviewer points out what is most interesting or least enjoyable about a book. The reviewer may try to persuade others to read (or not to read) the book.
2. A narrative tells about an event or experience. The narrative gives usually covers details in the order in which they occurred.
3. Provide your child with facts about a news event (real or imagined). Here is a list of facts related to one event. Use these facts or make up your own.

Who: Mr. Dakota Rainier	What: killed a fly with his garlic breath
Where: Gilroy, California	When: on Labor Day
Why: unintentional	How: ate 5 whole loaves of garlic bread

READING (Comprehension)

Give your child a list of facts and conclusions like those listed here. Ask him/her to check the correct conclusion, then write another plausible conclusion for each fact.

1. Only one person is known to have even been hit by a meteorite.
   Meteorites usually fall in forests, lakes or hills.
   The chances of being hit by a meteorite are almost zero.
2. A "jiffy" is defined as one hundred thousand billion billionths of a second.
   A jiffy is an incredibly short period of time.
   A jiffy is enough time for a quick phone call.
3. Killer bees have been responsible for killing almost three hundred people in Brazil since 1957.
   Killer bees are especially threatening to people in Brazil.
   Killer bees pose a worldwide threat to people.

MATH (Percents)

1. Samantha deposited $12.35 into her savings account. She earns 8% interest monthly.
   Figure how much Samantha would earn in interest at the end of one month.
   What would her savings balance be at the beginning of her second month?
2. Jeremy decided he would borrow $225.00 for a new mountain bike. His interest rate on the 3-year loan was 18% per year. How much would he pay in interest for this loan?

SCIENCE (Ecology/Soil)

BACKGROUND

Ecology is an area of worldwide concern, as we struggle to protect our water, air, animals and plants. Since ecology encompasses a wide range of topics, you may wish to focus your study on one or two areas of special interest. Find out what your child is most interested in—endangered plants and animals, conservation, communities in nature (forest communities, ocean communities, desert communities, grassland communities), ground water supply, rainforests, pollution, recycling—and concentrate your lessons on those topics.

1. Add ecology terms to the weekly spelling lists. Have your child add a glossary of ecology terms to his/her Science Log, using the following words to get started. Encourage your child to add new words as he/she encounters them in your study of ecology.

population	acid rain	endangered	habitat
pollution	interdependent	biodiversity	environment
ecology	litter	toxic	soil
community	extinct	nutrients	biotic
crop rotation	forest management	organic farming	waste management
ecosystem	greenhouse effect	pesticide	wildlife reserve

2. Have your child refer to resources to answer some of the following questions about soil.

What is soil?
What is topsoil?
Why is soil important to all organisms?
Which sample seems richest in organic material?
Which sample seems to be the heaviest?
Which sample seems to be the lightest?
Which sample has the smallest particles?
Which sample has the largest particles?
What is the value of a mixture of soils?
Which soil would be found in a garden?
Which soil would be found on a beach?
Which soil would make a good foundation for a house?

SOCIAL STUDIES (Western Hemisphere)

1. North America may be subdivided in a number of different ways. It may be divided into *Anglo-America* and *Latin America*. Some divide the continent agriculturally (the *Corn Belt*, the *Columbia Basin*, the *Wheat Region*). Some may divide the continent into the *North*, *New England*, the *Gulf* and the *Pacific*. The political divisions include Canada, United States, Mexico, Central America and the Caribbean Islands.

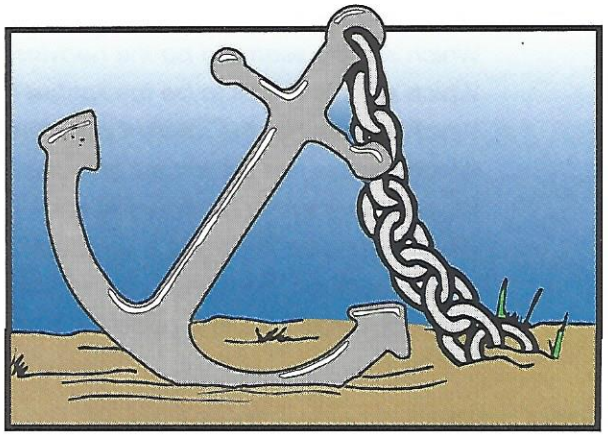
2. South America is divided into twelve countries and two dependencies. There are three major land regions: the *Andes Mountains*, the *Central Plains* and the *Eastern Highlands*. The continent of South America forms part of Latin America which includes Mexico, Central America and the West Indies.

Organize or Capsize

Put the spelling words in alphabetical order in the lifeboats before the ship capsizes.

idolize
patronize
immunize
organize
summarize
capsize
plagiarize
recognize
burglarize
hypnotize
memorize
emphasize
pasteurize
modernize
harmonize
terrorize
authorize
characterize

1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____

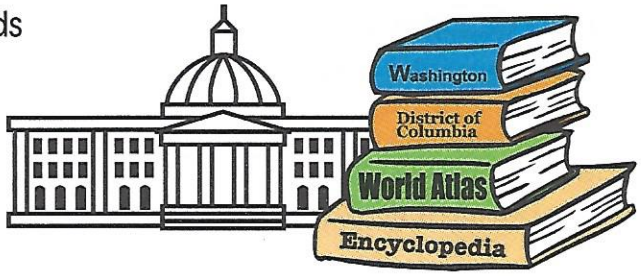


7. _____ 8. _____
9. _____ 10. _____
11. _____ 12. _____

13. _____ 14. _____
15. _____ 16. _____
17. _____ 18. _____

Timely Words

Read each sentence. **Circle** the two words that tell when something happens. **Write** each circled word on the correct line to show which word would come before or after the other word in time.



1. Mike hopes to someday visit Washington D.C., but meanwhile he reads books about the capital city.
   before _____ **after** _____
2. Some of the tourists left immediately for the airport while others planned to leave later in the day.
   before _____ **after** _____
3. Although John has put off mowing the yard for now, he knows he must eventually get it done.
   before _____ **after** _____
4. Kim said she would have arrived sooner, but she waited for a phone call that finally came.
   before _____ **after** _____
5. Tom wanted to appear earlier in the play, but his character did not appear until the last scene.
   before _____ **after** _____
6. The photographer said that Sally would have her picture taken first, but that Kevin would be next.
   before _____ **after** _____

Circle the word that would come before the other word. Use the circled word in a sentence.

1. immediately - later: _____

_____

2. earlier - last: _____

_____

Percentages

Sally and Gabriel wrote percentage problems for extra credit. Once you have solved their problems, make up some of your own on another sheet of paper.

1. There were 400 students in the school. If 38% of the students were boys, how many boys were there? _____

2. Out of the 345 sheets of construction paper in Mrs. Rainbow's class, 20% were red and 40% were blue. How many sheets were red? _____
   How many sheets were blue? _____

3. Only 19% of the 400 students ate the cafeteria food on Monday. How many students purchased cafeteria food Monday? _____

4. 25% of 76 band members can play a clarinet.
   How many can play a clarinet? _____

5. 35 trees were planted around the school. 60% were maples. How many of the trees planted were maple? _____

6. The local pizza parlor gave the eighth-grade class a 25% discount on pizzas they purchased to sell at the football game. Each pizza originally cost $12.00.
   How much did the eighth graders pay per pizza? _____
   If they purchased 12 pizzas, how much did they save together? _____

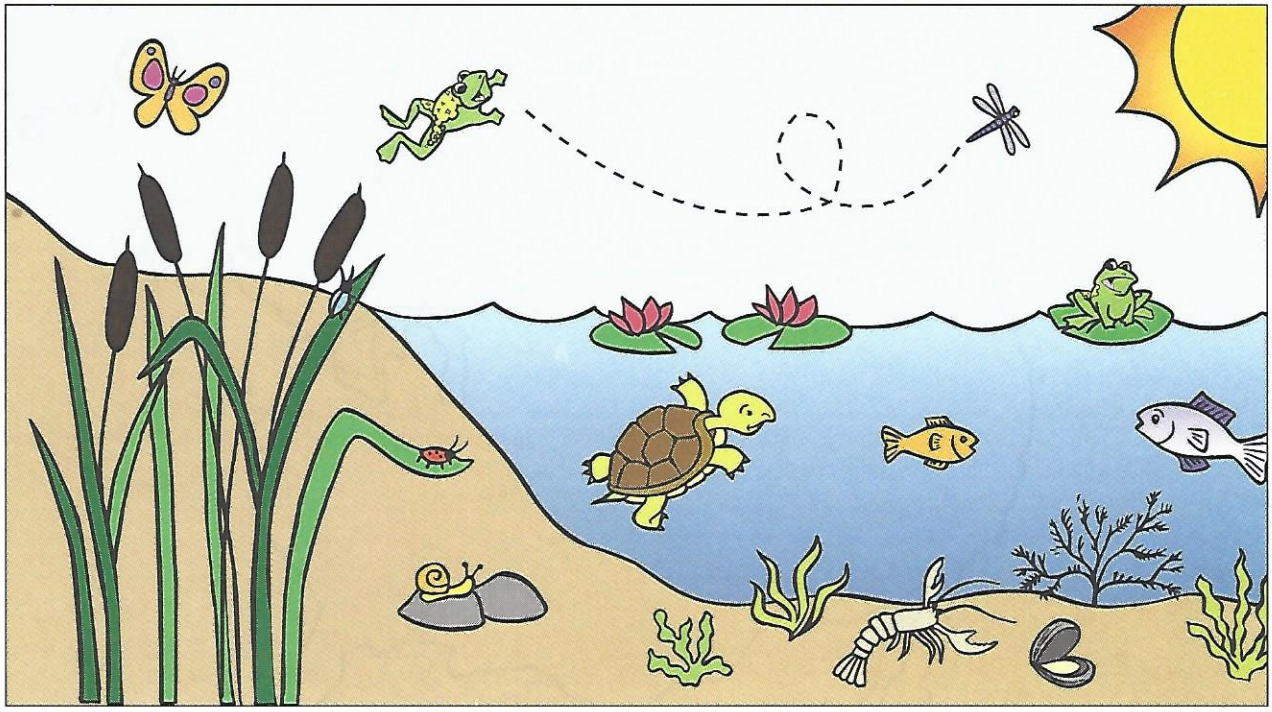
7. They saw these signs at the sports shop nearby. Figure each sale price.

_____ _____ _____

Enlightening Information

An **environment** includes all living and nonliving things with which an organism interacts. These living and nonliving things are **interdependent**, that is, they depend on one another. The living things in an environment (plants, animals) are called **biotic factors**, and the nonliving things (soil, light, temperature) are called **abiotic factors**. **Ecology** is the study of the relationships and interactions of living things with one another and their environment.

Living things inhabit many different environments. A group of organisms living and interacting with each other in their nonliving environment is called an **ecosystem**. The different organisms that live together in an ecosystem are called a **community**. Within a community, each kind of living thing (i.e., frogs) makes up a **population**.



Study the picture. Follow the directions.

1. Label two biotic factors and two abiotic factors in the picture.
2. Explain the relationships among the living things in the pictured environment.
3. Label the type of ecosystem pictured.
4. Circle all the members of the community.
5. Explain how the organisms in this environment are dependent upon one another.
6. List the different kinds of populations that live in the environment.

North and Central America

South America

	Language Skills	Spelling	Reading
Monday	**Story Elements** The setting of a story is often established from the outset. Many times the setting is indirectly described by clues given here and there. Read the beginning paragraphs of a novel until your child can describe the setting. Discuss the words and images that communicated the setting.	Pretest your child on the following words: archery, celery, cemetery, drapery, embroidery, fiery, greenery, grocery, hatchery, machinery, misery, mockery, refinery, robbery, slippery, stationery, surgery, trickery Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Introduce this week's reading selection or continue with the book from last week.
Tuesday	Read sentences aloud to your child. Have your child describe the setting in each. Discuss the key words and phrases that helped your child determine the setting. Then, have your child write a paragraph about one of those settings. *See* Language Skills, Week 29, number 1.	Review this week's spelling words. Have your child complete **Cemetery Epitaphs** (p. 292).	Discuss the current reading book in a conference. Focus on descriptive passages.
Wednesday	The characters in a story are usually established early on. The author generally introduces much more than just the characters' names, including what they look like and how they act. *See* Language Skills, Week 29, number 2.	Have your child use each of this week's spelling words correctly in a sentence.	**Character Analysis:** Ask your child to compare the characters and setting in this week's book to the characters and setting in a similar book. Have your child make a chart listing the similarities and differences.
Thursday	Write the following character descriptions across the top of the chalkboard: *monster, young child, old man, clown.* Under each character named, have your child list words and actions to help develop the character. Then, have your child write a paragraph about one of the characters, using the details listed.	Have your child study this week's spelling words.	Have your child imagine, then write, a conversation with a character from the current reading book.
Friday	Discuss the plot of a story. *See* Language Skills, Week 29, number 3.	Give your child the final spelling test. Have your child record pretest and final test words in his/her word bank.	Hold a reading conference to evaluate the choices made in the book. Discuss whether the characters made wise choices. Did the author make wise choices?

Math	Science	Social Studies
Percents Have your child solve situational problems with mixed operations and percents. *See* Math, Week 29, number 1.	**Soil** Have your child collect soil samples from three different locations. Have him/her put the samples in plastic bags, label each with the date and location and bring them inside to study. *See* Science, Week 29, number 1.	With your child, define and discuss the meaning of *climate*. Have your child read about the climates of North America, Central America and South America in an encyclopedia. Have your child compare a location in North America, with a location in South and Central America. Have the child indicate on a map where all three places are located, then describe the three places and their climates.
Banks sometimes offer *compound interest* on a savings account. With compound interest, the interest earned in one period is added to the principal for the next period. Ask your child to imagine that he/she put $200 in a savings account that earns 5% interest compounded yearly. Have your child make a chart and calculate how much he/she will earn over 10 years if he/she does not add to the principal.	Introduce the concept of *soil management*. Discuss and describe the attributes of healthy soil. *See* Science, Week 29, number 2. Have your child read about *composting* as a way to create richer soil. Help your child start a compost pile near your home. *See* Science, Week 29, number 3.	**Canada:** Have your child describe the physical borders and exact location of Canada. Encourage your child to use names of oceans, lines of latitude and longitude, measurements and proximity to other landmarks to describe its location. *See* Social Studies, Week 29 for background information on this unit of study.
Discuss the difference between similar figures and congruent figures. *Similar figures* are same in shape but different in size. *Congruent figures* are identical in both shape and size. *See* Math, Week 29, number 2. Have your child make a design made of similar and congruent figures. Have your child draw each figure carefully. Encourage your child to be creative.	Have your child read about the Dust Bowl of the Great Plains states. *See* Science, Week 29, number 4. Have your child write a story about living conditions in the Dust Bowl.	Give your child a copy of **Canada** (p. 293). Have your child label the map with the names of Canada's provinces and territories, along with their capitals. Then, have him/her label the important rivers and bodies of water that lie in and around Canada. *See* Social Studies, Week 29, number 1.
Have your child locate lines of symmetry on a variety of shapes. A *line of symmetry* divides a figure into two parts that are exactly the same or congruent. Some figures may have more than one line of symmetry, while others have none.	**Biomes:** Have your child read about the *rainforest* biome. Give your child an atlas or globe to locate rainforests throughout the world. What kinds of plants and animals are found there? Discuss the type of soil found in the rainforest. How is it different from the soil found in your area? Help your child conduct a simple experiment with soil. *See* Science, Week 29, number 5.	Give your child a second copy of **Canada** (p. 293). Have him/her color-code the map to show the major land regions and create a key. *See* Social Studies, Week 29, number 2. Then, have your child label at least ten physical features.
Use today to review any material your child finds difficult or for your child to complete unfinished work.	Have your child read about the *temperate forest* biome. What plants and animals are found there? Where are the world's temperate forests located?	Arrange for your child to perform a community service. Have your child write in his/her Social Studies Journal.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Story Elements)

1. Read aloud the following sentences. Have your child describe the setting of each.

   The dog wagged his tail as he cleaned the crumbs from under the table.

   Sally wrapped herself in another blanket and continued to watch the scary movie alone in the dark.

   The town clock chimed eleven times. The band began to play and lead a parade welcoming the hero home.

   Have your child select one of the above settings and write a paragraph about it. Your child should describe what the place looked like, what sounds could be heard and how the character felt.

2. An author needs to develop characters so they are believable—even in make-believe stories. Read aloud the two descriptions of Penny that follow. Ask your child which paragraph gives a clearer image of the character.

   Penny was baby-sitting for the Johnsons' little girl, Lori, for the first time. Penny looked friendly. Lori brought out her dolls and began to play on the floor next to Penny.

   Penny arrived early at the Johnsons' because it was her first time baby-sitting for their little girl, Lori. She wanted to get to know Lori a little before the Johnsons left for the evening. Five-year-old Lori looked at Penny carefully. Penny was smiling at her. Penny's long hair was pulled back in a pony tail with a pink ribbon, and her smile seemed to make even her freckles sparkle. Lori asked Penny to play dolls with her.

   Discuss why the second paragraph creates a clearer image of Penny. Developing a character involves creating a feeling of what sort of person the character is. Adjectives are not the only way to describe a person. A picture of a character may also be developed through his/her actions.

3. The plot of a story involves characters who interact and try to solve a problem. Have your child read each of the problems below and tell one way each might be solved.

   The sixth-graders were riding the bus on their way home from a field trip to Chicago. Suddenly, they heard a loud noise, and the driver brought the bus to a stop. The driver stepped out of the bus for a minute. When she returned, she announced to the students that the bus had a flat tire.

   Daryl's new puppy loved to chew. Daryl bought her bones and chew toys, but the puppy only liked to chew shoes—Dad's shoes!

   Holly and Tad were sailing their little boat close to shore when a strong wind came up suddenly. Everyone on the beach saw their boat turn over.

MATH (Percents)

1. Have your child solve the following situational problems.
   a. A waitress served three tables with total bills of $62.90, $38.45 and $24.85. If each table left a 15% tip, how much in tips will the waitress earn? What is the average tip?
   b. Another waiter served dinner to two parties. The first party had a bill of $382.50. The second party had a bill of half that amount. If each group left a 15% tip, how much did the waiter earn?
   c. At one table of 12 diners, 5 people ordered the shrimp dinner at $12.95 each. Four people ordered the lasagna at $9.95 each. Three people ordered chicken for $8.50 each. What was the total bill (do not apply taxes)? What tip should they leave?

2. The angles of similar figures are identical, and their sides are proportional in length. If you compare the lengths of the similar sides of the two figures, each pair of similar sides will have the same ratio. The angles and sides of congruent figures are identical.

SCIENCE (Soil/Biomes)

1. Have your child spread each soil sample on a separate sheet of white paper to examine with a magnifying glass. Have your child note his/her findings, then return the samples to the plastic bags. Next, have your child

weigh each soil sample, recording the date and weight of each. Instruct your child to leave each bag open for a few days, then weigh each sample again. Is there a difference in weight? Why?

2. Sometimes soil must be managed to keep it healthy for supporting living organisms. Farmers who plant in the same soil year after year are in danger of robbing their soil of nutrients. Experts in *soil management* instruct farmers in techniques for improving the quality of soil. Have your child read about soil nutrients, crop rotation, irrigation and the use of pesticides. Discuss the concept of organic gardening or farming.

3. To start a compost pile, you need a little bedding of leaves and grass clippings in a partly sunny location. Add food waste in small amounts and stir into the bedding. Too much food waste can start to smell or attract unwanted animals. Have your child keep a journal of the dates and types of materials added to the compost. Add water periodically if the compost is too dry. When the food waste has decomposed and the compost looks like rich, black dirt, add the natural fertilizer to a garden plot or potted plants.

4. In the 1930s, wind storms blew away the topsoil in the southern Great Plains. The topsoil had become loose and dry because the native grasslands had been overgrazed and replaced with wheatlands. Wheat did not protect the ground against wind. A drought in the early 1930s only increased the destructive power of the strong winds. Eventually, the topsoil was blown away, and new crops could not be grown. The barren land eroded further and dust storms drove people from the land.

5. The floor of a rainforest is covered with fallen leaves. But beneath that layer of leaves lies a very unusual soil. Rainforest soil is formed when rainwater breaks down rocks. The soil in the rainforest is many yards thick and made mostly of clay and a sticky material that resists erosion. Many of the nutrients, however, have been washed away by rains, leaving much of the rainforest soil infertile.

   Help your child conduct a simple experiment to explore how different types of soil are affected by water.

   You will need: 1/2 cup each of three types of soil (clay, sand and topsoil), three plastic sandwich bags, three 10-oz. plastic cups, rubber bands, toothpicks, a measuring cup, masking tape and water

   Directions:

   a. Put the soils in a warm dry place. Let them dry overnight.
   b. Use a toothpick to make ten small holes in the bottom of each plastic bag.
   c. Put each soil in a separate plastic bag.
   d. Set each bag in a plastic cup, folding the top of the bag over the edge of the cup. Hold the bags in place with rubber bands. Label the cups by type of soil.
   e. Predict: What do you think will happen when you add water to each soil?
   f. Pour 1/2 cup of water into each bag. Wait 15 minutes. Answer the following questions.
      1) Which soil held the most water?
      2) How is that soil different from the others?
      3) What can you tell about rainforest soil?

SOCIAL STUDIES (Canada)

BACKGROUND

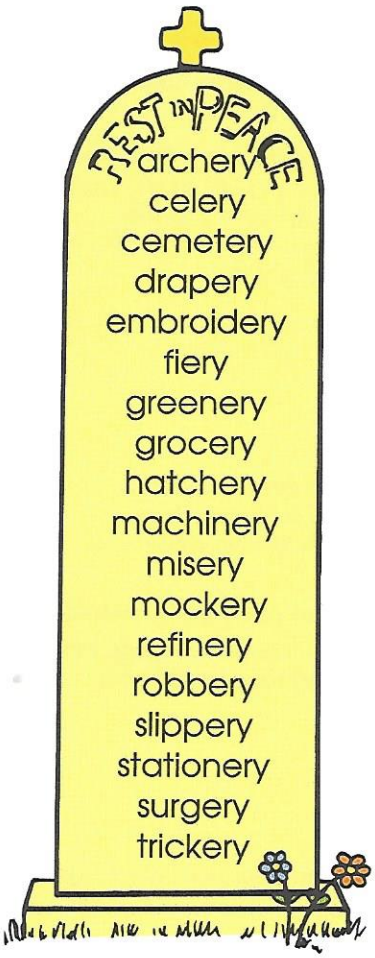
For the remainder of the year, your child will study individual countries in North America, Central America and South America. Help your child gather resources for research activities, including nonfiction books, encyclopedias, an atlas, primary sources, videos, newspapers and magazines. Activities are suggested in the lesson plans, but you may choose to have your child do a more in-depth study of a few states, provinces or countries.

1. Have your child label the bodies of water that surround Canada, as well as the major bodies of water found within its borders: the Great Lakes, St. Lawrence River, Hudson Bay, Nelson River, Lake Winnipeg, Mackenzie River, Great Bear Lake, Great Slave Lake, Columbia River, Yukon River, Fraser River.

2. Canada has eight major land regions: the Pacific Ranges and Lowlands, the Rocky Mountains, the Arctic Islands, the Interior Plains, the Canadian Shield, the Hudson Bay Lowlands, the St. Lawrence Lowlands and the Appalachian Region.

Cemetery Epitaphs

Use a spelling word to complete each word group.



1. graveyard, burial place, _____
2. industrial, purifier, _____
3. operation, medical procedure, _____
4. slick, shifting, _____
5. blazing, glowing, _____
6. stalk, vegetable, _____
7. theft, stealing, _____
8. curtains, covering, _____
9. pain, sorrow, _____
10. handiwork, sewing, _____
11. grass, plants, _____
12. notepad, envelopes, _____
13. bow shooting, sport, _____
14. engines, power tools, _____
15. insult, false appearance _____
16. prank, joke, _____
17. foodstuffs, store, _____
18. incubator, brooder, _____

Write an epitaph (a tombstone inscription) for a tombstone you might find in a cemetery. The epitaph may be wacky, creepy or sentimental. Try to use several words from the list.

Example: Here lies George who ate too much celery. He simply couldn't resist any kind of greenery, and the surgery didn't help. I am sad to say that he died in misery.

Canada

	Language Skills	Spelling	Reading
Monday	**Story Elements** Have your child use part of the **Story Organizer** (p. 19) to plan a story before writing it. Have your child map out the setting, characters, problem, events and solution to the story. Once your child has decided on these elements, think of five related vocabulary words. Write these words on the activity sheet for your child to define. Have your child write the story.	Pretest your child on the following words: amplify, beautify, certify, clarify, dignify, falsify, fortify, glorify, horrify, identify, justify, magnify, notify, qualify, rectify, simplify, solidify, verify Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Introduce this week's reading selection. Suggestion: *The Sign of the Beaver* by Elizabeth George Speare.
Tuesday	A *narrative story* is like a narrative paragraph, only longer. A narrative story is made up of a series of paragraphs that tell about a sequence of events in order. A story is generally narrated in the first or third person. Show your child an interesting picture from a magazine or book. Have him/her imagine a story based on the picture, then tell the story in writing.	Review this week's spelling words. Have your child complete **Magnify the Situation** (p. 298).	Discuss the current reading book in a conference. Focus on the meaning of the book's title.
Wednesday	Encourage your child to include conversation in a story to make it more realistic. Review the proper use of quotation marks. *See* Language Skills, Week 30, number 1. Have your child write a sequel to yesterday's story (using the same characters but a different problem) that includes passages of dialogue.	Have your child use each of this week's spelling words correctly in a sentence.	**Mood:** Discuss *mood* (or tone) as an element of a story. An author can establish a mood through sensory images and the use of symbolism. A story's mood may be dark, light, funny, happy, sad, adventurous or mysterious. Find passages that set a specific mood. Have your child read the passages, define the mood and discuss the words that help establish that mood.
Thursday	Discuss the meaning of the term *composition*. Compare it to a narrative. *See* Language Skills, Week 30, number 2.	Have your child study this week's spelling words.	Have your child choose a mood for a story, then list words that would help establish that mood. Repeat with other moods. Then, have your child choose one of the moods and use the list of related words to write a paragraph. Encourage your child to choose his/her words carefully when writing the paragraph.
Friday	Have your child write a composition on a familiar topic.	Give your child the final spelling test. Have your child record pretest and final test words in his/her word bank.	Hold a reading conference. Discuss how to find the meaning of new words by looking for clues in context. Have your child complete **The Sign of the Beaver** (p. 299).

Math	Science	Social Studies
Proportion Teach your child how to determine if two ratios are equivalent. *Equivalent ratios* are in *proportion*. *See* Math, Week 30, number 1. Have your child complete **Sam the Squirrel** (p. 300).	**Biomes** A forest is a rich resource for plants, animals and humans. Discuss the many benefits of forests to different kinds of organisms. *See* Science, Week 30, number 1. Have your child complete **From Field to Forest** (p. 302).	**Canada** Have your child read about and look at maps of plant and animal life in Canada. *See* Social Studies, Week 30, number 1.
Give your child a proportion with a missing value. Teach your child to find the value of an unknown variable using cross products. *See* Math, Week 30, number 2. Have your child complete **Proportions** (p. 301).	With your child, discuss the abundance of life that can be found on a rotting log in a forest. Have your child complete **Life on a Rotting Log** (p. 303).	Have your child read about Canadian history (including French and English involvement) up to the time of the American Revolution. Have your child complete an activity related to the history of Canada. *See* Social Studies, Week 30, numbers 2–4. Have your child complete **Speaking Canadian** (p. 304).
Using graph paper, draw a geometric shape whose sides are all a whole number of units in length. Have your child calculate the perimeter and area of the shape. Then, have your child draw a similar figure with a given ratio. **Example:** *Draw a rectangle that is one-fourth the size of the original.* Repeat with several other shapes and proportions. *See* Math, Week 30, number 3.	Have your child read about the *grassland* biome. What plants and animals are found there? What is the difference between a *steppe* and a *prairie*? Have your child draw a prairie food web. Ask your child to write a paragraph explaining what would happen to the other plants and animals if there were a decrease in the population of one plant or animal.	With your child, discuss Canada's population. About 75% of the Canadian population lives near the border between Canada and the U.S. About 77% of the population resides in urban areas. Have your child complete **Which Is Which?** (p. 305).
Find a simple object in the room. Ask your child to measure the object carefully and draw a scale model of the object. Have your child make a scale to accompany the drawing that tells the relative size of the object.	Discuss the impact of new housing and city developments on animal and plant habitats. Introduce the term *wetlands*. *See* Science, Week 30, number 2. Have your child read "The Great Debate." *See* Science, Week 30, number 3. Ask your child to make two lists of arguments—one for and one against the building of the new Riverton Ball Park.	Canada is rich in natural resources. Have your child read about important Canadian resources and industries. *See* Social Studies, Week 30, number 5. Have your child write a brief report on one Canadian province or territory. *See* Social Studies, Week 30, number 6.
Teach your child to determine actual distances represented on a map by using the scale that accompanies the map.	Have your child read about the *freshwater pond* biome. What plants and animals are found there? Have your child make a list of animals that live on the surface of the pond, those that live mid-depth and a those that live on the bottom of the pond. Have your child study a drop of pond water under a microscope and identify what he/she sees.	Arrange for your child to perform a community service. Have your child write in his/her Social Studies Journal.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Story Elements)

1. Use quotation marks only around the exact words that a character speaks. Use a comma to separate the quotation from the speaker.

   Examples: Mom said, "Thank you for your help."
   "You are welcome," replied Gary.

   Each time a new person talks, indent and begin a new paragraph.

2. Planning a composition is similar to planning a story. The paragraphs in a composition work together to develop or explain an idea rather than a plot. Follow these steps before writing a composition:

   a. Choose a topic (a trip, cars, sports, music, friends, plants, a building, animals, food, movies).

   b. Narrow the topic so it can be covered in five or six paragraphs. For example, if *plants* were the topic, narrow it down to a specific type of plant, its living conditions or its uses

   c. Brainstorm details about the narrowed topic.

   d. Group the details into categories. Label the main idea for each group of details.

   e. Write the composition: write an introductory paragraph, middle paragraphs and a final paragraph. The topic sentence for the introductory paragraph should state the main idea of the composition; each topic sentence for the middle paragraphs should state the main idea for one group of details.

MATH (Proportion)

1. Use equal ratios or cross products to test for proportion. In a proportion, cross products are equal.

   Equal Ratios

   $\frac{8}{10} \ (\div 2) \ \frac{4}{5}$
   $\frac{8}{10} \ (\div 2) \ \frac{4}{5}$

   Cross Products

   $\frac{8}{10} \times \frac{4}{5}$ $\quad 8 \times 5 = 10 \times 4$

2. Use cross multiplication to solve for an unknown value in a proportion or set of equal ratios.

   Example:

   $\frac{6}{8} = \frac{12}{r}$

   $12 \times 8 = 96$
   So $6r = 96$
   $r = 16$

3. A scale is the ratio between a reproduction and the actual. Scales are commonly seen on maps and models. Usually a scale gives the copy's measurement first, then the actual, as in 1 inch = 5 miles. In this case, every inch represents 5 miles.

   To practice using scales, draw a simple figure on a sheet of graph paper. Then, decide on an appropriate scale, such as 1 square to 3 squares. Have your child use this scale to draw a larger version of the original figure. For every 1 square on the original, use 3 squares to draw the copy.

SCIENCE (Biomes)

1. Forests are homes to many plants and animals; they provide them with food and shelter. Forests are also important resources for humans. Many everyday products come from the forest, including paper and maple syrup. Forests also provide beautiful places for nature walks and can even help prevent flooding. Have your child read about these and the many other benefits of forests to humans.

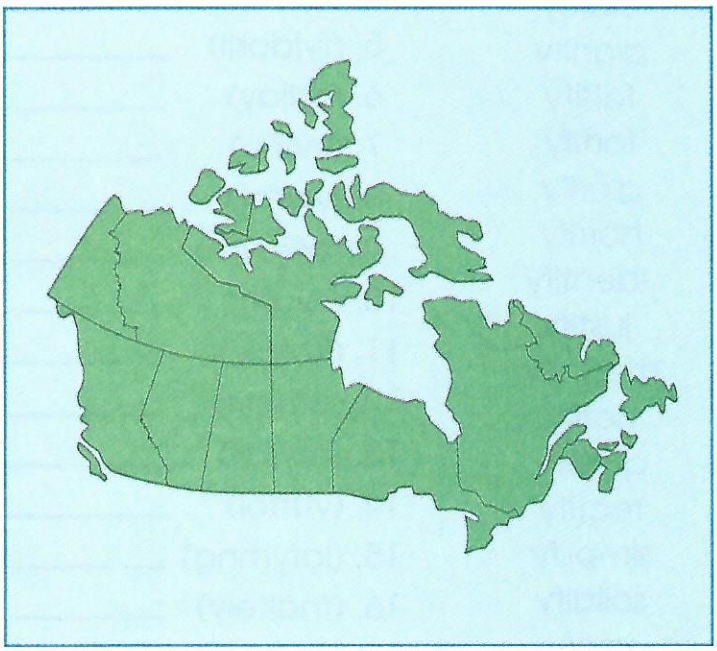
2. When new developments such as parks, zoos, shopping centers, schools, highways, golf courses, amusement parks, landfills and housing are proposed for a city, a planning board or commission must review the plans and environmental issues before granting rezoning or building permits. Citizens of the city may appear at meetings to take part in the discussions and decisions. One major concern in this country is the draining and use of wetlands for expansion of farms, highways and housing developments. Some people view wetlands as useless swamps. Environmentalists try to educate people about the value of wetlands. Wetlands provide

homes for many plants and animals. They also act like a sponge to protect areas from flooding. Have your child read about the other values of wetlands. What kinds of plants and animals inhabit wetlands?

3. **The Great Debate**
Downtown Riverton neighbors 300 acres of wetlands. This area of marshes and ponds is home to hundreds of species of plants and animals. A group of citizens from the city of Riverton wants to build a new baseball stadium on this land. Riverton has never had a professional baseball team, nor has it ever had any professional sports teams. Riverton is a large city of almost 750,000 people, and marshes are the only open land available near downtown. Some citizens would like to save the wetlands and build the ball park elsewhere, possibly in the suburbs. What do you think? What do you want to happen to the wetlands?

SOCIAL STUDIES (Canada)

1. Have your child make an alphabetical list of Canada's varied plant and animal life. After each entry, have your child list one fact about the particular plant or animal. Ask your child to draw pictures of the plants and animals where they can be found on the map **Canada** (p. 293).



2. Have your child make a time line of Canadian history beginning in 1497. Ask your child to include the names of explorers, settlements and events that involved the British and French in Canada up to the time of the American Revolution.
3. Have your child draw a picture of a native Canadian trading with a Frenchman.
4. Have your child list reasons for French/English rivalry.
5. Canada leads in the production of newsprint, and it ranks as a leader in the production of hydroelectric power. Other important industries and resources are listed below.

Agriculture: beef cattle, canola, chickens, eggs, hogs, milk and wheat

Fishing: cod, lobster and salmon

Forestry: fir, pine and spruce

Manufacturing: aluminum, chemicals, electrical equipment, fabricated metal products, food products, motor vehicles and parts, paper products, petroleum products, steel and wood products

Mining: coal, copper, gold, iron ore, natural gas, petroleum, uranium and zinc

Exports: fish, metals, natural gas, newsprint, petroleum, wheat and wood

6. Have your child include the following information in his/her report:

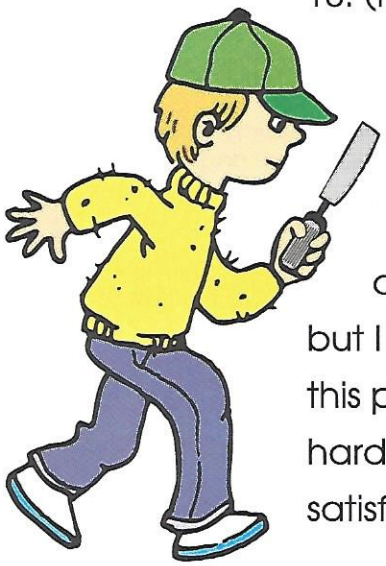
- capital
- area
- bordering provinces/territories/U.S. states
- interesting places to visit
- brief history
- population
- natural resources
- chief agricultural products
- major industries
- map

Magnify the Situation

Unscramble the letters to find the spelling word (verb) that goes with each clue (direct object). The first one has been done for you.

amplify
beautify
certify
clarify
dignify
falsify
fortify
glorify
horrify
identify
justify
magnify
notify
qualify
rectify
simplify
solidify
verify

	verb	direct object
1. (piifmyls)	simplify	the problem
2. (abyfieut)	_____	a city park
3. (ulyfaiq)	_____	your answer
4. (iyrfroh)	_____	your teacher
5. (fyidosli)	_____	the liquid
6. (ffsliay)	_____	the document
7. (yvfrie)	_____	your identiity
8. (ynifot)	_____	the authorities
9. (pfliaym)	_____	the sound
10. (ifyustj)	_____	your actions
11. (lrofgiy)	_____	a hero
12. (cfteryi)	_____	the situation
13. (cfyrail)	_____	your question
14. (yfftroi)	_____	the walls
15. (iafymng)	_____	the cells
16. (fnditeiy)	_____	the criminal
17. (ngifydi)	_____	the procedure
18. (itrecyf)	_____	the check



My name is Sam Sneed. It is my job to clarify the evidence,verify the facts, indentify the murderer, and notify the authorities. I do not intend to glorify but I am the best in my field. In order to qualify for this position I had to study very hard for many years. All the hard work paid off. I am now certified and have a very satisfying position as a _____.

The Sign of the Beaver

Read the following sentences. Based on context, write a definition for each **bold** word. Then, look up the definitions and **circle** yes if you were correct. If you were not correct, change your answer.

1. ". . . when his rage died down, that he felt a **prickle** of fear."
   Prickle means _____ yes

2. ". . . he saw the sunlight glinted through the **chinks** on the roof."
   Chinks means _____ yes

3. " . . . but he thought he'd rather have the **pesky** insects himself."
   Pesky means _____ yes

4. "Matt sat **pondering** the strange idea."
   Pondering means _____ yes

5. "He strutted and pranced in ridiculous **contortions** . . ."
   Contortions means _____ yes

6. "Now **wampum** no good to pay for gun."
   Wampum means _____ yes

7. "**Warily**, he made his way through the brush."
   Warily means _____ yes

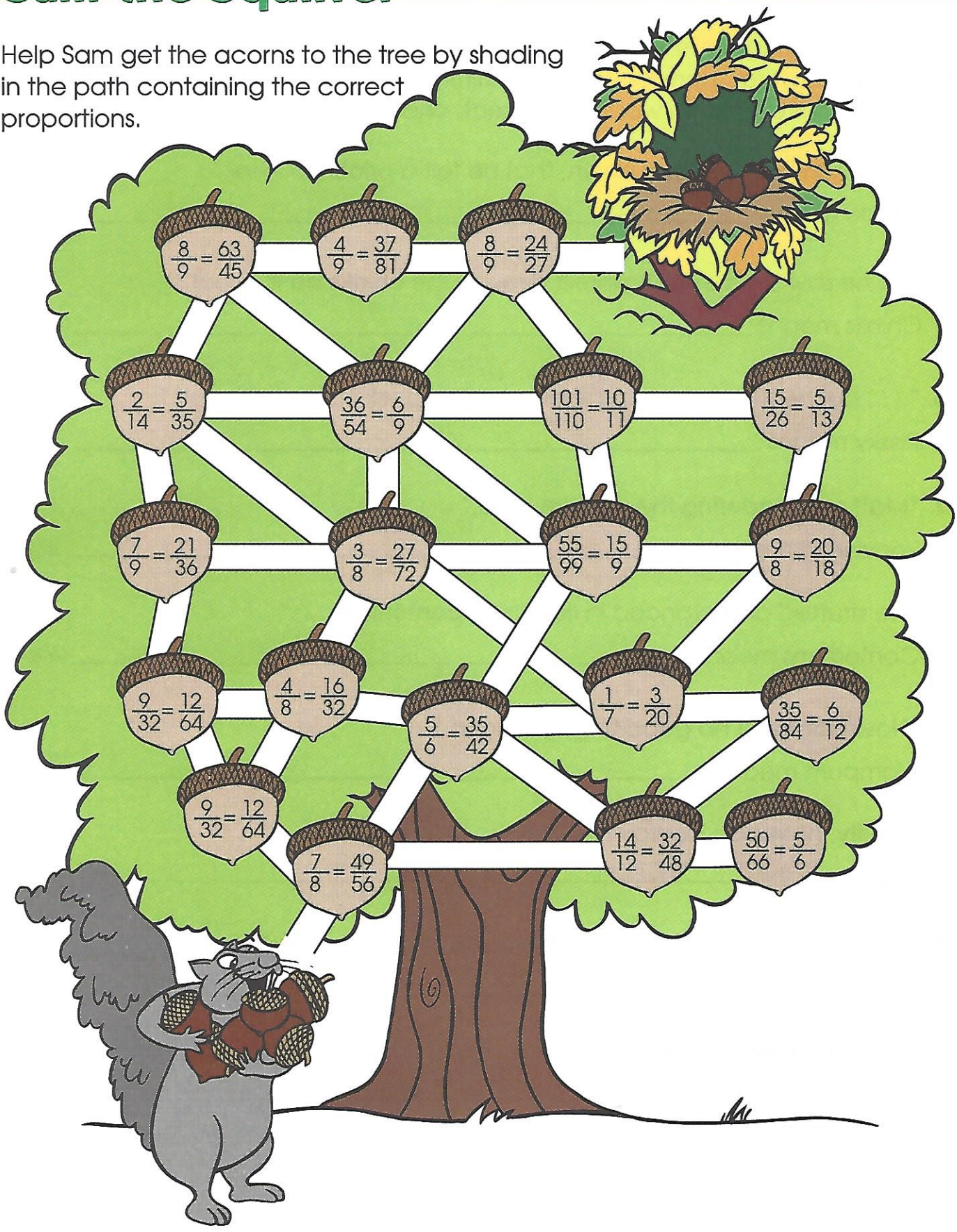
8. "The brown eyes looked up at the Indian boy with **admiration**."
   Admiration means _____ yes

9. " . . . they **wielded** their bats with no heed to each other's heads. . ."
   Wielded means _____ yes

10. "Matt forced himself to eat **sparingly** of these things."
    Sparingly means _____ yes

Sam the Squirrel

Help Sam get the acorns to the tree by shading in the path containing the correct proportions.



Proportions

Solve the problems. **Write** your answers here.

1. $\frac{2}{4}=\frac{n}{8}$ $n=$

2. $\frac{3}{x}=\frac{9}{15}$ $x=$

3. $\frac{n}{20}=\frac{5}{4}$ $n=$

4. $\frac{5}{6}=\frac{30}{n}$ $n=$

5. $\frac{27}{n}=\frac{9}{10}$ $n=$

6. $\frac{3}{14}=\frac{n}{42}$ $n=$

7. $\frac{2}{n}=\frac{24}{72}$ $n=$

8. $\frac{3}{9}=\frac{x}{54}$ $x=$

9. $\frac{3}{7}=\frac{x}{42}$ $x=$

10. $\frac{6}{12}=\frac{12}{n}$ $n=$

11. $\frac{7}{8}=\frac{42}{x}$ $x=$

12. $\frac{3}{8}=\frac{n}{48}$ $n=$

13. $\frac{12}{13}=\frac{24}{x}$ $x=$

14. $\frac{7}{9}=\frac{21}{n}$ $n=$

15. $\frac{7}{4}=\frac{x}{28}$ $x=$

16. $\frac{n}{30}=\frac{5}{3}$ $n=$

17. $\frac{5}{40}=\frac{2}{m}$ $m=$

18. $\frac{6}{2}=\frac{t}{20}$ $t=$

19. $\frac{3}{9}=\frac{x}{15}$ $x=$

20. $\frac{6}{n}=\frac{4}{8}$ $n=$

21. $\frac{7}{4}=\frac{49}{y}$ $y=$

22. $\frac{6}{8}=\frac{n}{48}$ $n=$

23. $\frac{y}{15}=\frac{1}{3}$ $y=$

24. $\frac{40}{120}=\frac{4}{n}$ $n=$

25. $\frac{9}{3}=\frac{27}{y}$ $y=$

26. $\frac{14}{6}=\frac{n}{3}$ $n=$

27. $\frac{12}{3}=\frac{12}{n}$ $n=$

28. $\frac{24}{8}=\frac{}{m}$ $m=$

29. $\frac{25}{6}=\frac{75}{n}$ $n=$

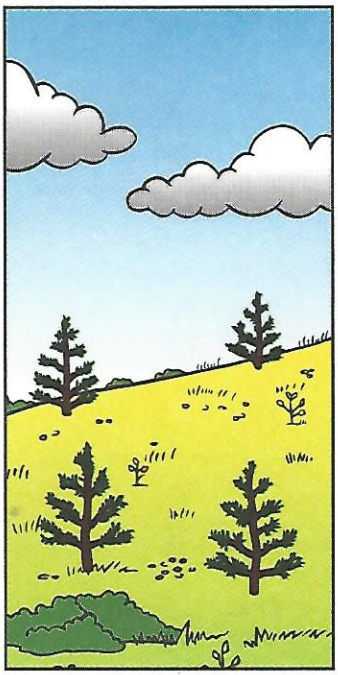
30. $\frac{3}{12}=\frac{x}{48}$ $x=$

31. $\frac{5}{25}=\frac{t}{20}$ $t=$

32. $\frac{n}{55}=\frac{2}{11}$ $n=$

From Field to Forest

Through a series of changes, an abandoned farmer's field can develop into a climax forest. These changes take an orderly pattern called **succession**. Read the description of each step in the succession of an abandoned farmer's field in the southeastern United States.

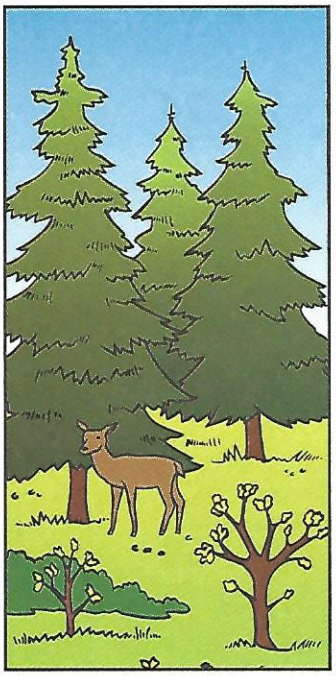


Farmer's Abandoned Field
Ten years after Farmer Brown quit working his farm, small pine seedlings began to grow in the abandoned field along with low-growing shrubs, grasses and herbs. List some animals that would live in this habitat.

_____

_____

_____

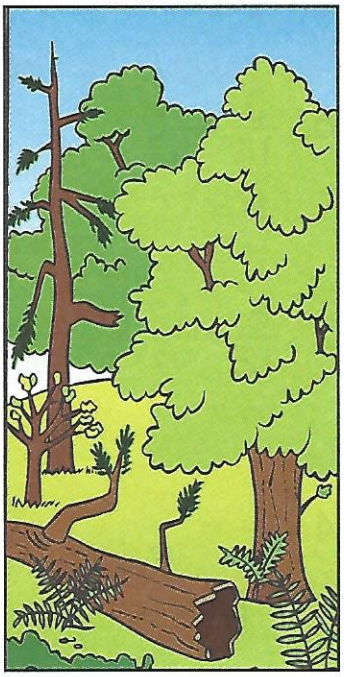


Pine Forest
Twenty-five years have passed, and the pines have grown tall and mature. Young oak trees start to grow beneath the pines. List some animals that would live in this habitat.

_____

_____

_____



Oak-Pine Forest
The oak trees reach for the sun between the old pine trees. Many older pines die, and young oaks begin to replace them. List some animals that would live in this habitat.

_____

_____

_____

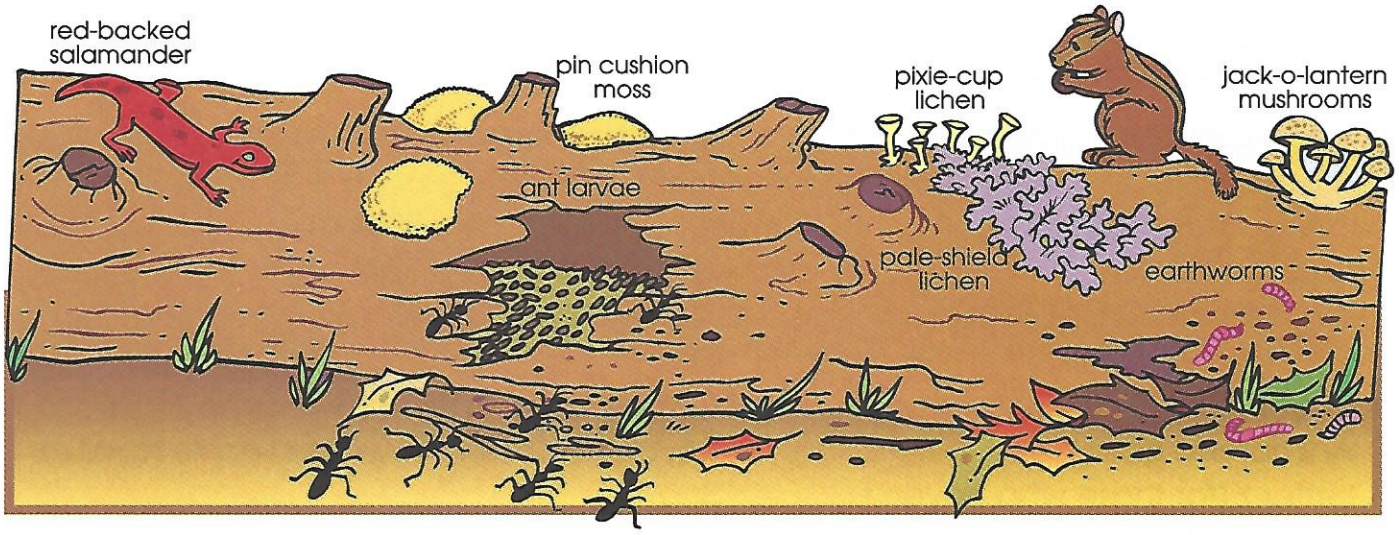
Oak Climax Forest
The large oaks dominate the forest. Young oaks grow in the understory, but young pines cannot grow in the shade of the oaks. List some animals that would live in this habitat.

_____

_____

_____

Life on a Rotting Log



The forest community is not limited to animals and plants that live in or near living trees. As the succession of the forest continues, many trees will die and fall to the ground. The actions of plants, animals, bacteria, lichens and weather help break the dead log down and return its components to the forest soil.

1. List the different kinds of plant life that are found on the rotting log. _____

_____

2. How do the small plants help the log decay? _____

_____

3. How do the plants benefit from the log? _____

_____

4. What kinds of small animals are found in or on the rotting log? _____

_____

5. How do these animals help the log decay? _____

_____

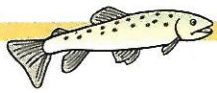
The lichen found on the rotting log is an interesting type of plant. It is actually made up of two organisms living together in symbiosis. What two organisms form a lichen? What does each of these organisms need to live? How do the organisms help each other? _____

_____

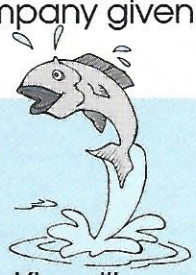
_____

_____

Speaking Canadian

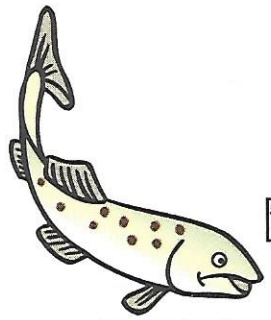


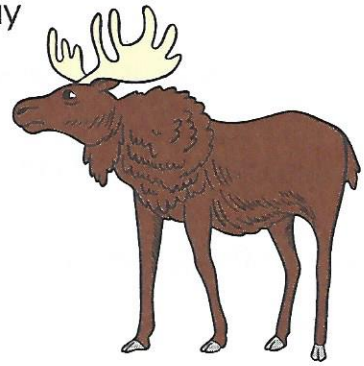
Use the word box to complete the puzzle and discover the name of a company given the rights to a huge tract of land in northern Canada in 1570.

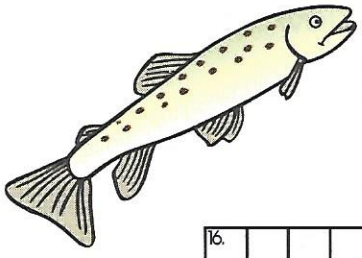


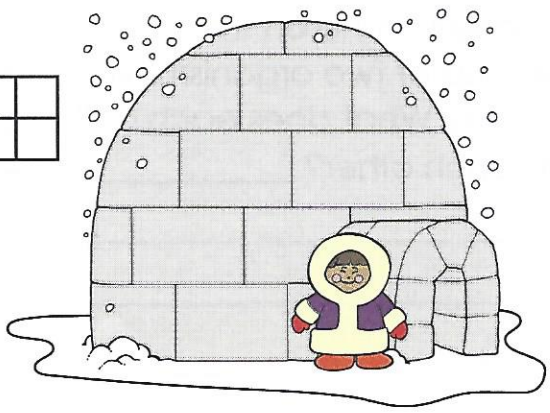
constable	hydro	mukluk	zed	
curling	char	metis	reveillon	
coureurs de bois	loyalists	Lower Canada	wapiti	
Quebecois	Eskimo	Canada Day	Micmac	Klondike

1. Trout-like fish
2. Animal-skin boot
3. Letter z (for those who haven't watched Sesame Street)
4. Indian word meaning eaters of raw meat
5. Quebec's French-speaking citizens
6. Area once famed for its gold
7. Police officer
8. French traders not licensed to gather furs
9. Name once given to French-speaking Canada
10. Colonists loyal to Britain during the American Revolution, many of whom fled to Nova Scotia
11. Game in which heavy stones are slid toward a target
12. _____ electricity
13. Descendants of French settlers and their Indian wives
14. elk
15. Indian tribe from Eastern Canada
16. Quebec feast which follows the Christmas Midnight Mass
17. Canada's birthday





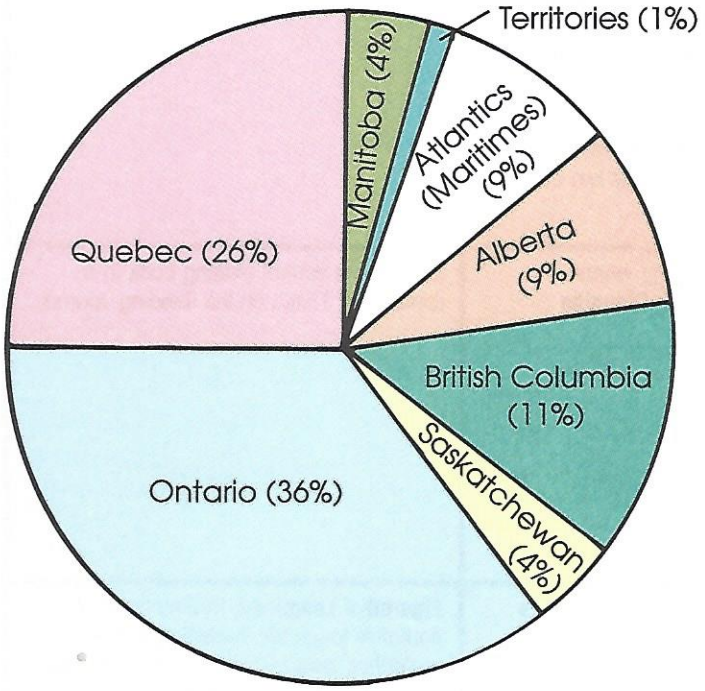




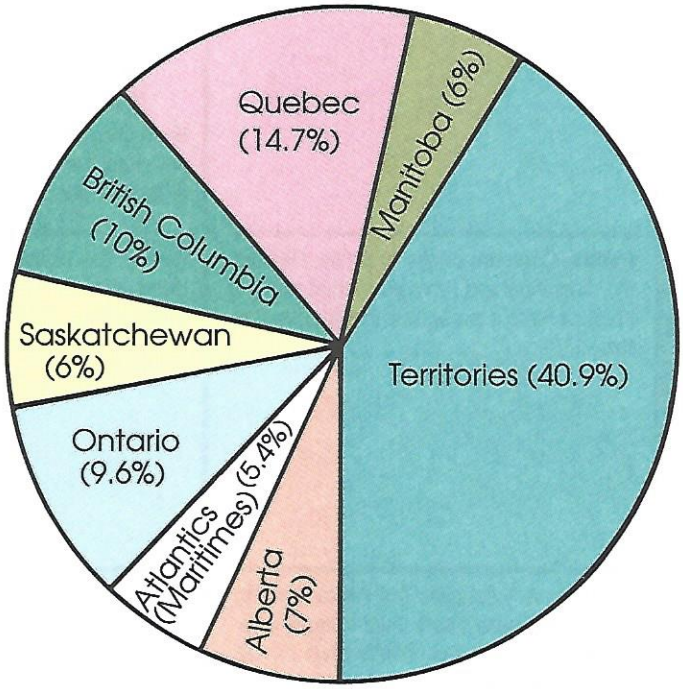
Which Is Which?

Use the charts to answer the questions.

Population Distribution Chart



Area Distribution Chart



1. Which province has a population about the same as that of the Atlantic (Maritime) provinces? _____
2. Which two provinces have similar populations? _____
3. Which province is the largest in area? _____
4. Which province has population and area percentages nearly alike? _____
5. Which lands take up more than 40% of the area of Canada? _____
6. Which province has a larger population, Alberta or Ontario? _____
7. Which province is smaller, Saskatchewan or British Columbia? _____
8. Which takes up less area, Alberta or the Atlantic (Maritime) Provinces? _____
9. Which two provinces together make up more than 60% of Canada's population? _____
10. Which province has the greatest population density? _____

	Language Skills	Spelling	Reading
Monday	Help your child write an information report using notes. *See* Language Skills, Week 31, number 1.	Pretest your child on the following words: banquet hatchet quiet blanket helmet racket bonnet interpret scarlet cabinet jacket skillet corset magnet velvet faucet packet violet Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Introduce this week's reading selection or continue with the book from last week.
Tuesday	**Poetry:** Compare poetry to prose. Discuss the difference and have your child make a chart or write a paragraph comparing the two.	Review this week's spelling words. Have your child complete **Cleaning Cabinets** (p. 310).	Discuss the current reading book in a conference. Focus on the Reading Journal.
Wednesday	Poetry is very concise, but it may contain grand concepts, create vivid images and evoke strong feelings. Poetry uses *rhyme, rhythm, alliteration, metaphor, hyperbole* and *creativity* to present ideas. Poetry can be fun to listen to and read. Have your child write a definition of poetry. Challenge your child by asking him/her to write the definition using poetic language.	Have your child use each of this week's spelling words correctly in a sentence.	**Figurative Language:** Review types of figurative language, including *simile, metaphor, personification* and *idiom*. *See* Reading, Week 31, numbers 1–4. Have your child complete **Up a Tree** (p. 311).
Thursday	Introduce your child to two common rhyming patterns used in poetry. *See* Language Skills, Week 31, number 2. Have your child find poems containing these rhyming patterns.	Have your child study this week's spelling words.	Ask your child to look through magazines, books and newspapers to find three examples of each of the four types of figurative language. Have your child copy each figure of speech and identify it by type (simile, metaphor, personification, idiom).
Friday	Take turns with your child reading aloud poems from a book of poetry. Discuss the rhythm of the poems. Tap out rhythms as you read.	Give your child the final spelling test. Have your child record pretest and final test words in his/her word bank.	Hold a reading conference. Discuss passages in the current book that contain figurative language.

Math	Science	Social Studies
Scale Have your child use a scale to convert actual distances to distances on a map. Provide your child with a list of actual distances, such as kilometers to the grocery store, kilometers to the zoo or kilometers to Grandma's house. Ask your child to calculate what each distance would be on a map which uses a scale of 1 cm = 3 km.	**Endangered Animals** Introduce and explain the terms *endangered* and *extinct*. *See* Science, Week 31, number 1.	**Mexico** Have your child describe in writing the exact location of Mexico, using names of oceans, lines of latitude and longitude, measurements and proximity to other landmarks.
Have your child draw his/her bedroom and its furnishings using the scale 1 in. = 1 ft.	Have your child choose two or three endangered animals to research this week. Ask your child to research where they live, why they are endangered, their habits and other interesting facts. Have your child present the information in a report, a poster or a diorama. *See* Science, Week 31, number 2 for a partial list of endangered animals.	Give your child a copy of **Mexico** (p. 315). Have your child draw the boundaries and label the states of Mexico, as well as important rivers and bodies of water.
Use today to review or catch up on ratios, proportions, percents, similar shapes, symmetry and scale.	Allow time for your child to continue his/her research on endangered animals.	Have your child read about the history of Mexico and choose from the related activities. *See* Social Studies, Week 31, numbers 1–5.
Test your child's understanding of ratios. Have your child complete **Ratio Test** (p. 312). Reteach any skills missed on the test, if necessary.	Allow time for your child to continue his/her research on endangered animals. Have your child complete **Animal Math** (p. 313).	Have your child read about Mexico City and choose from the related activities. *See* Social Studies, Week 31, numbers 6–8.
Give your child some brainteasers to solve. *See* Math, Week 31, number 1.	Allow time for your child to continue his/her research on endangered animals. Have your child complete **Animal Magic** (p. 314).	Arrange for your child to perform a community service. Have your child write in his/her Social Studies Journal.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Poetry)

1. When writing a report, it may be necessary to get information from reference books. If that is the case, take notes from the sources. Review with your child some techniques for taking notes in his/her own words. Below are some notes taken about mammals. These notes are well-organized and in an outline format. Have your child write a report from this information.

   Characteristics of mammals
   - Warm-blooded
   - Backbones
   - Covered with hair
   - Live young
   - Brain more complex than other animals

   Location and size
   - All continents and climates
   - Some adapt to only one environment, others to several
   - Some small, some large
   - Larger mammals need more land to live on

   Adaptations
   - Teeth (tusks, tiny teeth)
   - Kind of feet, reasons for different kinds (use, travel)
   - Some hibernate

2. Here are two common rhyming patterns used in poetry.

   Examples:

Mary let the cat in,	(a)	The peacock is a king on high,	(a)
Rescued from the cold.	(b)	His cloak is spread out in the sky.	(a)
With fur matted and thin,	(a)	In his throne, he looks so proud,	(b)
It purrs its thanks, loud and bold.	(b)	He holds his head up in a cloud.	(b)

READING (Figurative Language)

1. A *simile* compares two unlike things using the words *like* or *as.*

   Examples: Katie's dog ran like lightning after my cat.
   I'm hungry as a horse.
   The children sat as quiet as mice waiting for the movie to start.

2. A *metaphor* compares two unlike things by stating that one thing is the other.

   Examples: Molly is a living doll for cleaning up the kitchen.
   The sailboats were ghosts riding on the water.
   The sunrise was a purple, orange and pink painting.

3. *Personification* lends human qualities to or animates nonhuman objects.

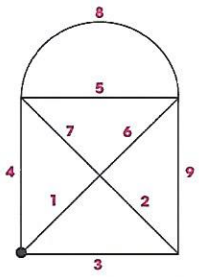
   Examples: The gust of wind swept the barn off its foundation.
   An open door welcomed us to the party.
   The forbidding fence warned us not to trespass.

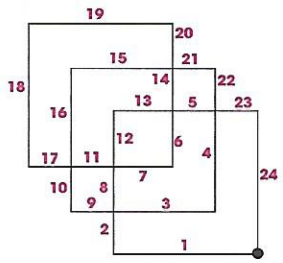
4. An *idiom* is an expression that has come to have a meaning other than its literal meaning.

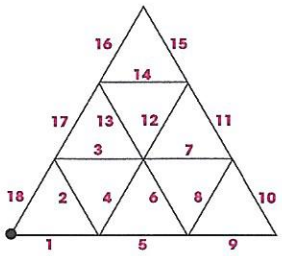
   Examples: Robert was down in the dumps when he got his grades.
   The class was in hot water when they didn't settle down after recess.
   He certainly pulled the wool over my eyes.

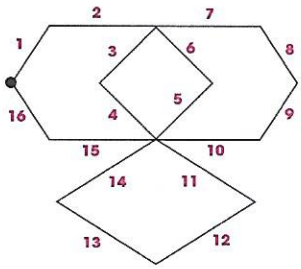
MATH (Brainteasers)

1. Copy the following brainteasers for your child. Your child must draw each figure without lifting the pencil from the page and without tracing any line more than once. There may be more than one solution for some figures.









SCIENCE (Endangered Animals)

1. Plant and animal populations may decrease for natural reasons (fire, drought, floods, ice, climatic changes, disease) or as a result of human activity, such as destruction of habitat or chemical pollution. When a plant or animal population becomes so small that it may completely disappear from Earth, it is called an *endangered species*. When the species of plant or animal has disappeared from Earth, it is said to be *extinct*. Some endangered animals include the orangutan, bald eagle, Florida manatee and whooping crane. Some extinct animals include the saber-toothed tiger, mastodon, giant ground sloth, dodo bird and the dinosaurs.

2. Below is a partial list of the world's endangered animals.

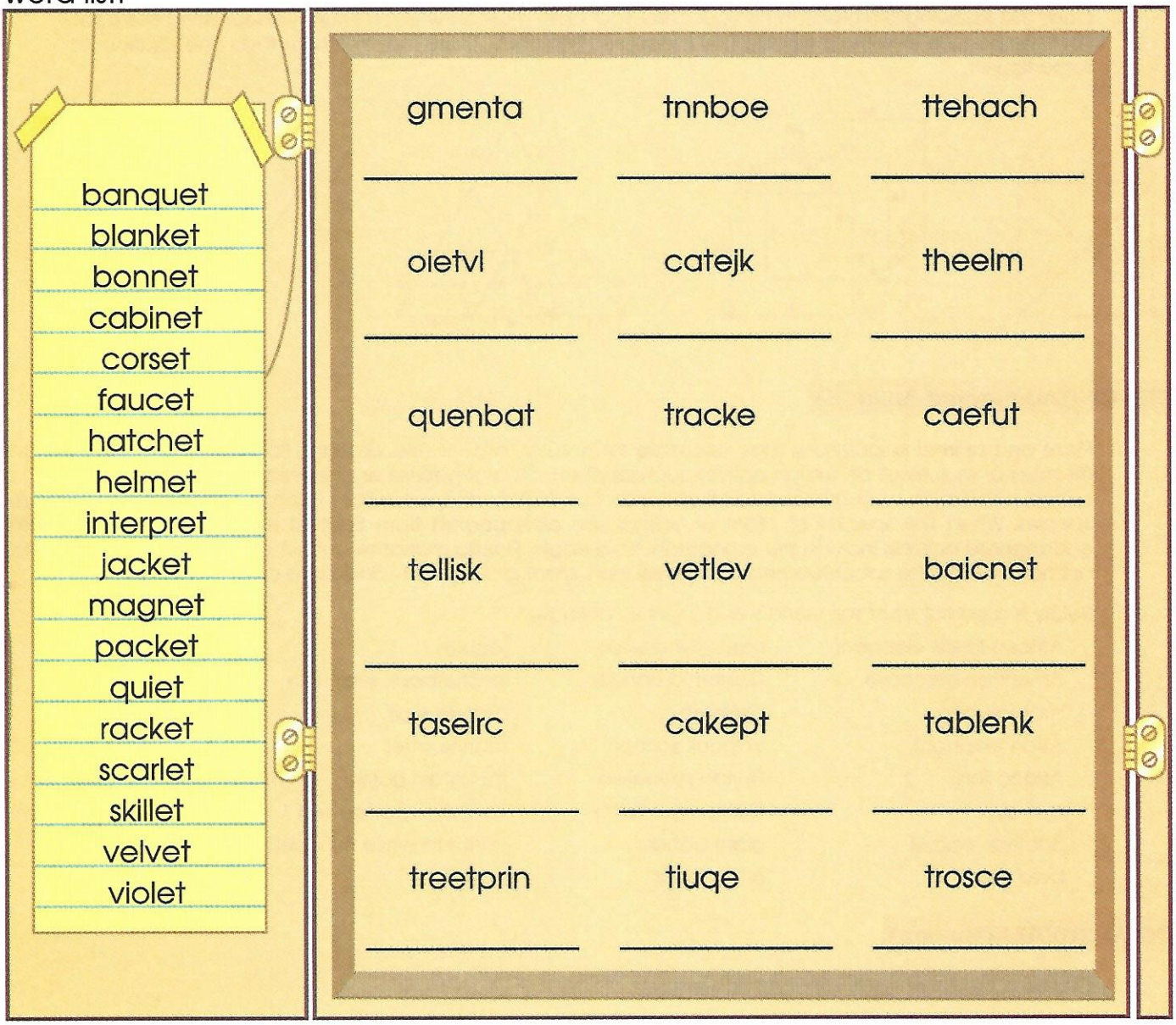
African forest elephant	black rhinoceros	jaguar	prairie dog
American crocodile	California condor	leatherback sea turtle	pronghorn
Arabian oryx	cheetah	maned wolf	red kangaroo
Asian elephant	chinook salmon	marine otter	sea lion
Asiatic lion	Florida manatee	mountain gorilla	snow leopard
aye-aye	Galapagos turtle	northern spotted owl	whooping crane
Bactrian camel	giant panda	northern white rhinoceros	yak
bald eagle	grizzly bear	ocelot	

SOCIAL STUDIES (Mexico)

1. Create a model of an ancient Aztec temple.
2. Identify the areas of the ancient Mayan and Aztec civilizations on a map of Mexico and Central America.
3. Read about the construction of the pyramids built in ancient Mexico. Describe the symbolism.
4. Draw a picture of the Mexican flag and explain the significance of the colors and the coat of arms.
5. Look at pictures of the pottery and clay figures of the Mayans and Aztecs. Copy the style to create your own clay figures.
6. Read about the following men and their roles in Mexico's history: Maximilian, Hernando Cortés, Porfirio Díaz and Moctezuma (or Montezuma) II. Write a summary of each man's importance to Mexico City.
7. Write about some of the popular cultural events in Mexico City. What is housed in the National Museum of Anthropology? What can you see at the Palacio de Bellas Artes? Who are Diego Rivera and Freida Khalo?
8. Mexico City is built over the former Aztec capital of Tenochtitlán. Research and draw an illustration of the former capital or write about the invasion of the Spanish.

Cleaning Cabinets

Unscramble the groups of letters in the kitchen cabinets to form words from the word list.



banquet
blanket
bonnet
cabinet
corset
faucet
hatchet
helmet
interpret
jacket
magnet
packet
quiet
racket
scarlet
skillet
velvet
violet

gmenta _____	tnnboe _____	ttehach _____
oietvl _____	catejk _____	theelm _____
quenbat _____	tracke _____	caefut _____
tellisk _____	vetlev _____	baicnet _____
taselrc _____	cakept _____	tablenk _____
treetprin _____	tiuqe _____	trosce _____

Identify the number of syllables in five spelling words. Then, **write** a synonym and antonym for each.

	syllables	**synonym**	**antonym**
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Up a Tree

Match these expressions with their meanings.

_____ all the personality of wallpaper paste	a. without question
_____ a piece of my mind	b. consider clearly
_____ running amok	c. becoming wild
_____ beyond a shadow of a doubt	d. gather up great quantities
_____ think straight	e. a very bland disposition
_____ ace in the hole	f. strong opinion
_____ shop like a bear about to hibernate	g. from a bad situation to a worse one
_____ out of the frying pan and into the fire	h. special advantage

Write two sentences using the above expressions.
Example: When my teacher asked me to give the answer, I couldn't think straight.

1. _____

2. _____

Ratio Test

1. A basketball player makes 7 free throws out of every 12 thrown.
   a. **Write** a ratio of the free throws made to the number thrown. _____
   b. **Write** a ratio of the free throws taken to the number missed. _____
   c. With this same ratio, how many free throws would the player make out of 24 throws? _____

2. **Write** the following percents as fractions in reduced form:
   12% _____ 260% _____

3. **Write** the following fractions as percents:
   $\frac{15}{100}$ = _____ $\frac{1}{4}$ = _____ $2\frac{2}{5}$ = _____

4. **Write** the following percents as decimals:
   68% = _____ 1% = _____

5. **Write** the following decimals as percents:
   0.18 = _____ 0.05 = _____ 3.24 = _____

6. Find 15% of 40. _____

7. Find 4% of 20. _____

8. Two hundred fifty people attended the fiesta. Of the fiesta guests, 52% were female. How many guests were female? _____

9. The quarterback completed 8 out of 25 passes. What percentage of passes were completed? _____

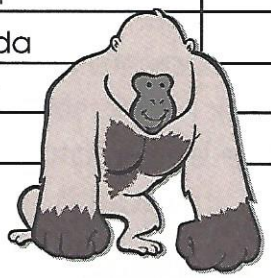
10. Are the following ratios in proportion?
    $\frac{3}{8} = \frac{27}{72}$ _____ $\frac{1}{7} = \frac{3}{20}$ _____

11. Solve for x in the following proportions:
    $\frac{18}{3} = \frac{x}{2}$ $\frac{6}{x} = \frac{24}{12}$
    x = _____ x = _____

Animal Math

This chart lists some of the body statistics of fifteen endangered animals. Use these measurements to solve the problems below.

Animal	Height	Weight	Length
Mountain gorilla	6 feet	450 pounds	
Brown hyena	25 inches	70 pounds	3 feet
Black rhinoceros	5.5 feet	4,000 pounds	12 feet
Cheetah	2.5 feet	100 pounds	5 feet
Leopard	2 feet	150 pounds	4.5 feet
Spectacled bear	2.5 feet	300 pounds	5 feet
Giant armadillo		100 pounds	4 feet
Vicuna	2.5 feet	100 pounds	
Central American tapir	3.5 feet	500 pounds	8 feet
Black-footed ferret		1.5 pounds	20 inches
Siberian tiger	38 inches	600 pounds	6 feet
Orangutan	4.5 feet	200 pounds	
Giant panda		300 pounds	6 feet
Polar bear		1,600 pounds	8 feet
Yak	5.5 feet	1,200 pounds	



1. What is the total height of a mountain gorilla, a vicuna and a yak? _____
2. What is the total weight of a leopard, a cheetah and a polar bear? _____
3. What is the total weight of a giant panda and a giant armadillo? _____
4. Add the lengths of a black rhinoceros, a spectacled bear and a Siberian tiger. _____
5. Add the heights of two leopards, three yaks and four orangutans. _____
6. Subtract the height of a vicuna from the height of a cheetah. _____
7. Multiply the height of a Central American tapir by the height of a mountain gorilla. _____
8. Add the heights of a brown hyena and a Siberian tiger. _____
9. Add the weights of all the animals. _____
10. For the animals whose lengths are given, arrange the lengths of the animals from longest to shortest on another sheet of paper.

Animal Magic

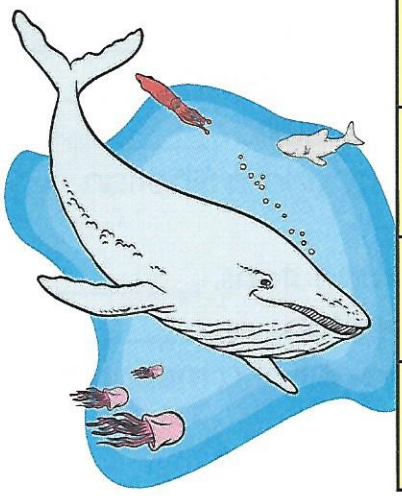
Read the animal name in Column A. Choose the correct description from Column B. **Write** the number of the answer in the Magic Square below. The first one has been done for you.

Column A

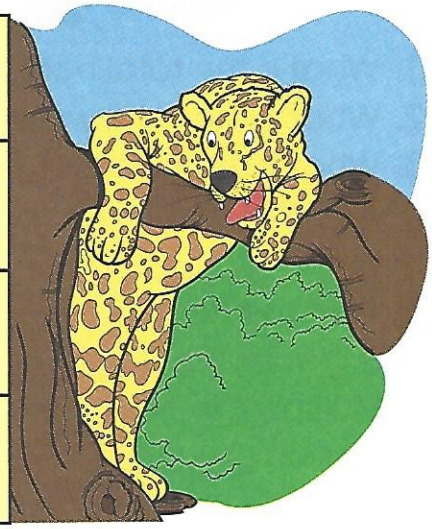
A. grizzly bear
B. koala
C. peregrine falcon
D. California condor
E. black-footed ferret
F. cheetah
G. orangutan
H. giant panda
I. Florida manatee
J. kit fox
K. blue whale
L. whooping crane
M. red wolf
N. green sea turtle
O. brown hyena
P. jaguar

Column B

1. large bear of the American grasslands
2. lives on dry grasslands of South Africa
3. the most valuable reptile in the world
4. largest soaring bird of North America
5. the tallest American bird
6. the fastest animal on land
7. the only great ape outside Africa
8. large aquatic seal-like animal
9. large black and white mammal of China
10. small, fast mammal; nocturnal predator
11. largest animal in the world
12. member of the weasel family
13. has interbred with coyotes in some areas
14. also called a duck hawk; size of a crow
15. eats leaves of the eucalyptus tree
16. know as "el tigre" in Spanish



A 1	B ___	C ___	D ___
E ___	F ___	G ___	H ___
I ___	J ___	K ___	L ___
M ___	N ___	O ___	P ___

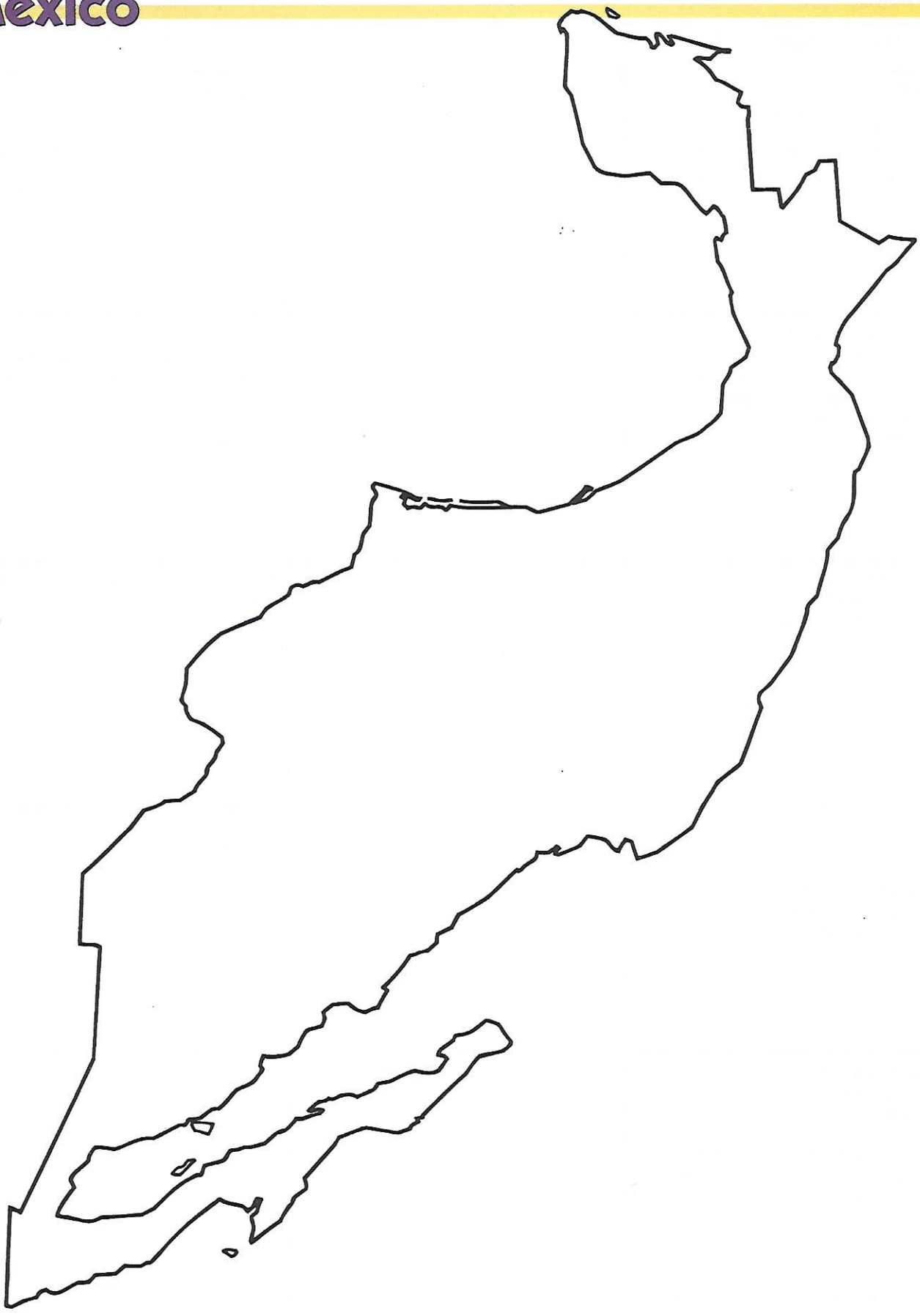


Add the numbers across, down and diagonally. What answer do you get? _____

Why do you think this is called a magic square? _____

_____

Mexico



	Language Skills	Spelling	Reading
Monday	**Poetry** Discuss strategies for writing poetry. Walk your child through the process. *See* Language Skills, Week 32, number 1. Have your child follow this process to write a rhyming poem.	Pretest your child on the following words: admit, bandit, benefit, commit, credit, debit, edit, emit, exhibit, habit, inherit, limit, orbit, profit, prohibit, solicit, spirit, visit Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	**Biography** Choose a biography for this week's reading selection. There are many interesting biographies written by Jean Fritz that are appropriate for the sixth-grade level. Introduce the subject of the book today.
Tuesday	Review similes. Ask your child to look for similes in poetry. Have your child write a poem where each line is a different simile about the same subject. *See* Language Skills, Week 32, number 2.	Review this week's spelling words. Have your child complete **Going into Orbit** (p. 320).	Discuss the current reading book in a conference. Have your child use other resources to research the life of the subject of the biography.
Wednesday	Encourage your child to use similes in poetry to create vivid images. *See* Language Skills, Week 32, number 3.	Have your child use each of this week's spelling words correctly in a sentence.	Have your child take notes in chronological order as he/she reads the biography. Once finished with the book, have your child make a time line of the person's life. This is just another way of taking notes.
Thursday	Review metaphors. Discuss the use of metaphors in poetry. Read some poems to your child that contain metaphors. *See* Language Skills, Week 32, number 4. Have your child write a poem containing at least one metaphor.	Have your child study this week's spelling words.	Have your child write a summary of the biography based on the information contained in the time line.
Friday	Discuss other literary techniques often used in poetry: *assonance, consonance* and *onomatopoeia*. *See* Language Skills, Week 32, number 5. Have your child experiment with these techniques by writing short poems of two or four lines each.	Give your child the final spelling test. Have your child record pretest and final test words in his/her word bank.	Hold a reading conference. Discuss the format of a biography.

Math	Science	Social Studies
Statistics Review the procedures for finding mean, median, mode and range. *See* Math, Week 32, number 1. Give your child lists of numbers gathered from a newspaper or magazine. Have your child find the mean, median, mode and range for each group of numbers.	**Endangered Plants** Have your child read about endangered plants. *What threatens plant species today? See* Science, Week 32, number 1.	**Mexico** Prior to the 1940s, Mexico's economy was based on agriculture and mining. Today, tourism is extremely important to Mexico's economy. Have your child read about important resources and industries in Mexico. *See* Social Studies, Week 32, number 1.
Graphing: Review how to graph ordered pairs on a coordinate graph. Have your child complete **Browser** (p. 321).	If possible, arrange a trip to a local zoo or botanical garden and view some of the endangered animals and plants. Have your child write about two of the plants seen there. *See* Science, Week 32, number 2.	Have your child write a brief report on one of Mexico's states. *See* Social Studies, Week 32, number 2.
Have your child draw a simple picture on a sheet of graph paper. Once the drawing is complete, have your child draw and number the horizontal and vertical axes outside of the image. Following the example of yesterday's activity, have your child create a list of ordered pairs that could lead someone to draw the picture.	Introduce and explain the term *biodiversity*. Our planet has a rich diversity of species that makes it a beautiful and interesting environment. Have your child read about how biodiversity is important to the survival of the planet.	**Central America:** Refer to a map of Central America and discuss important borders and cities. Give your child a copy of **Central America Political Map** (p. 323). Have your child label each country and its capital, noting the capital's coordinates on the chart. Then, have your child color each country a different color and label the Pacific Ocean, the Caribbean Sea, the Gulf of Panama and the Panama Canal.
Have your child create an index to a map. The index should list features and locations in alphabetical order and identify the coordinates with an ordered pair. *See* Math, Week 32, number 2.	Ask your child to research the plants that do well in your area. Based on this information, have your child plan a small outdoor garden for your yard, patio, window box or roof. Guide your child in preparing the soil, planting the seeds or seedlings and caring for the plants. Have your child keep a record of how he/she cares for the plants in his/her Science Log and record any growth.	The countries of Central America have unique terrain, diverse populations and different lifestyles. Guide your child in researching the countries individually. Your child may want to take a different approach with each country. Have your child research and present information on the country of Belize. *See* Social Studies, Week 32, number 3.
Have your child complete **Graphs** (p. 322). Discuss the topics on the completed activity sheet.	Some people rely on herbal medicines and remedies. Have your child read about herbs and their many uses. If possible, have your child prepare questions and interview someone who grows or uses herbs.	Have your child research and present information on the country of El Salvador. *See* Social Studies, Week 32, number 3. Arrange for your child to perform a community service. Have your child write in his/her Social Studies Journal.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Poetry)

1. Encourage your child to follow this process when writing poetry:
   a. Select a subject.
   b. Think about the subject. Picture it in your head.
   c. Write down ideas, feelings and descriptions of the subject.
   d. Decide on a form for the poem.
   e. Write a first draft.
   f. Revise. Adjust the rhyme and/or rhythm of the poem.
   g. Write a final draft.

2. Write the beginning of a simile on the chalkboard. Have your child complete it several different ways.

   Example: The puppy is like . . .
   The puppy is like a warm ball of fur.
   The puppy is like yellow cotton.
   The puppy is as wild as a bear cub.

   The result is a poem. Have your child create poems around other similes: I feel like . . .
   The sun is as . . .

3. Show your child how a simile may start a line of poetry. Write some examples on the board and discuss.

   Like a lion roaring in my ear, the train rushed by with its whistle blowing.
   Like the middle of the night, the room was silent.

   Write other similes that might start a line of poetry. Have your child finish the lines.

   Like cool summer breezes,
   Like a blow on the head,
   Like a snake crawling up my leg,
   Like walking on hot pavement,

4. Metaphors are often used in poetry because they create a strong feeling or image.

   Examples: *The boy was a bullet racing across the field.*
   My sister was a parrot who copied everything I said.
   My ten-year-old cousin Trisha is a gourmet cook.
   My grandmother is an angel.

5. *Assonance* is the repetition of vowel sounds. (Sandy sat at that laundromat last Saturday.)
   Consonance is the repetition of consonant sounds. (Sally sells seashells by the seashore.)
   Onomatopoeia is the use of a word whose sound makes you think of its meaning. (buzz, splash, hiss)

MATH (Statistics/Graphing)

1. *Mean* is the average. It is found by dividing the sum of all possibilities by the number of possibilities. When the possibilities are arranged in numerical order, the middle number is called the *median*. The *mode* is the number that occurs most often. The *range* is the difference between the greatest and least possibility.

2. Maps are often placed over a grid that helps the mapreader locate things more easily. The index of cities, landmarks or businesses refers to the coordinates of the grid. Have your child create an index to a map (use a map that is relevant to your child) by listing locations in alphabetical order and identifying ordered pairs. If the map does not already have an *x* and *y* axis, have your child add them.

SCIENCE (Endangered Plants)

1. Use the following questions to guide your child's research on endangered plants:
   Why might you be asked not to pick the wildflowers in a park or along a nature trail?
   How has the loss of bamboo forests affected the giant panda?
   Why does the deforestation of a tropical rainforest affect the many species of plants?
   Why would the giant redwood forests be difficult to replace?
   How does a forest fire affect the plants in a given area?
   How have industrial chemicals and wastes destroyed plants in certain areas?
   What was the potato famine of Ireland and what were the effects?
2. Discussion or research topic: What is the role of zoos and wildlife centers in the effort of preservation of species?

SOCIAL STUDIES (Mexico/Central America)

1. Mexico is the world's primary source of silver. Other important industries and resources are listed below.
   Agriculture: beef cattle, coffee, corn, milk and wheat
   Fishing: anchovies, oysters, sardines, shrimp and tuna
   Manufacturing: iron and steel, motor vehicles and processed foods
   Mining: iron ore, natural gas and petroleum
   Exports: coffee, petroleum, motor vehicles and engines

2. Have your child include the following information in his/her report:
   capital
   population
   area
   natural resources
   bordering provinces/territories/U.S. states
   chief agricultural products
   interesting places to visit
   major industries
   brief history
   map
3. As your child studies the countries of Central America, have him/her consider population, physical features, history, ethnic make-up, industry, agriculture, natural resources, foods, culture, economy, language, tourism and politics. Have your child choose a different area of focus for each country and a unique way in which to present the data. Each presentation may take one of the following forms:

map	report	diorama	drawing	essay
poster	interview	comic strip	poem	slide show
graph	time line	demonstration	model	puppet show

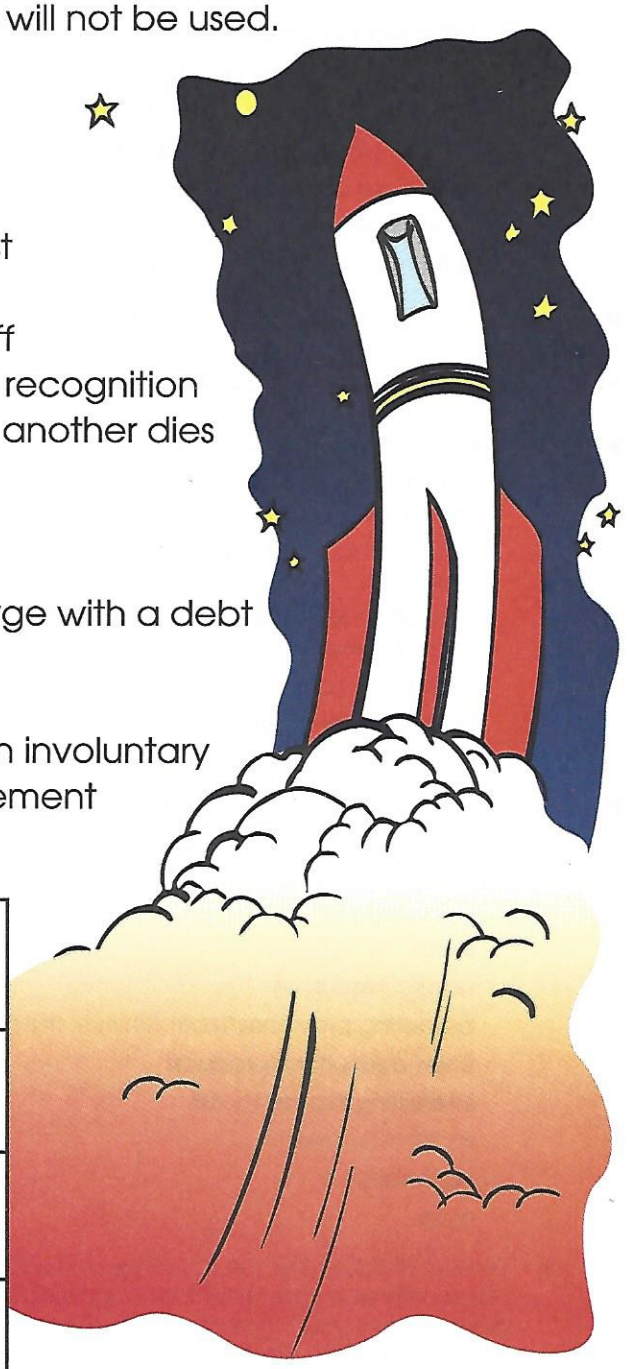
Going Into Orbit

1. admit
2. bandit
3. benefit
4. commit
5. credit
6. debit
7. edit
8. emit
9. exhibit
10. habit
11. inherit
12. limit
13. orbit
14. profit
15. prohibit
16. solicit
17. spirit
18. visit

Complete the magic square by writing the number of the word from the list in the lettered square that corresponds to its definition. One of the words will not be used.

Definitions

A. Robber or outlaw
B. To correct or revise
C. Go to see; stay as a guest
D. To restrict; boundary
E. To send forth or to give off
F. Asset; acknowledgment; recognition
G. To receive property after another dies
H. To forbid
I. To revolve around
J. Courage; liveliness
K. A record of debt; to charge with a debt
L. To serve or be useful to
M. To seek or to ask for
N. Repeated behavior, often involuntary
O. To do; to place in confinement
P. To display

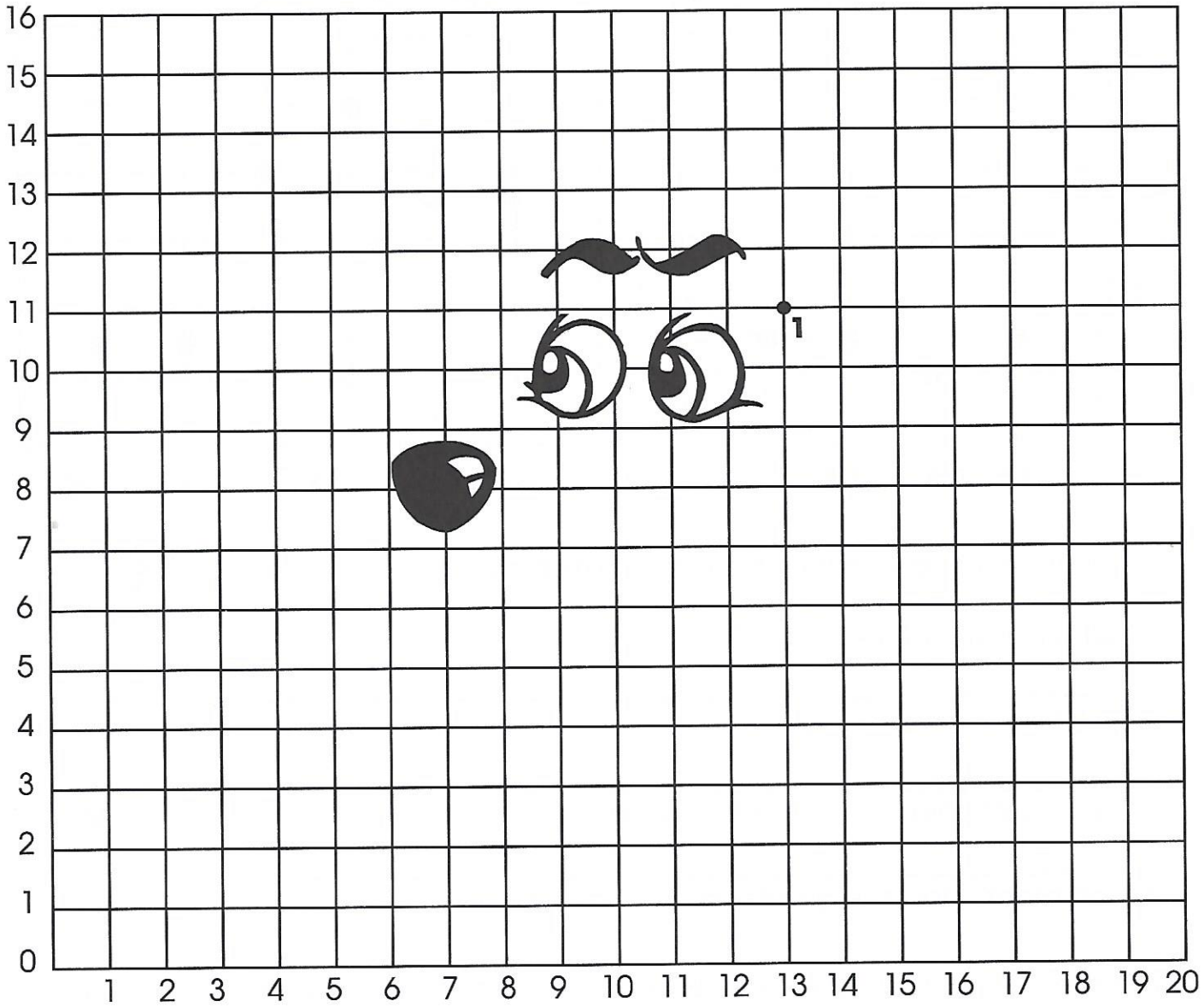


	A	B	C	D
_____	E	F	G	H
_____	I	J	K	L
_____	M	N	O	P
_____				
	_____	_____	_____	_____

Check your magic square by adding each row and then each column of numbers. If all the sums are the same, you have matched correctly.

Browser

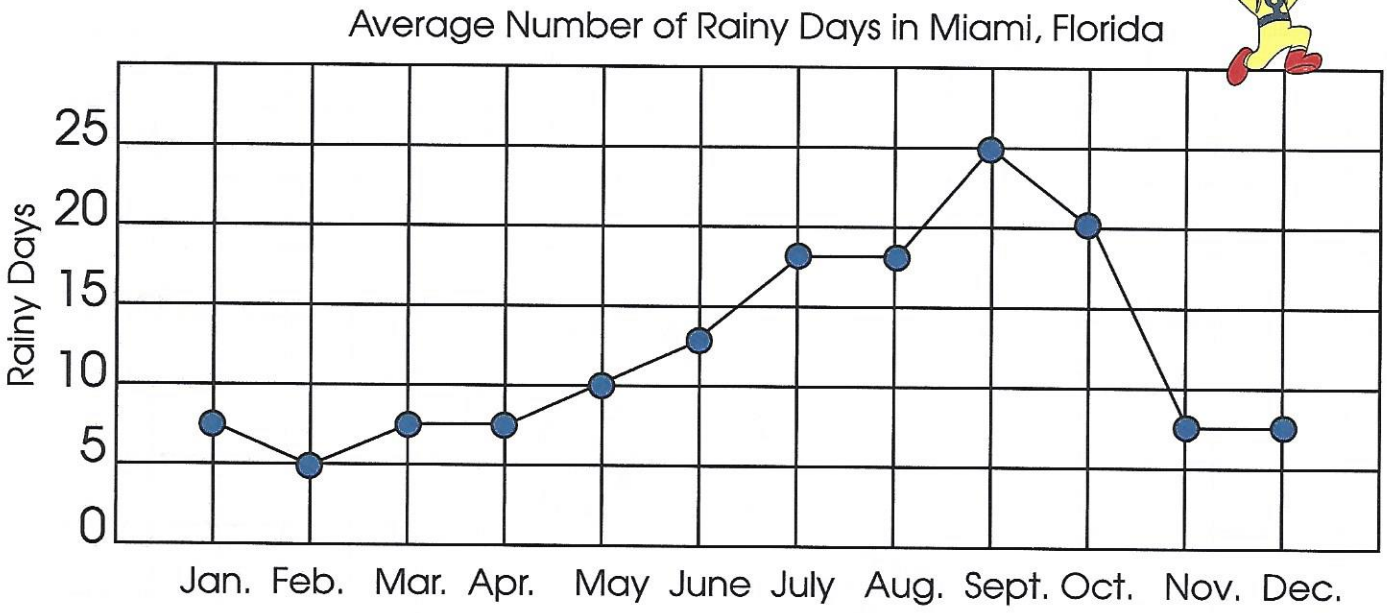
Graph the ordered pairs in each group. Number each dot. Connect each point with the next point using a straight line. Do not connect the last point in one group with the first point in another group. The first one is done for you.



1. (13,11)
2. (15,14)
3. (18,12)
4. (17,10)
5. (15,10)
6. (15,14)
7. Lift pencil.
8. (8,12)
9. (6,14)
10. (4,12)
11. (7,11)
12. Lift pencil.
13. (4,12)
14. (4,10)
15. (5,11)
16. Lift pencil.
17. (14,12)
18. (13,13)
19. (10,13)
20. (8,12)
21. (6,9)
22. (5,9)
23. (3,6)
24. (2,7)
25. (1,6)
26. (0,6)
27. (2,2)
28. (4,1)
29. (7,1)
30. (8,0)
31. (13,0)
32. (17,5)
33. (17,9)
34. (19,0)
35. Lift pencil.
36. (17,9)
37. (16,10)
38. (15,8)
39. Lift pencil.
40. (16,8)
41. (16,5)
42. (12,1)
43. (7,1)
44. Lift pencil.
45. (13,9)
46. (6,9)
47. Lift pencil.
48. (14,7.5)
49. (14,8)
50. (12,6)
51. (1,6)
52. Lift pencil.
53. (9,6)
54. (10,7)
55. (11,6)

Graphs

Graphs have a vertical axis and a horizontal axis. The axes are labeled to show what is being compared.



Use the data plotted on the graph to **answer** the following questions.

1. What is the title of the graph?

_____

2. How is the vertical axis labeled?

_____

3. What is contained in the horizontal axis?

_____

4. Which month had the greatest number of rainy days?

_____

5. Which two-month period shows the greatest change in the number of rainy days?

_____

6. Which month was the driest?

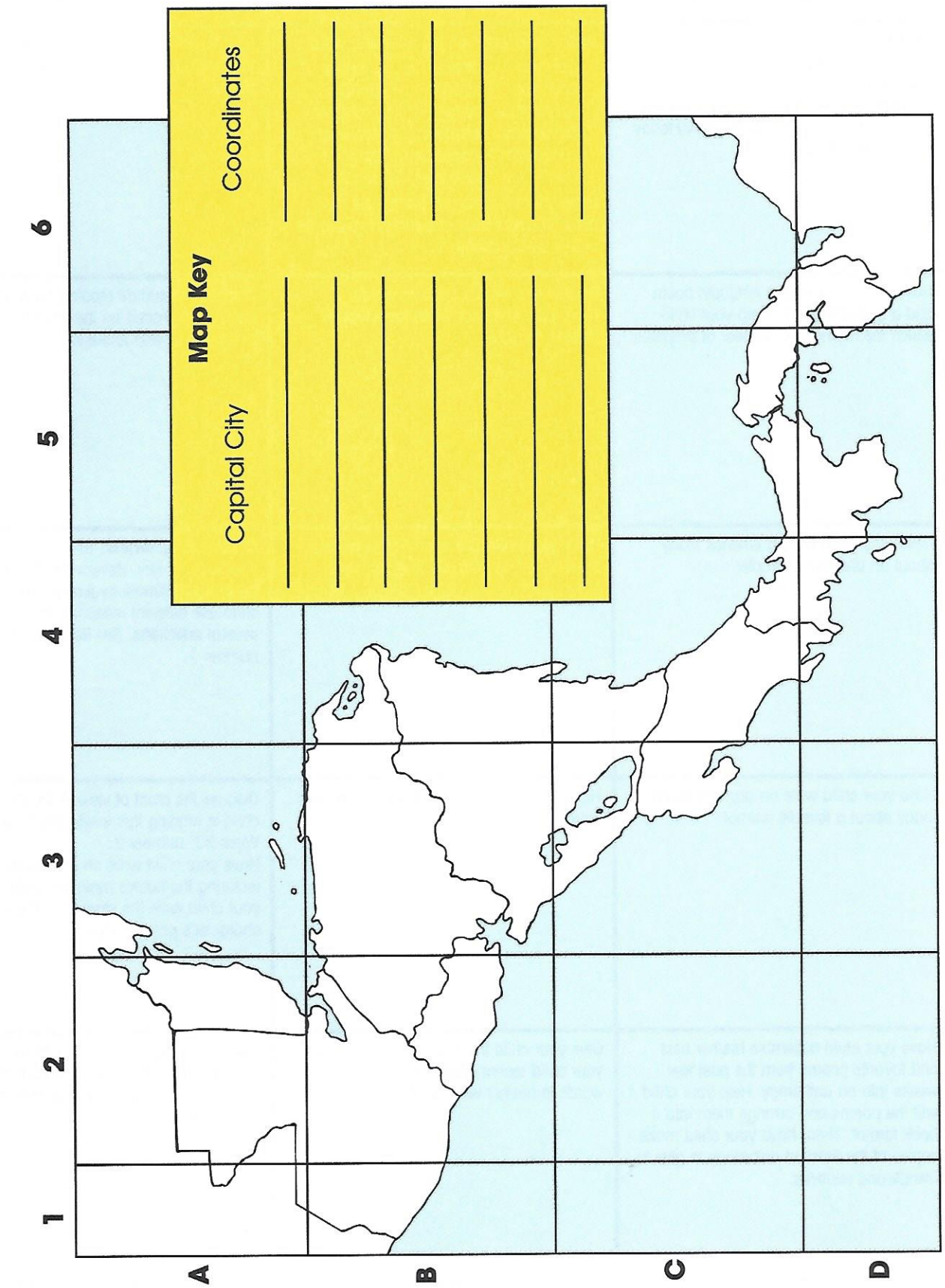
_____

Use the graph to **fill in** the blanks below.

7. range:_____ 8. mean:_____ 9. median _____ 10. mode: _____

Central America

Political Map



	Language Skills	Spelling	Reading
Monday	**Poetry** Continue to study poetry this week. Review several types of poetry with your child. *See* Language Skills, Week 33, numbers 1–6. Have your child write several *haiku* today on favorite natural subjects.	Pretest your child on the following words: author, bachelor, collector, conductor, conqueror, creator, dictator, director, editor, emperor, inspector, instructor, monitor, orator, professor, protector, sculptor, senator Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Introduce this week's reading selection. Suggestion: *I, Houdini* by Lynne Reid Banks.
Tuesday	Have your child write a *cinquain* poem and a *quatrain* poem. Help your child watch the rhyme and number of syllables.	Review this week's spelling words. Have your child complete **Investigator Hector** (p. 328).	Discuss the current reading book in a conference. Focus on the distinction between fact and fantasy.
Wednesday	Have your child write a *limerick* today about an unusual character.	Have your child use each of this week's spelling words correctly in a sentence.	**Reference Materials:** Take your child to your local library. Review the different reference materials available. Have your child use different resources to answer several questions. *See* Reading, Week 33, number 1.
Thursday	Have your child write an *acrostic* poem today about a favorite animal.	Have your child study this week's spelling words.	Discuss the point of view in the book your child is reading this week. *See* Reading, Week 33, number 2. Have your child write an adventure featuring the book's main character. Have your child write the story from the main character's point of view.
Friday	Have your child assemble his/her best and favorite poems from the past few weeks into an anthology. Help your child edit the poems and arrange them into a book format. Then, have your child make copies of the finished anthology to give to friends and relatives.	Give your child the final spelling test. Have your child record pretest and final test words in his/her word bank.	Hold a reading conference. Discuss the "exceptional talents" of the book's main character. Then, discuss your child's own exceptional talents.

Math	Science	Social Studies
Graphing Review the parts of a *line graph*. *See* Math, Week 33, number 1. A line graph shows change over time. Have your child complete **Double Line Graphs** (p. 329). Then, have your child make a double line graph to show morning and evening temperatures over the course of 7 days.	**Acid Rain** Discuss the meaning of the term *acid rain*, as well as its causes and effects. *See* Science, Week 33. Over the course of this week, your child will conduct an experiment on acid rain. The goal of the experiment is to determine how the strength of acid will affect the growth of a plant. Have your child state the problem in his/her Science Log. *See* Science, Week 33, number 1.	**Central America** Have your child research and present information on the country of Honduras. *See* Social Studies, Week 32, number 3.
Review the parts of a *bar graph*. A bar graph compares two or more quantities. *See* Math, Week 33, number 2. Have your child make a bar graph using the following information, then write three statements describing the data. **Title:** Heights of Garden Flowers **Data:** daisy – 3 ft. 6 in. yarrow – 2 ft. hollyhock – 6 ft. peony – 3 ft. coneflower – 3 ft.	Help your child form a hypothesis and record it in his/her Science Log. *See* Science, Week 33, number 2.	Have your child research and present information on the country of Panama. *See* Social Studies, Week 32, number 3.
Explain to your child that a *double bar graph* can show a comparison between two sets of data. Have your child complete **Double Bar Graphs** (p. 330).	Help your child plan the procedure for his/her acid rain experiment. Have him/her record the plan in his/her Science Log. *See* Science, Week 33, number 3.	Have your child research and present information on the country of Costa Rica. *See* Social Studies, Week 32, number 3.
A *circle graph* (or *pie chart*) is used when a whole is divided into parts. It is often used to demonstrate percentages. Have your child complete **Circle Graphs** (p. 331).	Have your child begin the experiment according to his/her plan. Remind your child to measure the acid water carefully and to water the plants according to the schedule laid out in the plan. Have your child measure the plants and record the data accurately on the chart. If he/she notices anything unusual about the plants, have him/her record the observations along with the other data.	Have your child research and present information on the country of Guatemala. *See* Social Studies, Week 32, number 3.
Have your child draw a circle graph to illustrate how he/she spends or saves money each month.	After several days (sometime in the next week or two), have your child analyze the data and draw a conclusion. Have your child write a report explaining what he/she has learned about the effects of acid rain on the growth of plants.	Have your child research and present information on the country of Nicaragua. *See* Social Studies, Week 32, number 3. Arrange for your child to perform a community service. Have your child write in his/her Social Studies Journal.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Poetry)

There are many different types of poetry—a poem can take almost any form. Read a variety of poetry with your child. Discuss the styles of your child's favorite poets and review the types of poems described below.

1. *Haiku* is traditionally about a topic in nature and is made up of three lines: the first and third lines have five syllables and the second line has seven syllables.
2. A *cinquain* is made up of five lines, each with a given number of syllables or words.

   syllables: 2, 4, 6, 8, 2 words: 1, 2, 3, 4, 1
3. Each verse of a *quatrain* contains four lines with one of the following rhyming schemes:

   a, a, a, a a, a, b, b a, b, a, b a, b, b, a
4. A *limerick* is a humorous five-line poem that often begins, "There was a ____ from ____." Lines one, two and five rhyme; lines three and four rhyme and are shorter.
5. The subject of an *acrostic* poem is written vertically. Each letter in the word is used to begin a line of the poem.
6. Poems written in *free verse* have no rhyme or notable rhythm. These poems often use figurative language to create vivid images.

READING (Reference Materials)

1. Give your child the following questions to research. Have your child write the answer to each question and list where (in what type of resource book) he/she found the information.

   What is the approximate latitude and longitude of Mexico City?

   Who fought in the Battle of the Little Bighorn and who won?

   What did General Ulysses S. Grant say when General Robert E. Lee surrendered to him at the Appomattox Courthouse?

   What was unique about Helen Keller and who was her teacher?

   What is the second highest point in Asia?

   Who built the Great Wall of China?

   What is a "nonentity"?

   Who was president of the United States when Panama and the U.S. signed a treaty agreeing to the construction of a canal connecting the Atlantic and Pacific Oceans?

   How many square feet are in an acre?

   What are three synonyms for the word "startled"?

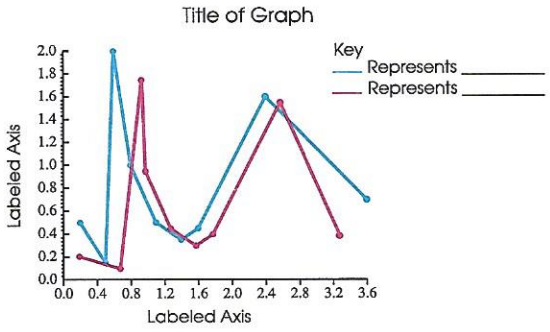
   What artist painted the ceiling of the Sistine Chapel?

   What kind of weather is the northeastern part of the United States currently experiencing?
2. *Point of view* is the angle from which a story is told.

   A *first-person* point of view means the author or one of the characters is telling the story. The narrator uses the pronouns *I* and *me* to tell the story.

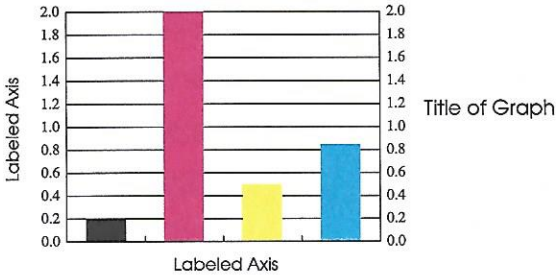
   A *third-person* point of view means someone outside the story is telling it. The third person will be either limited (cannot see into the characters' minds) or omniscient (outside the story but knows what's in the minds of the characters).

MATH (Graphing)



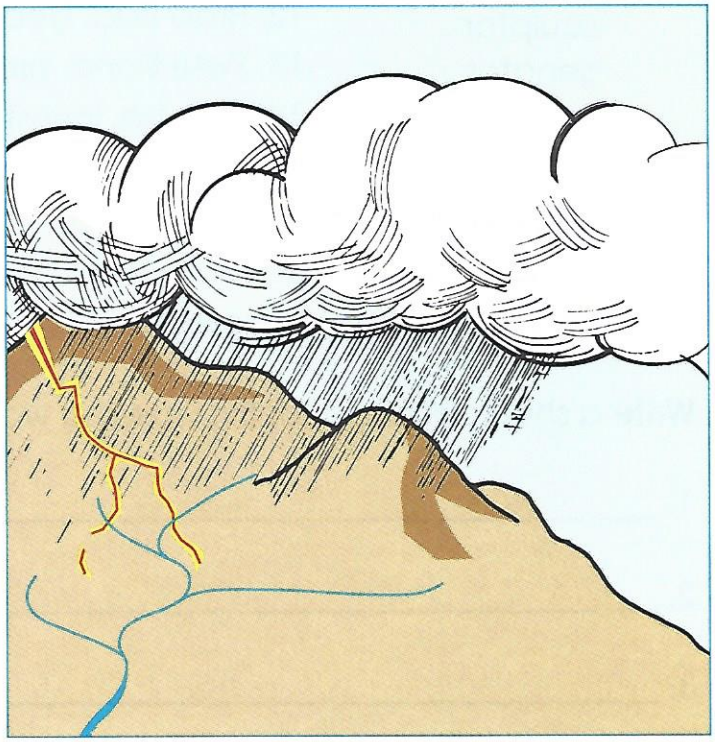
1. A line graph must contain the following elements:
   a. A title that clearly explains the subject of the graph
   b. Clearly labeled axes, numbers beginning at 0
   c. A legend, or key, to show what the different lines mean
   d. Specific points plotted on the graph
   e. Points connected with a line

2. A bar graph must contain the following elements:
   a. A title that clearly explains the subject of the graph
   b. Clearly labeled axes, numbers beginning at 0
   c. Shaded rectangular bars spanning from zero to the quantity represented



SCIENCE (Acid Rain)

BACKGROUND
Rain, snow and other kinds of precipitation that are polluted by acids are called *acid rain*. Acid rain has polluted our rivers, streams and lakes, causing many fish to die. Scientists also believe that acid rain affects how plants grow.



1. This experiment will involve using different strengths of acids and recording their effects on plant growth. Have your child write a question that asks what he/she wants to learn from the experiment.

2. Before beginning the experiment, ask your child to form a *hypothesis*, or prediction, of what the results will be. What kind of effect will watering a plant with "acid rain" have on its growth? Will the "acid rain" make the plant grow taller and stronger, or shorter and weaker?

3. One of the best ways to begin this project is to find information at the library about acids and acid rain. **Working with acids can be very dangerous. Review safety rules.** Be sure your child has read about different kinds of acids, the strengths of acids, how to measure the pH of an acid and how to handle acids.
   a. Have your child grow several plants in both the control and the experimental groups. The control plants should get regular water, not acid water.
   b. Have your child write a step-by-step description of the experiment, including a list of materials, the types of acid to be used, the kinds of plants to be used, how often he/she will water the plants, how much he/she will water the plants and how he/she will measure the plants' growth. Your child should also list controlled variables, such as the amount of sunlight, type of soil and temperature.
   c. Have your child make a chart to record data. The chart should include headings such as *Plant, Water pH Level, Amount of Water/Day, Height on Day 1, Height on Day 2*, etc.

Investigator Hector

author
bachelor
collector
conductor
conqueror
creator
dictator
director
editor
emperor
inspector
instructor
monitor
orator
professor
protector
sculptor
senator

Investigator Hector must investigate several people. Read the clues to identify each person's occupation. **Write** the correct spelling word in the blank.

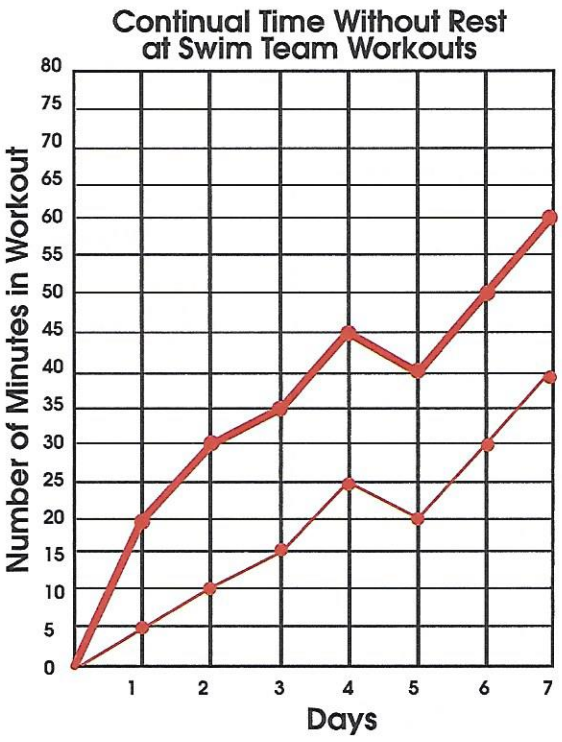
Clues

1. Arnie Andrew, acclaimed novelist _____
2. Darla Day, direction giver _____
3. Olive Oyle, opinionated speaker _____
4. Ernie Egoist, empire ruler _____
5. Clint Corn, card accumulator _____
6. Irene Ink, intelligent informer _____
7. Edgar Edge, eager reviser _____
8. Dastardly D., dreaded tyrant _____
9. Carl Carr, cartoon designer _____
10. Sue Smit, sincere Congresswoman _____
11. Sam Son, serious carver _____
12. Brad Bad, bearded single _____
13. Pete Pane, prominent teacher _____
14. Ivan Ize, investigative examiner _____
15. Casey Clark, choirmaster _____
16. Maggie May, money overseer _____
17. Conrad Carp, courageous victor _____
18. Prince Paul, powerful defender _____

Write a short definition for five spelling words.

1. _____
2. _____
3. _____
4. _____
5. _____

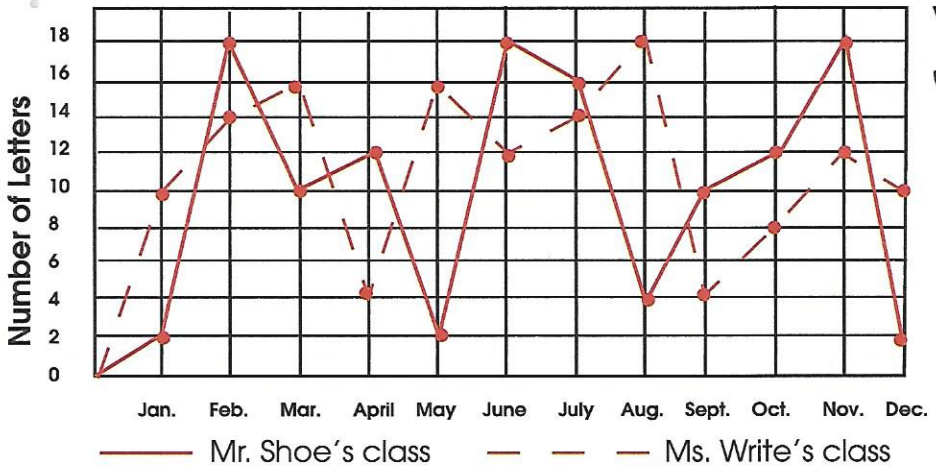
Double Line Graphs

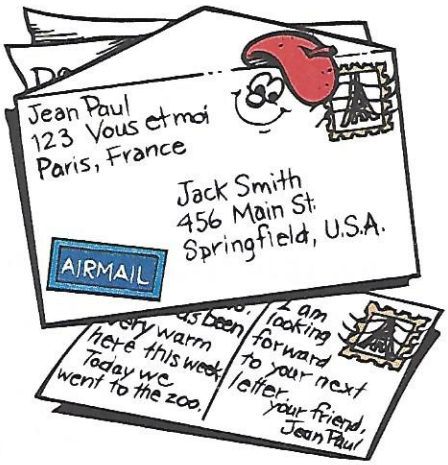


Cyndi swimming in week number 1

Cyndi swimming in week number 2

1. On the very first day of workouts, how soon after Cyndi started did she need to take a rest? _____
2. In week number 1, how soon did Cyndi need to rest on day number 3? _____
3. How long could she go without rest on the first day of the second week? _____
4. What is the range of week number 1? _____
5. What is the range of week number 2? _____
6. Did Cyndi's performance improve? _____

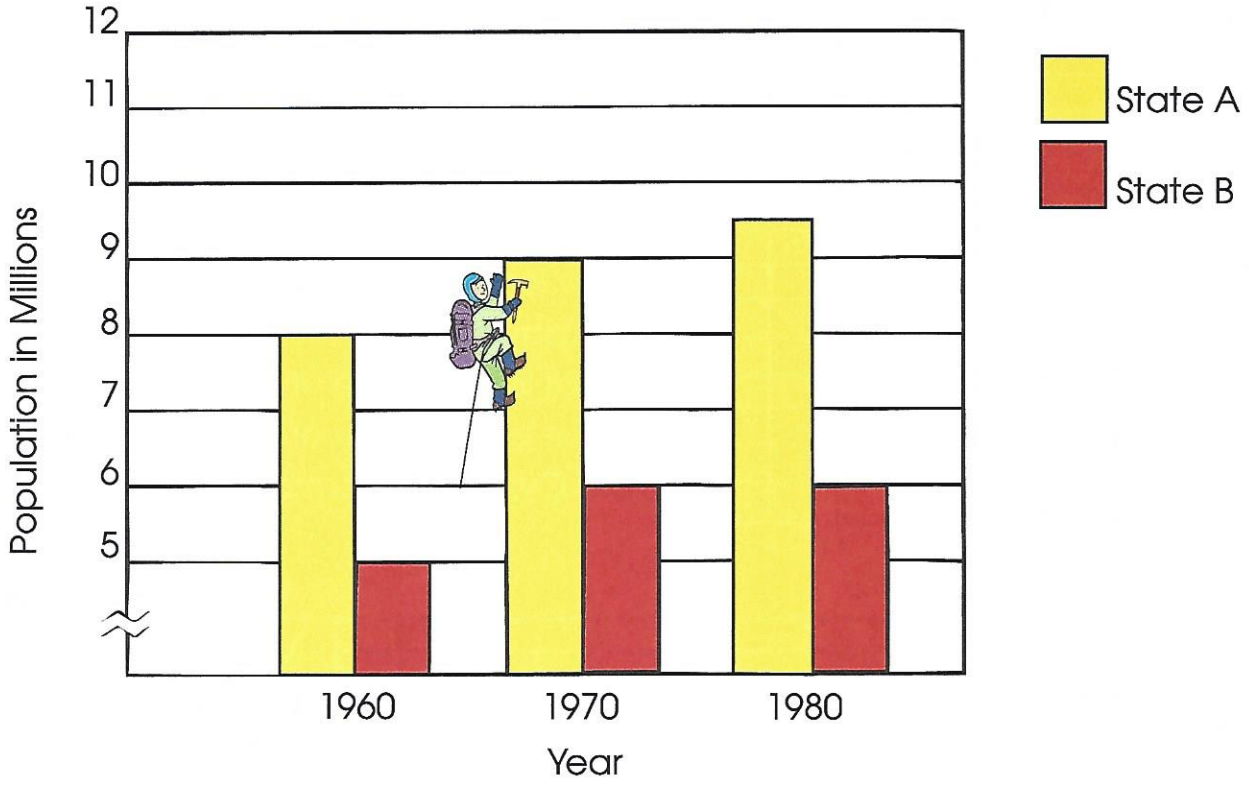




1. Which class received 18 letters more often within a 1-month period? _____
2. Which class received more letters the first month? _____
   The last month? _____
3. How many letters did Ms. Write's class receive in all? _____
4. Which class received more letters? _____
5. Which class only received two letters in January, May and December? _____

Double Bar Graphs

Double bar graphs allow the comparison of two sets of data. The following double bar graph compares the growth of two states. (Population figures are rounded to the nearest half million.)



Use the graph to **answer** the following questions.

1. What was the population of State A in 1960?

_____

2. What was the population of State B in 1960?

_____

3. Which state experienced greater growth in population from 1970 to 1980?

_____

4. What was the growth of State A from 1960 to 1970?

_____

5. What was State B's population gain from 1960 to 1970?

_____

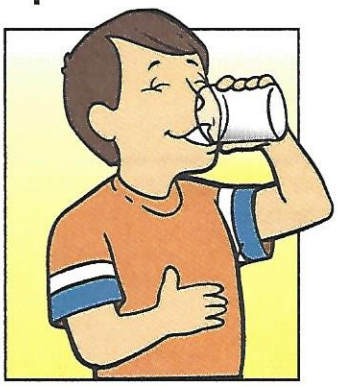
6. Which state had greater population growth from 1960 to 1980? What was it?

_____

Circle Graphs

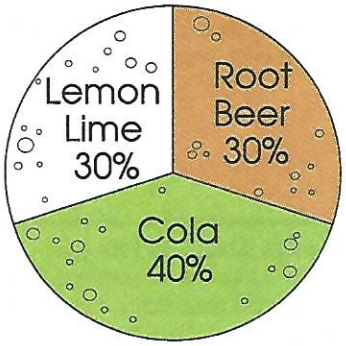
Circle graphs are best to use when a total amount has been divided into parts. Each part illustrates a portion of the whole.

Examples:



Favorite Soda Flavors

Cola	40%
Root Beer	30%
Lemon Lime	30%



Use the following information to complete the circle graphs.

1. Birthplaces of the first ten U.S. presidents:

Virginia	60%
Massachusetts	20%
New York	10%
South Carolina	10%

2. Recyclables collected on Ecology Day:

paper	50%
aluminum cans	15%
plastic	15%
rubber	10%
glass	10%

3. Pizza preferences:

cheese	30%
cheese and pepperoni	20%
cheese and mushroom	10%
the works	40%

	Language Skills	Spelling	Reading
Monday	Have your child write about an autobiographical incident. The piece should have a clear beginning, middle and end. Encourage your child to express what he/she learned from the incident and include humor, if appropriate.	Pretest your child on the following words: adhesive, creative, defensive, expensive, explosive, expressive, fugitive, impressive, impulsive, motive, native, negative, offensive, persuasive, positive, relative, repulsive, sensitive Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	**Poetry** Select poetry anthologies for this week's reading lessons. Introduce the books today.
Tuesday	**Public Speaking:** With your child, brainstorm reasons for speaking in public. Discuss good presentation habits. *See* Language Skills, Week 34, number 1. Have your child present the paper he/she wrote yesterday. Encourage him/her to use the presentation skills discussed today.	Review this week's spelling words. Have your child complete **Creative Native** (p. 336).	Discuss the poems your child is reading in a conference.
Wednesday	Teach your child how to introduce someone properly. *See* Language Skills, Week 34, number 2. Have your child practice making introductions.	Have your child use each of this week's spelling words correctly in a sentence.	Review some of the different types of poetry and show examples of each. *See* Reading, Week 34, number 1.
Thursday	Teach your child how to give a demonstration speech. A *demonstration speech* includes verbal instructions and visual modeling of a procedure. Have your child prepare and deliver a demonstration speech on a familiar topic.	Have your child study this week's spelling words.	Read aloud a poem for your child to interpret. *See* Reading, Week 34, number 2.
Friday	Discuss some possible issues and audiences for a persuasive speech. Help your child arrange to deliver a speech to an actual audience. Suggested audiences include township board, library board, school board or city council.	Give your child the final spelling test. Have your child record pretest and final test words in his/her word bank.	Hold a reading conference. Have your child practice reading poems aloud.

Math	Science	Social Studies
Graphing Have your child convert data into percentages, then degrees of a circle to create a circle graph. *See* Math, Week 34, number 1.	**Recycling** With your child, discuss the importance of recycling. Teach your child the three *R's—reduce, reuse* and *recycle. See* Science, Week 34, number 1.	**South America** What percentage of South America's population resides in each country? Have your child make a circle graph that depicts the percentage of the population of each country as compared to the total population of the continent. *See* Social Studies, Week 34, number 1.
Have your child make a circle graph to represent the colors found in a bag of candy. Have your child tally the number of each color on a chart, then calculate the percentages of each color to make the circle graph. Finally, have your child write three statements about the data he/she collected.	Help your child find out what items can be recycled in your community. Then, have him/her make a poster that will remind you and your family to set aside those items rather than throwing them in the trash.	The countries of South America have unique terrain, diverse populations and different lifestyles. Guide your child in researching the countries individually. For each country, your child may take a different approach. *See* Social Studies, Week 34, number 2. Have your child research and present information on the country of Argentina.
Use today to review and catch up on work related to statistics and graphing.	Collect cans, bottles, straws, foam containers, cups, wrappers, boxes, rubber bands, wire, bottle caps, magazines and other disposable materials. Let your child select several of these objects to use to create a sculpture or collage.	Have your child read about Simón Bolívar. *See* Social Studies, Week 34, number 3. Have your child research and present information on the country of Bolivia. *See* Social Studies, Week 34, number 2.
Test your child's understanding of statistics. Have your child complete **Statistics Test** (p. 337). Reteach any skills missed on the test, if necessary.	Have your child write a proposal of ways your family can reduce and reuse materials. *See* Science, Week 34, number 2.	Have your child research and present information on the country of Brazil. *See* Social Studies, Week 34, number 2.
Probability: Discuss the meaning of *probability. See* Math, Week 34, number 2. Ask your child to imagine that the letters of the word *probability* are put into a bag. Have your child determine the probability of picking each letter.	Have your child read about landfills and the problems associated with creating and maintaining them. Have your child draw a diagram showing a side view of a landfill. Ask your child to explain how a landfill differs from a dump.	Have your child research and present information on the country of Chile. *See* Social Studies, Week 34, number 2. Arrange for your child to perform a community service. Have your child write in his/her Social Studies Journal.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Public Speaking)

1. When speaking in public, keep in mind the following points:

   Know your subject. First, gather information and write it in abbreviated form. Then, write an introduction. Follow with details about the subject.

   Practice. Read what you are going to say from notes. Repeat the speech several times until you are well acquainted with the sequence and wording. Deliver the speech while looking in a mirror. Tape record yourself speaking and listen.

   Stand tall and look at your audience.

   Speak distinctly and loud enough for the audience to hear you clearly.

   Speak with appropriate expression. Use your notes only as a reminder. Avoid "filler" words like "uh" or "um."

2. Teach your child appropriate language for introducing two people who do not know each other. Teach your child to use the names of both people and to give some information that will help them understand the other's relationship to you. The italicized words in the example below explain the relationship of each person to the speaker. Using just a name will mean little to the two people you are introducing.

   Example: "Dr. Bouchard, I'd like you to meet *my friend* Maggie. Maggie, this is *my doctor* who is also *my aunt's neighbor.*"

READING (Poetry)

1. Discuss what poetry is. With your child, brainstorm a list of different types of poetry (rhyming, free verse, limerick, cinquain, haiku, ballad, shape, etc.). Also discuss some of the literary devices commonly used in poetry, such as *rhyme, rhythm, alliteration, repetition, onomatopoeia* and *visual arrangement* of words.

2. Read aloud one verse at a time of a multi-verse poem, such as "Late Butterflies" by Howard Nemerov. Do not tell your child the title of the poem during the first reading. Discuss your child's interpretation after each verse. Read the poem a second time. This time, tell your child the title and read the poem in its entirety. If your child visualizes the poem any differently, ask him/her to describe the difference. Have your child fold a sheet of paper into six sections (or the number of verses) and illustrate each verse in order.

MATH (Graphing)

1. Have your child complete the chart using the given data from a bake sale held at the library. Then, have your child make a circle graph showing percentages based on this information.

Goods Sold	Number of Items	Percent	Degrees of the Circle
Cupcakes	30		
Layer Cakes	15		
Brownies	35		
Carrot Cakes	20		
Oatmeal Cookies	100		
Chocolate Chip Cookies	150		

2. *Probability* is the likelihood that a particular event will occur. Probability is expressed as a ratio in fraction form. A *probability ratio* compares the number of favorable outcomes to the total number of possible outcomes.

   Example: What is the probability of a coin landing heads up on one toss? There are two sides to the coin so there are two possible outcomes to the toss. There is one favorable outcome—heads. The probability is 1 out of 2 or $^1/_2$.

SCIENCE (Recycling)

1. With your child, brainstorm a list of objects and materials that can be reused, such as cardboard boxes, plastic spray bottles, glass containers, paper bags, plastic cups and clothing. Then, list objects and materials that can be recycled, such as newspapers, paper, cardboard boxes, plastic bottles and glass jars. Discuss ways in which your child can help reduce his/her own consumption of nonrenewable resources.

2. *Reduce:* We have become a "disposable" society. We throw away paper and plastic plates, cups, silverware, disposable diapers, paper towels, plastic garbage bags, products that come with excessive packaging and more. Be careful when you shop!

   Reduce: We often throw away broken things that could be repaired. How many times have you tossed out a toy or article of clothing because it was easier to buy a new one than to repair it?

   Reuse: We can reuse lots of things. Use both sides of a sheet of paper. Empty containers can be used for storage. Scraps and other throwaways make wonderful art materials.

   Reuse: Sometimes our trash can be someone else's treasure. Take your unwanted items to a homeless shelter or to a social service organization. Just make sure your items are not *too* well used.

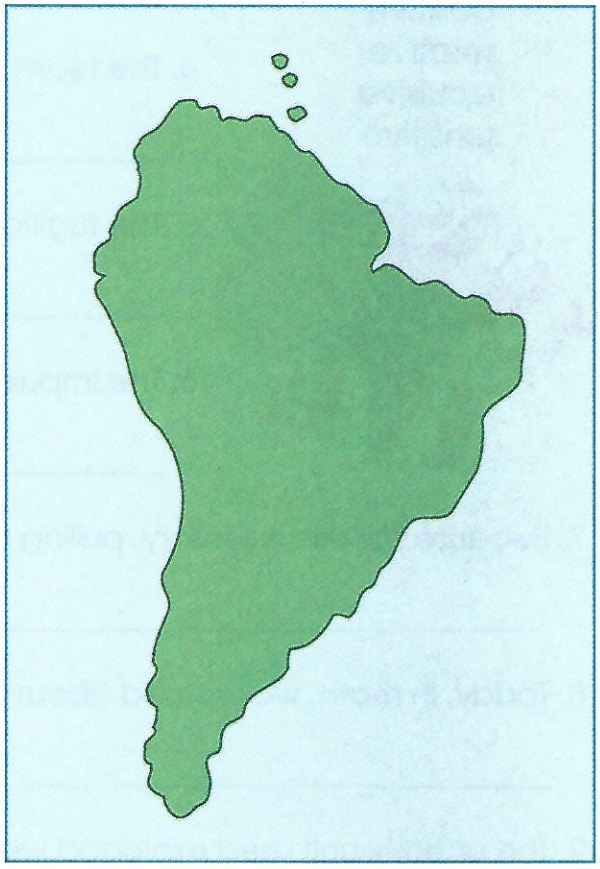
SOCIAL STUDIES (South America)

1. Refer to a current encyclopedia for population information. Have your child calculate the total population of South America by adding the population figures from the twelve countries and two dependencies. Then, have your child calculate what percentage each country's population is of the total.

2. As your child studies the countries of South America, have him/her consider population, physical features, history, ethnic make-up, industry, agriculture, natural resources, foods, culture, economy, language, tourism and politics. Have your child choose a different area of focus for each country and a unique way in which to present the data. Each presentation may take one of the following forms:

map	report	diorama
drawing	essay	poster
interview	comic strip	poem
slide show	graph	puppet show
time line	model	demonstration

3. Simón Bolívar is often called the "George Washington of South America." Have your child read to find out whether the two men could have known each other. Have your child imagine what advice Bolívar might have asked of Washington and what advice Washington might have given. Discuss whether or not "George Washington of South America" is an appropriate nickname for Bolívar. Ask your child to explain why or why not.



Creative Native

adhesive
creative
defensive
expensive
explosive
expressive
fugitive
impressive
impulsive
motive
native
negative
offensive
persuasive
positive
relative
repulsive
sensitive

Circle the two incorrect words in each sentence.
Write the correct spelling word in the blanks.

1. The detective tried to find a motion for the repulsion murder.

_____ , _____

2. Susie is very expression and persuaded when she speaks.

_____ , _____

3. My related wore an expenses leather coat to the mall.

_____ , _____

4. The team used an impression defensely strategy in the game.

_____ , _____

5. The fugition was a nation of Canada.

_____ , _____

6. The impulsed child destroyed his creator artwork.

_____ , _____

7. Because my skin is sensory, pulling the adhesion tape hurt.

_____ , _____

8. Today, in math, we learned about position and negated numbers.

_____ , _____

9. The offensly unit used exploded weapons to defeat its foe.

_____ , _____

Statistics Test

Create a line, circle or bar graph from the information given.

1. Kids' favorite foods:

Fast Food	Sweets	Fruit	Chips
100	220	85	95

2. Miles traveled by a salesman in 1 week:

Monday	Tuesday	Wednesday	Thursday	Friday
250	75	167	101	87

3. Amount of homework per night for each grade:

1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
$\frac{1}{2}$ hr.	1 hr.	2 hr.	2 hr.	3 hr.	$3\frac{1}{2}$ hr

4. Weather in Anytown:

Type	Autumn	Winter
Sunny	18	30
Rainy	3	10
Cloudy	6	20
Snowy	3	10

	Language Skills	Spelling	Reading
Monday	**Research Report** Discuss the procedure for organizing and writing a research report. *See* Language Skills, Week 35, number 1. Help your child choose a topic for a report and begin the research process.	Pretest your child on the following words: ability majority possibility community minority prosperity curiosity oddity quantity generosity opportunity security immunity personality simplicity longevity popularity validity Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Introduce this week's reading selection. Suggestion: *Old Possum's Book of Practical Cats* by T. S. Eliot.
Tuesday	Review how to *skim,* use an index and locate resources on a given topic. Help your child locate information on his/her topic in a variety of resources.	Review this week's spelling words. Have your child complete **Personality Plus** (p. 342).	**Characterization:** Discuss the current reading book in a conference. Focus on characterization.
Wednesday	Teach your child how to take complete notes without copying the text word for word. Write only the main ideas and exact facts that relate to the topic of the report. It is important to write notes legibly, but grammar is not an issue. Use abbreviations, write numerals and draw sketches when helpful. Introduce the concept of *plagiarism. See* Language Skills, Week 35, number 2.	Have your child use each of this week's spelling words correctly in a sentence.	Read aloud several poems for your child. Have him/her draw a picture based on the description in each poem.
Thursday	*Lectures* and *interviews* are two other types of sources that can be useful in researching a topic. Teach your child how to take notes from an oral presentation. *See* Language Skills, Week 35, number 3.	Have your child study this week's spelling words.	Play the music from the Broadway musical "Cats" by Andrew Lloyd Webber. Ask your child to listen for familiar lyrics.
Friday	Have your child continue to take notes from a variety of resources for the research report. Then, have your child organize his/her notes into a logical sequence.	Give your child the final spelling test. Have your child record pretest and final test words in his/her word bank.	Hold a reading conference. Have your child compare Eliot's book and Webber's music.

Math	Science	Social Studies
Probability A canister contains 200 jelly beans—75 cherry, 36 lime, 44 grape and 45 orange. What is the probability of choosing the given flavors? grape — orange cherry — grape or lime orange or cherry — lime lemon — grape or cherry *See* Math, Week 35, number 1.	**Pollution** Define the term *pollution*. Pollution is a problem in many ecosystems. Air and water are two common types of pollution. Ask your child to name other types of pollution. Discuss the damage caused by pollution. Have your child list and describe substances that pollute the air and water. *See* Science, Week 35, number 1.	**South America** Have your child research and present information on the country of Columbia. *See* Social Studies, Week 34, number 2.
Probability is a comparison of the number of favorable outcomes with the total possible outcomes. How do you determine the total possible outcomes of a compound event? *See* Math, Week 35, number 2. Have your child complete **Tree Diagrams and Compound Events** (p. 343).	Help your child conduct an experiment to find out if there is pollution in your area. Have your child cut 3" x 5" rectangles of adhesive shelf paper. Tape the shelf paper, sticky side out, to index cards. Punch a hole in each card and hang the cards by a piece of string in various locations in and around your house. After several weeks, examine the cards. Which locations proved to have the most pollutants in the air?	Have your child research and present information on the country of Ecuador. *See* Social Studies, Week 34, number 2.
Making tree diagrams can be cumbersome work, especially when there are many possible outcomes. Teach your child how to use multiplication to achieve the same results. *See* Math, Week 35, number 3.	The word *ozone* has more than one meaning. Ozone is created naturally in the earth's stratosphere; it blocks out the harmful ultraviolet rays from the sun. This is considered "good" ozone. Have your child read about the "bad" ozone. *See* Science, Week 35, number 2. Ask your child to design a car that does not run on gas and does not produce hydrocarbons.	Have your child research and present information on the country of Guyana. *See* Social Studies, Week 34, number 2.
Integers: Introduce your child to *integers* in a realistic situation. *See* Math, Week 35, number 4. Draw a number line to illustrate to your child the relationship between negative and positive integers.	Have your child write a haiku about an aspect of ecology. **Example:** Brown chirping insect, Munching on the wet, green grass, Watching out for frogs.	Have your child research and present information on the country of Paraguay. *See* Social Studies, Week 34, number 2.
Make a large number line on the floor (with shelf paper) or sidewalk (with sidewalk chalk). Plot zero in the center, positive numbers to the right of zero and negative numbers to the left. Play a game in which you tell your child to walk on the number line in positive and negative directions. *See* Math, Week 35, number 5.	Help your child make a list of hazardous chemicals found in your home. Have him/her find out how to dispose of these chemicals properly. What alternatives are there to using these chemicals?	Have your child research and present information on the country of Peru. *See* Social Studies, Week 34, number 2. Arrange for your child to perform a community service. Have your child write in his/her Social Studies Journal.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Research Report)

1. Before your child begins working on the research report, review some organizational steps. It may be helpful to make a chart of these steps for your child's reference.
   a. Select a topic.
   b. Gather reference materials and narrow the topic.
   c. Make a list of questions about the narrow topic. Write each question on an index card.
   d. Using the reference materials, find answers to the questions and write them on the cards. Note the source of the information for use in the bibliography.
   e. If two sources present conflicting information, look at a third source to confirm one or the other.
   f. Organize the note cards in a logical sequence.
   g. Write an outline.
   h. Write a rough draft.
   i. Revise and edit the report.
   j. Write a final draft.

2. *Plagiarism* is the act of passing off another's words or ideas as your own. Do not copy words exactly from a resource without quoting or otherwise acknowledging the author.

   You may wish to quote an author if you . . .

   a. want to lend authority to your words.
   b. think the author has expressed an idea so well that you want to repeat it in your report.

3. Taking notes on a lecture or interview is difficult, since the information is said only once. Teach your child to listen carefully, filtering the information and jotting down only the important points and interesting facts. Remind your child that "correctness" is not an issue and that using abbreviations and numbers is acceptable. Give your child practice taking notes in a lecture situation. Read the following passage while your child takes notes. After the reading, discuss your child's notes. Point out any strengths and areas that need improvment.

   Alaska covers more territory than any of the fifty United States yet ranks forty-ninth in population. There is so much land that it would be possible to give one square mile to every person in the state. Alaska also contains the United States' highest point and the northernmost city. Mount McKinley is 20,320 feet high. Barrow, Alaska, is almost at the top of the world.

   California, by contrast, ranks third in state land size, with about 160,000 square miles, and first in population, with nearly 30,000,000. The population density of California is 188 persons per square mile. That is 188 times more dense than Alaska's population density. California does hold some record-breaking geographic statistics. It contains the lowest point, Death Valley, and the highest mountain in the forty-eight contiguous states, Mount Whitney.

MATH (Probability/Integers)

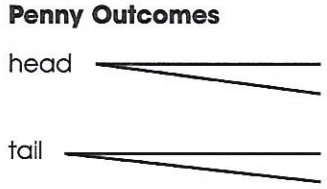
1. Probability ranges from 0 (an impossible occurrence) to 1 (an event that is certain to occur). Add together the probabilities of choosing grape, orange, cherry and lime jelly beans. The total should be 1, since it is certain that you will choose one of those flavors.

   Answers:

grape	$^{44}/_{200}$	orange	$^{45}/_{200}$
cherry	$^{75}/_{200}$	grape or lime	$^{80}/_{200}$
orange or cherry	$^{120}/_{200}$	lime	$^{36}/_{200}$
lemon	$^{0}/_{200}$	grape or cherry	$^{119}/_{200}$

   Imagine that someone eats all of the cherry-flavored jelly beans. Discuss what happens to the probability of choosing each of the remaining flavors. (The probability increases for the other flavors.)

2. If you toss one coin, there are only two possible outcomes: heads and tails. If you toss a penny and a nickel, the possible outcomes increase. To find out the possible outcomes, you can draw a *tree diagram*. First, list all the possibilities with one coin (heads and tails). Then, next to each possibility, list all the possible outcomes of the other coin.



There are four possible outcomes:
1. penny head, nickel head
2. penny head, nickel tail
3. penny tail, nickel head
4. penny tail, nickel tail

Out of four possible outcomes, what is the probability that you will get a penny head and a nickel head? ($^1/_4$) What is the probability that you will get two heads? ($^1/_4$) What is the probability that you will get one head and one tail? ($^2/_4$ or $^1/_2$)

3. In a compound event, multiply the possible outcomes of each event to determine the total possible outcomes.

Example: If you roll three dice at once, what is the total number of ways the dice could land? Each die has 6 possible outcomes. Multiply 6 x 6 x 6 to get the total possible outcomes. The total is 216.

Ask your child to determine the number of possible outcomes in the following scenario:

A car dealership offers 32 different models of vehicles. Each model offers a choice of 8 interior colors, 8 exterior colors and the option of automatic or manual transmission. Use multiplication to determine how many combinations are possible. *Answer: 32 x 8 x 8 x 2 = 4,096 possibilities.*

4. Integers include all positive whole numbers, all negative whole numbers and zero. The opposite of 3 is – 3 as evidenced in the following equation: 3 + – 3 = 0. Both numbers are an equal distance from zero on a number line. It may be confusing to talk about negative numbers. There are many real situations in which your child may explore integers. A checkbook has credits and debits—the debits are negative numbers. Think of a football field with the center line as zero and the positive and negative yards on either side. Think of the surface of the water as zero and talk about diving below the water as a negative number and rising above the water as positive. A thermometer is also a natural tool for exploring integers. Think of your child's interests, and have him/her practice adding positive and negative integers in a realistic scenario.

5. Have your child stand on the number line at zero. Then, say an addition sentence for him/her to demonstrate by walking on the number line.

Example: 6 + – 7 = ___
Your child walks six steps to the right, then seven steps to the left. This will bring the child to – 1.

Here are some other problems to get you started:

6 + – 5 =	2 + 5 =	– 3 + –5 =	– 3 + 5 =
1 + – 2 =	– 8 + 2 =	– 3 + –2 =	– 4 + 8 =
3 + – 2 + 5 + – 7 + 1 =		– 2 + 4 + –1 + 5 =	

SCIENCE (Pollution)

1. Some of the substances that pollute air and water include household and garden chemicals, insecticides, herbicides, smoke, exhaust from motor vehicles, trash, industrial wastes, mining wastes, oil spills, acid rain and chemical spills.

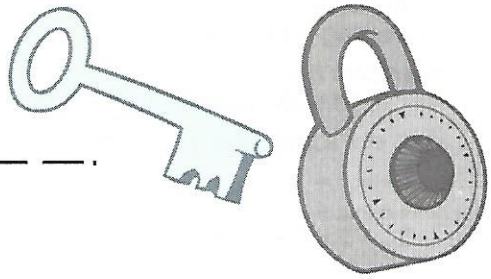
2. Ozone can also be a toxic gas called *smog*. Smog is an air pollutant that hovers close above the earth's surface and affects the air we breathe. Smog can irritate our eyes, burn our throats and cause damage to our forests and crops. The main chemical reaction that creates ozone occurs when we mix three main ingredients: 1) the two main components of air, nitrogen and oxygen, in high temperatures form *nitrogen oxides;* 2) *hydrocarbons*, which come from the exhaust tailpipes of cars and trucks; and 3) *sunlight*.

Personality Plus

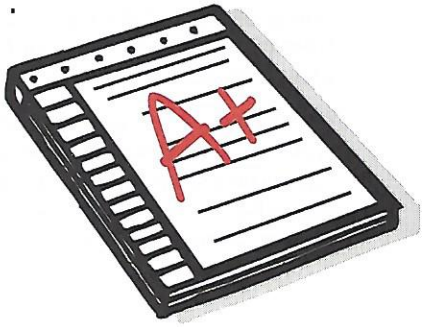
community
validity
immunity
majority
minority
ability
quantity
personality
opportunity
generosity
curiosity
popularity
oddity
simplicity
security
prosperity
longevity
possibility

Complete each phrase with a spelling word. The words will appear in alphabetical order.

1. Don't waste your _ _ _ _ _ _ _ _.
2. I live in a _ _ _ _ _ _ _ _ _.
3. _ _ _ _ _ _ _ _ _ killed the cat.
4. The wealthy man's _ _ _ _ _ _ _ _ _ _ helped those less fortunate.
5. John has an _ _ _ _ _ _ _ _ to the measles.
6. _ _ _ _ _ _ _ _ runs in the family.
7. _ _ _ _ _ _ _ _ rules!
8. The rest of you are in the _ _ _ _ _ _ _ _.
9. Mr. Smith's strange collection was an _ _ _ _ _ _.
10. This is your big _ _ _ _ _ _ _ _ _ _.
11. Marie has a charming _ _ _ _ _ _ _ _ _ _.
12. Who will win the _ _ _ _ _ _ _ _ _ contest?
13. The _ _ _ _ _ _ _ _ _ _ always exists.

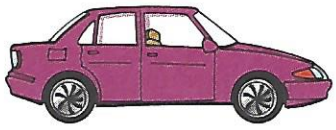


14. Good fortune brings _ _ _ _ _ _ _ _ _ _.
15. It is sold in a large _ _ _ _ _ _ _ _.
16. There is _ _ _ _ _ _ _ _ in numbers.
17. Life is made easier by _ _ _ _ _ _ _ _ _ _.
18. The _ _ _ _ _ _ _ _ of her test scores was confirmed by the teacher.



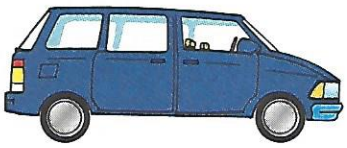
Tree Diagrams & Compound Events

Mary's family is looking at new cars. They have narrowed it down to the following choices. The tree diagram below shows the possible outcomes.



Sedan

- Gray
  - Gray Interior
  - White Interior
  - Red Interior
- White
  - Gray Interior
  - White Interior
  - Red Interior



Van

- Gray
  - Gray Interior
  - White Interior
  - Red Interior
- White
  - Gray Interior
  - White Interior
  - Red Interior

1. The compound event described above has how many possible outcomes? _____

2. What is the probability that Mary's family will select a gray sedan with a black interior? _____

3. What is the probability that they will select a gray van? _____

4. What is the probability that they will select a white van with a red interior? _____

Extension: On another sheet of paper, show a different way to figure the number of possible outcomes in this compound event without drawing a tree diagram.

	Language Skills	Spelling	Reading
Monday	**Research Report** Have your child write a rough draft of his/her report. The report should include facts learned from the research. Remind your child to use quotation marks and give credit to the author when copying material directly from a text.	Select words from the past 8 weeks for this week's pretest. Have your child correct the pretest and make a list of any misspelled words. Have your child study the list this week.	**Review of Reading** Introduce this week's reading selection or continue with the book from last week.
Tuesday	Read through the rough draft of the report with your child. Discuss. Offer some constructive criticism. Review proofreading marks. *See* Language Skills, Week 36, number 1. Have your child proofread and revise the rough draft.	Ask your child to find spelling words from the past 8 weeks that contain identifiable root words. Have your child list each spelling word and its root word.	Discuss the current reading book in a conference. Focus on the author's style.
Wednesday	Teach your child how to make a bibliography. *See* Language Skills, Week 36, number 2. Refer to a writing handbook or other resource for appropriate bibliography format for books, encyclopedias,magazines, newspapers, videos and interviews. Have your child make a bibliography of sources for the report.	Give your child clues that will lead him/her to guess a spelling word. Clues may include hints as to the word's meaning, origin, number of syllables, root words or affixes.	With your child, brainstorm a list of different types of stories, such as action, biography, fable, myth, tragedy, novel and folktale. Discuss elements of a story that make reading interesting, such as dialogue, mood, tempo and descriptive passages. Have your child complete a copy of **Story Organizer** (p. 19) for this week's book.
Thursday	Have your child do a final proofread and make a final copy of the research report.	Have your child make a crossword puzzle using spelling words from the past 8 weeks. Have your child use definitions as clues.	Have your child make a chart of the books he/she has read this year. Ask your child to make up headings for the chart to communicate what he/she has learned about literature this year. Possible headings include *title, author, genre, rating, mood, characterization, conflict, solution, best scene, lesson learned* and *recommendation.*
Friday	Have your child gather his/her best and favorite writing and artwork from this year. Help your child publish his/her work in a literary magazine. Make copies of the magazine for friends and relatives.	Give your child the final spelling test.	Hold a final reading conference. Help your child make a list of books to read over the summer.

Math	Science	Social Studies
Integers Make a desk-size number line with positive and negative integers for your child's reference. Discuss strategies for adding positive and negative integers. Work through several problems together with your child. *See* Math, Week 36, number 1. Have your child complete the top half of **Integers** (p. 348).	**Ecology** The greenhouse effect theory holds that the temperature of the earth is gradually increasing and will soon alter the ecology of the earth. *See* Science, Week 36, number 1. Ask your child: *What do you think the effects on the ecology of the earth will be if the temperature continues to increase?*	Have your child research and present information on the country of Suriname. *See* Social Studies, Week 34, number 2.
Have your child complete situational problems that involve reading a thermometer. *See* Math, Week 36, number 2.	Help your child build a terrarium to simulate the greenhouse effect. *See* Science, Week 36, number 2.	Have your child research and present information on the country of Uruguay. *See* Social Studies, Week 34, number 2.
Subtraction with integers can be tricky. Explain that to subtract an integer, you must add its opposite. **Example:** In the problem 4 – -6, add the opposite of -6 which is +6. Rewrite the equation as 4 + +6 = 10. The difference is 10. Try it on a number line. The difference between +4 and –6 is 10. Give your child other subtraction problems to solve. *See* Math, Week 36, number 3.	Have your child interview an ecologist about his/her work. Help your child prepare questions prior to the interview about the necessary training for such a job, a typical day and what makes the job interesting. *See* Science, Week 36, number 3.	Have your child research and present information on the country of Venezuela. *See* Social Studies, Week 34, number 2.
Have your child complete the bottom half of **Integers** (p. 348). Review math skills covered this year.	Ask your child to imagine life on earth 1,000 years into the future. It will be quite different from life today. *If a group of future scientists uncovered one of our landfills, what could they learn about us? What do you think they would think of us?*	Review your study of the Western Hemisphere. Have your child complete **Mapping Mania** (pgs. 350–351).
Test your child's understanding of math concepts covered this year. Have your child complete **Overview Test** (p. 349). Reteach any skills missed on the test, if necessary.	Review concepts from the unit on ecology. Have your child write a paragraph summarizing what he/she has learned about ecology. Then, have your child write a second paragraph describing a practice he/she will change based on this learning.	Have your child evaluate his/her experience with community service. What has the child learned?

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Research Report)

1. Teach your child how to use the following proofreader's marks:


Use a capital letter


Indent


Insert a period


Start a new paragraph


Insert a comma


Insert quotation marks


Insert


Insert an apostrophe


Use a lower-case letter


Delete

2. A bibliography is a list of books or articles used in the report. The bibliography provides information about the resources so the reader can see where the writer of the report got his/her information. Each entry in the bibliography includes the title, author, publisher, location of publisher and date published. Some include page numbers or volume numbers.

MATH (Integers)

1. Give your child the following problems to solve. Discuss strategies as your child solves the problems.

4 + – 5 =	6 + –8 =	–3 + –4 =	8 + 9 =
–4 + 8 =	3 + –9 =	13 + –14 =	–8 + 0 =
–24 + 14 =	–3 + 15 =	–16 + 16 =	–2 + 12 =

2. Have your child complete the following situational problems by adding and subtracting integers.
   a. In the morning, the thermometer registered –3°F. It later rose 8°, then dropped 6° by the end of the day. What was the temperature at the end of the day? (–1°F)
   b. The next day was much warmer. It started at 12°F. It later rose 8°, then dropped 6° by the end of the day. What was the temperature at the end of the day? (14°F)
   c. The storm was responsible for a very low temperature the following morning. It was –12°F, then it dropped 8° more, rose 15°, then dropped again 4°. What was the final temperature? (–9°F)
   d. The thermometer registered 28°F on Thursday morning. It quickly dropped 5°, then rose 15°, then dropped another 4°. The day ended with the temperature rising another 8°. What was the temperature at the end of the day? (42°F)
   e. Friday's temperature started at 16°F. It then dropped 3°, rose 21°, dropped 6°, then rose 4°. What was the ending temperature? (32°F)

3. Give your child the following problems to solve. Discuss strategies as your child works the problems.

10 – (–2) =	7 – (–4) =	–6 – 8 =	8 – (–9) =
–18 – 9 =	– 5 – (–8) =	15 – 20 =	– 32 – (–10) =
83 – (–21) =	25 – (–5) =	21 – 40 =	– 3 – (–3) =

SCIENCE (Ecology)

1. Ask your child to describe the temperature inside a closed car that has been sitting a long time in the sun during the summer. Explain that the heat rays that enter the car are trapped inside the car by the glass. The temperature increases inside the car. This is similar to the *greenhouse effect.* The atmosphere naturally traps heat and keeps the earth warm. However, since the increased use of fossil fuels has increased the amount of carbon dioxide in the atmosphere, the temperature of the earth has increased. We help prevent the addition of carbon dioxide and other gases to our atmosphere by reducing the amount of fossil fuels we use and by reducing the clear cutting of forests.

2. Place several inches of soil in the bottom of an aquarium. Plant small plants in the soil and water them lightly. Place a thermometer inside and cover the aquarium with plastic wrap. Set the aquarium in direct sunlight. Have your child observe the *terrarium* over a period of several weeks and record the temperature changes during this period. How do the plants react? Simulate the greenhouse effect by shining a heat lamp into the aquarium on the side opposite of the sun. Observe the plants over several days to see how they react.

3. Arrange for your child to interview one of the following people about his/her vocation or hobby as it relates to the field of ecology.

ecologist	wildlife manager	agriculture agent
soil conservationist	gardener	game and fish representative
park ranger	marine biologist	someone who works at an aquarium
fishing enthusiast	horticulturist	someone who raises earthworms

Integers

Solve the problems. **Write** your answers here.

1. $-12 + 1 =$
2. $-7 + 9 =$
3. $-2 + 10 =$
4. $-14 + 7 =$
5. $-12 + 12 =$
6. $-14 + 3 =$
7. $-10 + -10 =$
8. $-5 + 0 =$
9. $-12 + -11 =$
10. $-6 + 9 =$
11. $-8 + 12 =$
12. $-1 + 12 =$
13. $-15 + -10 =$
14. $-2 + 8 =$
15. $-30 + 2 =$
16. $-4 + 5 =$
17. $10 - (-14) =$
18. $-14 - (-7) =$
19. $10 - (-3) =$
20. $-10 - 6 =$
21. $-5 - (-5) =$
22. $-8 - (-9) =$
23. $-30 - (-8) =$
24. $-14 - 9 =$
25. $-16 - (-4) =$
26. $20 - 30 =$
27. $-10 - 4 =$

Overview Test

1. **Write** 7,245,208.07 in words. _____

_____

2. Round 3,657.189 . . .

to the nearest hundredth. _____

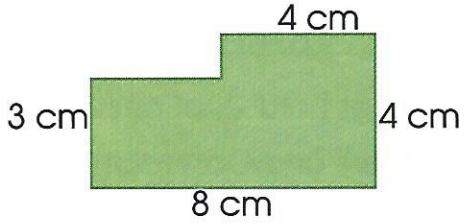
to the nearest whole number. _____

3. $d \times 14 = 56$

$d =$ _____

4. What is the perimeter? _____

What is the area? _____



5. $\begin{array}{r} 792 \\ \times\ 34 \\ \hline \end{array}$

6. $2^5 =$ _____

7. $23\overline{)653}$ _____

8. 50 hours =

_____ days

_____ hours

9. $15 + 3 \times 2 =$ _____

10. $\begin{array}{r} 0.148 \\ \times\ 0.7 \\ \hline \end{array}$

11. $2.6\overline{)15.47}$ _____

12. $\frac{3}{5} \times \frac{10}{18} =$

13. $2\frac{1}{2} \div \frac{1}{2} =$

14. $2\frac{5}{8} + \frac{3}{4} =$

15. $17 - 5\frac{1}{2} =$

16. 15% of 20 = _____

17. 14 is _____ % of 20

18. $\frac{5}{40} = \frac{2}{m}$

$m =$ _____

19. $-6 + 9 =$ _____

20. $14 - (-12) =$ _____

Mapping Mania

Refer to a map of Canada and the United States to complete the following.

1. A group of islands close to each other is called an archipelago. Name the archipelago that extends southwest from Alaska. _____
2. What state is made up of an archipelago? _____
3. Why are Texas, Louisiana, Mississippi, Alabama and Florida known as the Gulf states? _____
4. The Great Lakes hold $\frac{1}{5}$ of all surface freshwater in the world. Name the American states and Canadian province that border these lakes. _____

   _____
5. What Canadian province retains its French heritage and language? _____
6. Name the Canadian Maritime Provinces. _____

   _____
7. Name the oceans that border Canada. _____
8. Name the American state that borders two oceans. _____

   Name the oceans. _____
9. Name the state made up of two peninsulas. _____
10. Name the three major mountain chains found in North America. _____

    _____
11. Locate a map with time zones. Find the number of time zones within the contiguous United States. _____ Name them. _____

    _____
12. Name the states that have the Mississippi River as a border. _____

    _____

Challenge!
There is one place in North America where you could get into a boat at one state capital, sail to the nearby capital of a Canadian province and continue along the coast to another state capital. Name the three capitals. _____

_____

Mapping Mania

Refer to a map of Central America and South America to complete the following.

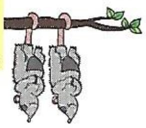
1. Name the large peninsula in Mexico that separates the Gulf of Mexico from the Caribbean. _____
2. Name the four nations that still have possessions in the Caribbean region. _____
3. Which Central American country is not officially Spanish speaking? (It was formerly British Honduras.) _____
4. In 1949, this Central American country abolished its army. Today, it is one of the most stable countries in Latin America. Its president won a Nobel Peace Prize in 1987 for working to end fighting in Central America. It lies west of Panama and south of Nicaragua. Identify the country. _____
5. Name the countries that border the Gulf of Mexico. _____
6. Which South American countries lie on the equator? _____
7. Does any South American country lie completely outside the tropics? If so, which one? _____
8. Name the cape at the southern tip of South America. _____
9. Name three countries in South America where Spanish is not the official language. _____
10. In 1935, one of the great scientists in history, Charles Darwin, spent a month in the Galápagos Islands, part of Ecuador. His visit was the inspiration for the theory of natural selection that revolutionized science. Give the absolute and relative locations of the Galápagos. _____
11. Name the only country in South America without a coastline. _____

Seeing Double

accept
accurate
arrange
ballot
commit
common
different
install
necessary
occasion
opposite
quarrel
really
recess
support
surround
terrible
tomorrow

Add letters to the double consonants to spell the words on the list and complete each short phrase.

1. ba ll ot box
2. co mm it a crime
3. te rr ible day
4. a cc ept it
5. insta ll a program
6. rea ll y nice
7. rece ss time
8. a rr ange neatly
9. special o cc asion
10. co mm on name
11. su pp ort group
12. lover's qua rr el
13. di ff erent choice
14. su rr ound sound
15. o pp osite end
16. a cc urate count
17. nece ss ary work
18. a new tomo rr ow



Choose eight words from the list. Separate the words into syllables and **rewrite** them below.

ac/ept, ac/cu/rate, nec/es/sar/y, oc/cas/sion
ar/range, bal/lot, op/po/site, quar/rel
com/mit, com/mon, re/al/ly, re/cess
dif/fer/ent, in/stall, sup/port, sur/round
ter/ri/ble, to/mor/row

page 18

Story Organizer

Author ____________ Date ______
Title ____________

Vocabulary **Definitions**

Setting:
Characters:

Answers will vary.

Problem:

Events:

Solution:

Did you enjoy this story? 1 2 3 4 5 6
Not at all — Very much!

page 19

Down the Ladder

Follow the directions to get to the bottom of the ladder.
Start with this number. 4,351,614,926

Add 4,000,000 to the number.	4,355,614,926
Subtract 40,000 from the number.	4,355,574,926
Decrease the number by 4,000.	4,355,570,926
Increase the number by 3,000,000.	4,358,570,926
Increase it by 5,000,000.	4,363,570,926
Subtract 10 from the number.	4,363,570,916
Subtract 40,000 from the number.	4,363,530,916
Add 30,000 to the number.	4,363,560,916
Increase the number by 2,000.	4,363,562,916

YOU MADE IT TO THE BOTTOM!

A quick review:
99 plus 1,001 equals 1,100
999 plus 100,001 equals 101,100
9,999 plus 100,001 equals 110,000

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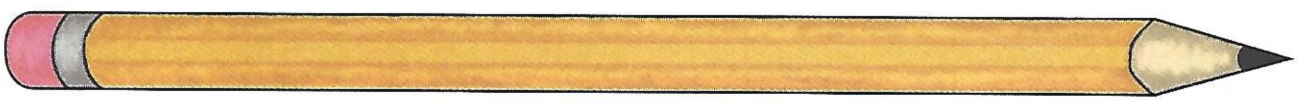
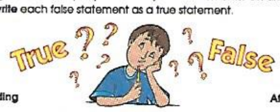


Anticipation Guide

Read each statement and **circle** true or false in the left column. **Read** from a variety of resources to check the accuracy of your answers. Then, **circle** true or false in the right column as you prove or disprove statements. On another sheet of paper, **rewrite** each false statement as a true statement.



Answers will vary.

Before Reading		Statement	After Reading
true	false	1. The pituitary gland controls development and body growth.	(true) false
true	false	2. Hormones are substances produced by an organism which regulates its growth and development.	true (false)
true	false	3. A healthy body is able to protect itself from disease.	(true) false
true	false	4. Mucus is a good substance to have in your nose.	(true) false
true	false	5. Your skull has cavities.	(true) false
true	false	6. An adult skeleton has 206 bones.	true (false)
true	false	7. Enzymes in the stomach help digest food.	true (false)
true	false	8. Blood contains plasma, blood cells and platelets.	true (false)
true	false	9. The brain is made up of two hemispheres.	(true) false
true	false	10. Blood traveling from the heart is full of oxygen.	(true) false
true	false	11. The nervous system contains the brain, spinal cord and nerves.	true (false)
true	false	12. Muscles need oxygen when they are active.	(true) false

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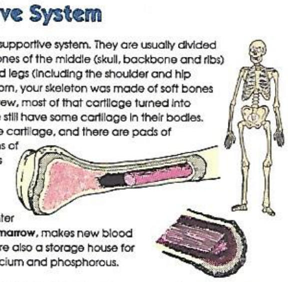
The Supportive System

The bones are the body's supportive system. They are usually divided into two major groups—bones of the middle (skull, backbone and ribs) and bones of the arms and legs (including the shoulder and hip bones). When you were born, your skeleton was made of soft bones called **cartilage**. As you grew, most of that cartilage turned into bone. However, all people still have some cartilage in their bodies. Our noses and our ears are cartilage, and there are pads of cartilage between sections of the backbone that acts as cushions.



Bones do more than just support the body. The center of the bone, called **bone marrow**, makes new blood cells for our body. Bones are also a storage house for important minerals like calcium and phosphorous.

Answer the questions below. Use a science book or an encyclopedia if necessary.

Answers may include:

1. What are the main functions of the skeletal system? The skeleton supports the body. The skeleton protects internal organs. Bone marrow produces new blood cells. Bones store important minerals.
2. What is the largest bone in your body? the femur
3. What is the smallest bone in your body? the stapes, or stirrup
4. What do bones first develop as? cartilage
5. What does bone marrow do? produces blood cells
6. Do all bones have real bone marrow? no
7. What is the outer layer of a bone called? compact bone
8. Where two bones meet is called a joint

Fascinating Fact! Did you know that a giraffe has the same number of vertebrae in its neck as you?

page 23

Earthshaking Adventure

Locate each spelling word in the word search. Words can be found up, down, forward and backward.

anywhere	copyright	earthquake
earthshaking	farewell	gentleman
headache	however	landslide
lifeguard	lifetime	mantelpiece
meanwhile	nighttime	otherwise
skewbald	skinflint	throughout

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

page 28

What Time?

1. Mary was out of bed at 6:30 a.m. She had lunch 6 hours later. What time did Mary have lunch?
   6 hours **Ahead** = 12:30 p.m.
2. Mary returned from school at 4:00 p.m. Mary had left for school 8½ hours earlier. What time did Mary leave for school?
   8½ hours **Back** = 7:30 a.m.
3. Mary ate breakfast at 7:00 a.m. and ate dinner 11 hours later. What time did she eat dinner?
   11 hours **Ahead** = 6:00 P.M.
4. Mary started her homework at 7:30 p.m. and studied for 3½ hours. What time did she stop studying?
   3½ hours **Ahead** = 11:00 P.M.
5. On Saturday, Mary baby-sat a neighbor's child. The parents returned at 3:00 p.m. They had been gone 5 hours. At what time did Mary start baby-sitting?
   5 hours **Back** = 10:00 A.M.
6. Mary's party started at 8:00 p.m. and was over 2½ hours later. Mary spent 1½ hours cleaning up after the last guest left. What time was Mary through cleaning?
   4 hours **Ahead** = 12:00 A.M.
7. Mary's math class starts at 2:30 p.m. Her music class starts 4½ hours earlier. What time does Mary's music class start?
   4½ hours **Back** = 10:00 A.M.
8. School is out at 3:00 p.m. Baseball practice lasts 2 hours, and then the team takes ½ hour to shower and get dressed. What time does the team leave school?
   2½ hours **Ahead** = 5:30 P.M.

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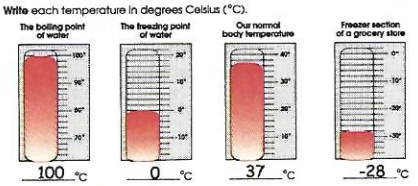
Thermometers

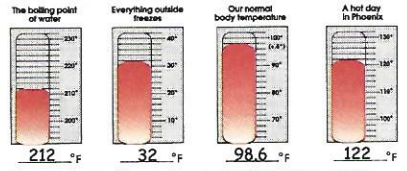
Write each temperature in degrees Celsius (°C).



100 °C 0 °C 37 °C -28 °C

1. How many degrees Celsius does our body remain above the freezing point of water? 37 °C
2. On the Celsius thermometer, how many degrees difference is there between the freezing and boiling points of water? 100 °C

Write each temperature in degrees Fahrenheit (°F).



212 °F 32 °F 98.6 °F 122 °F

1. How many degrees difference is there on the Fahrenheit thermometer between the freezing and boiling points of water? 180 °F
2. How many degrees difference is there between a hot day in Phoenix, Arizona, and the boiling point of water? 90 °F

page 30

Mean Monster Locks Up Wrestling

Mean Monster, a great defensive back in football, decided to take on all the top wrestlers in order to keep in shape during the off-season. He weighed 569 lb. 7 oz. and stood 7 ft. 3 in. tall. (Remember: 1 lb. = 16 oz. and 1 ft. = 12 in.)

Solve the problems on another sheet of paper. **Write** your answers in the spaces provided.

1. Mean Monster's first bout was with Harry the Hammer who weighed 397 lb. 4 oz. How much more did Mean Monster weigh than Harry the Hammer?	172 lb. 3 oz.
2. Mean Monster did so well in his first round that he faced Marvelous Marvin Morton in the next event. Marvelous Marvin stood 6 ft. 9 in. tall. How much taller was Mean Monster?	6 in.
3. Awesome Albert Alston was 167 lb. 11 oz. lighter than Mean Monster. What did Awesome Albert weigh?	401 lb. 12 oz.
4. Irwin the Icebox weighed 478 lb. 14 oz. He and Mean Monster stood together on the scale. What did it read?	1048 lb. 5 oz.
5. Dreadful Dan the Mighty Man weighed 777 lb. 7 oz. What was his weight in ounces?	12,439 oz.
6. Ivan the Incredible ate an 18 lb. 8 oz. meal before his bout. Mean Monster had only 188 oz. of food before the match. How much more did Ivan eat?	108 oz. or 6 lb. 12 oz.
7. Melvin the Magnificent was a dainty 478 lb. 15 oz. He stood with Mean Monster and Dreadful Dan on the same scale. What was their total weight?	1825 lb. 13 oz.
8. Mean Monster's brother, Itty Bitty Monster, weighed 134 lb. 15 oz. less than his big brother. What did Itty Bitty weigh?	434 lb. 8 oz.

page 31

Count Them

Count some of the bones in your body. Use a science book or an encyclopedia to help you answer the questions below.

1. How many cavities are there in your ~~[illegible]~~ Some answers will vary. 3 What are they for?
   eye and air passages in nose
2. How many bones do you feel in your upper arm? ___ How many are there? 1
   In your lower arm? ___ How many are there? 2 How many bones are in your arms (counting your hands)? 30 each
3. How many bones do you feel that form one palm of your hand? ___
   These are called metacarpals How many are there? 5
4. How many bones do you feel in the fingers and thumb of one of your hands? ___ How many are there? 14 These are called phalanges
   Which finger has fewer bones than the others? thumb
5. How many pairs of ribs do you count? ___ How many are there? 12
   How many pairs are attached to the sternum? 7
6. How many bones do you feel in one of your legs? ___ How many are there? 4
7. The skeleton makes up about 18% of the body's weight. How much do you weigh? ___ How much do your bones weigh? ___
8. What is the longest single bone in your body? femur This bone accounts for ¼ of your height. About how long is this bone? ___
9. An adult human skeleton has 206 bones. There are 26 vertebrae. What percentage of the body's bones comprise the backbone? 12.62%
10. How many bones do you have altogether in your hands? 54 (27 ea)
    What other part of your body has the same number of bones? feet

Fascinating Fact! Did you know babies are born with about 350 separate bones?

page 32

Meeting Places

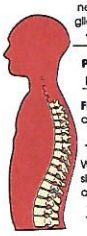
The place two bones meet is called a **joint**. Joints allow us to bend, twist and turn our bodies. The human body has several different types of joints. Each allows a different kind of movement. Read the descriptions below. Then, **write** examples of the joints below each description.

Hinge Joints — These joints can only move in one direction, like a door hinge. One bone works against another. Movement is back and forth on one plane. **Examples:**
knees, elbows

Ball-and-Socket Joints — These joints provide us with swinging and rotating movements. Make a fist with one hand. Cup the fingers of the other. Put your fist inside the cupped hand. You can turn your fist (the ball) in any direction within your cupped hand (the socket). **Examples:**
hips, shoulders

Saddle Joints — These joints move in two directions, back and forth, up and down or in rotation. **Examples:**
fingers, toes

Sliding Joints — In a sliding joint, several bones next to one another bend together in limited gliding motion. **Examples:**
vertebrae



Pivot Joints — These joints give us a rotating motion. **Examples:**
neck, wrist

Fixed Joints — With these types of joints, bones are fused together and permit no movement. **Examples:**
skull, pelvis

What part of your body can move forward, backward, side to side and around on top of a vertical axis and is not one of the above?
the head

page 33

Verb Tense

The **present tense** tells what is happening now.
Example: Jamie runs today in the big race.
The **past tense** tells about an action which happened in the past.
Example: Jamie ran in the preliminary race yesterday.
The **future tense** tells about an action which will occur in the future. It is formed by using the helping verb will with the present tense of the verb.
Example: Jamie will run in the Olympics someday.

Underline the verb in each sentence. Tell whether the verb is in the present tense, past tense or future tense.

1. Thousands of years ago, the Chinese used more than one name. past
2. Today, the Chinese still give their children three names. present
3. Family names, or last names, come about in various ways. past
4. These names will remain for centuries into the future. future
5. Some writers use "pseudonyms," or fictitious names. present
6. Eric Blair wrote under the assumed name George Orwell. past
7. Immigrants will introduce new names to the United States. future
8. Some people use nicknames instead of their legal names. present

Fill in the chart below.

Verb	Present Tense	Past Tense	Future Tense
see	see, sees	saw	will see
hide	hide, hides	hid	will hide
swim	swim, swims	swam	will swim
catch	catch, catches	caught	will catch
leave	leave, leaves	left	will leave
run	run, runs	ran	will run
throw	throw, throws	threw	will throw

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Mussel With Muscle

Write the correct homophone from the spelling words under each picture.
Write the matching homophone below it.

cymbal	symbol	hangar	hanger	muscle
mussel	pare	pear	pause	paws
plain	plane	principal	principle	tacks
tax	waist	waste		


cymbal / symbol


tacks / tax


plane / plain


waist / waste


muscle / mussel


hanger / hangar


paws / pause


principal / principle


pair / pear

page 39

The Right Stuff

Circle the resource book you would use to find . . .

1. A recipe for baking homemade bread.
   encyclopedia (cookbook) *The Life of a Beaver*
2. A description of how beavers make dams.
   almanac (*The Life of a Beaver*) *The Guinness Book of World Records*
3. A map of the United Kingdom.
   thesaurus (world atlas) *The Guinness Book of World Records*
4. The ingredients for Turkish delight.
   The Life of a Beaver world atlas (cookbook)
5. Information about the author, C. S. Lewis.
   almanac (encyclopedia) *Guidebook for Art Instructors*
6. The name of the world's most massive dam.
   (*The Guinness Book of World Records*) dictionary thesaurus
7. The oldest words in the English language.
   almanac atlas (*The Guinness Book of World Records*)
8. Another word for "trouble."
   (thesaurus) atlas cookbook
9. Why a beaver slaps its tail.
   dictionary (*The Life of a Beaver*) atlas
10. The pronunciation of "courtier."
    The Hobbit (dictionary) almanac
11. What camphor is used for.
    (dictionary) *The Life of a Beaver* thesaurus

page 40

What's the Idea?

Circle the sentence that best expresses the main idea of each paragraph.

1. Edmund began to question whether or not the lion in the Queen's courtyard was alive. The large creature looked as if it were about to pounce on a dwarf. But it did not move. Then Edmund noticed the snow on the lion's head and back. Only a statue would be covered like that!
   - The statue is snow-covered.
   - (Edmund wonders if the lion is alive.)
   - The lion is ready to jump.

2. The resting party of children and beavers heard the sound of jingling bells. Mr. Beaver dashed out of his hiding place and soon called the others to join him. He could hardly contain himself with excitement. Father Christmas is here!
   - Mr. Beaver is a brave animal.
   - The group hears a jingling sound.
   - (Father Christmas has come to Narnia.)
3. Poor Edmund! Because he came to the Queen, he expected her to reward him gratefully with Turkish delight. After all, he had traveled so far and had suffered miserably in the cold. When the Queen finally commanded that he receive food and drink, the cruel dwarf brought Edmund a bowl of water and a hunk of dry bread.
   - (Edmund is not rewarded as he expects.)
   - Edmund receives bread and water.
   - The young boy suffered from the cold.
4. Peter knew he must rescue Susan from the wolf. When the wolf charged, Susan climbed up a nearby tree. The wolf's snapping and snarling mouth was inches away. When Peter looked more closely, he realized that his sister was about to faint. Rushing in with his sword, Peter slashed at the beast.
   - Peter kills the wolf.
   - The wolf snarls at Susan.
   - (Peter realizes he must save his sister.)

Choose one of the following sentences as your main idea and **write** a paragraph.

1. The Queen demands that Edmund be returned to her.
2. Aslan's army loses the Queen and her dwarf.
3. Father Christmas gives gifts to the beavers and the three children.

Paragraphs will vary.

page 41

Metric Units of Length

1 cm = 10 mm

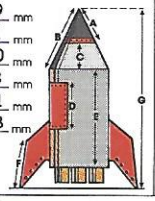
Hint: If it's 0.5 or greater, round up to the next cm. If it's less than 0.5, round down.

Complete each conversion.

30 mm = 3 cm	8.5 cm = 85 mm	50 mm = 5 cm
80 mm = 8 cm	38 mm = 3.8 cm	5.9 cm = 59 mm
14.2 cm = 142 mm	4.7 cm = 47 mm	900 mm = 90 cm

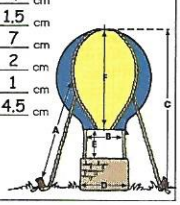
Measure each section of the rocket to the nearest millimeter.

A = 17 mm
B = 29 mm
C = 11 mm
D = 20 mm
E = 43 mm
F = 21 mm
G = 78 mm



Measure each section of the hot air balloon to the nearest half centimeter.

A = 4 cm
B = 1.5 cm
C = 7 cm
D = 2 cm
E = 1 cm
F = 4.5 cm



Measur...meters and to the nearest centimeter.

1. Widt... mm ____ cm
2. Dist... cm
3. Length of the pe... cm
4. Thickness of your front door ____
5. Length of a book ____ mm ____ cm
6. Length of your shoe ____ mm ____ cm

Answers will vary.

page 42

Units of Capacity

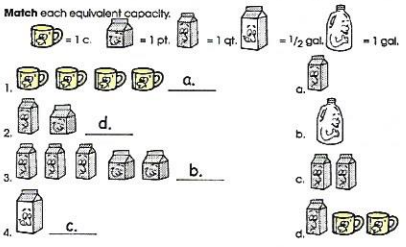
Complete each equation so that it equals 1 gallon.

1 pt. = 2 c. 1 qt. = 2 pt. 1 gal. = 4 qt.

1. 3 qt. + 1 qt. = 1 gal.
2. 4 c. + 2 pt. + 2 qt. = 1 gal.
3. 2 c. + 1 pt. + 3 qt. = 1 gal.
4. 3 qt. + 2 c. + 2 c. = 1 gal.
5. 2 pt. + 2 qt. + 1 qt. = 1 gal.
6. 6 c. + 2 c. + 2 pt. = 1 gal.

Match each equivalent capacity.

1 c. = 1 pt. = 1 qt. = ½ gal. = 1 gal.



1. a.
2. d.
3. b.
4. c.

a.
b.
c.
d.

Which unit would best measure each example below?

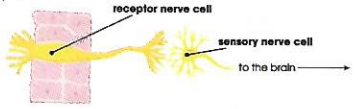
1. Amount of water used to take a shower gallons
2. Amount of flour to make bread cups
3. Amount of water to fill your pool gallons
4. A single serving of yogurt cups
5. A container of motor oil quarts

gallons
cups
pints
quarts

page 43

The Body's Communication System

Your body's **central nervous system** is made up of two parts: the **brain** and the **spinal cord**. The rest of the system consists of nerves coming from the brain and the spinal cord. These nerves are called **sensory nerve cells** and **motor nerve cells**. A stimulus causes your sensory nerve cells to carry messages from your skin and sense organs to your brain.



Imagine you see a bee coming to sting you. Your sensory nerve cells carry this message to your brain. Your brain is the control center that interprets the message. Motor nerve cells carry the message (Run!) back from the central nervous system to the muscles. Your response (running) then occurs.

Listed below are different kinds of stimuli. **Write** how you would respond to each stimulus in the Response column.

Example: Stimulus — Feel pain in chest **Response** — Dial 9-1-1.

Stimuli	Response
Smell of burning food	
B...or from outside	
Bathtub overflow...	
Dog darts in front of car	
Pitcher throws ball at you	
Gale force wind blowing	

Answers will vary.

Fascinating Fact! Did you know your nervous system contains more than 10 billion nerve cells?

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Think Fast

While riding your bike down the street, a car suddenly pulls out in front of you. Your eyes send a message to your brain. Your brain sends a message to your muscles to apply the brakes. How long did it take you to stop? This time is called your **reaction time.**

Conduct a simple experiment to test your reaction time. You will need a 30 cm ruler and a partner.

1. Place your left arm on your desk with your hand over the edge.
2. Hold your thumb and index finger apart a little more than the thickness of the ruler.
3. Your partner will hold the high (high number) end of the ruler. The lower (low number) end will be level with the top of your index finger.
4. Your partner will say "ready," pause a few seconds and drop the ruler.
5. You will catch the ruler and check the distance by reading the level at the bottom of the index finger.
6. Record your results.
7. Now, try the experiment again using your right hand.

	Left Hand	Right Hand
3		
4		
5		

Answers will vary.

Average: _____ _____

Which hand had the fastest reaction time? _____

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Linking or Helping Verbs

The verb **be** (and its various forms) can be used as either a linking verb or a helping verb.

Examples: Sarah **is** a fine skater. (linking verb)
Gregory **is** helping Dad clean. (helping verb)

Read the sentences below. **Underline** the form of the verb **be** and decide how it is used. **Write** linking verb or helping verb on the line.

1. In ancient times, no one was using money. helping verb
2. Later on, they were trading goods and services. helping verb
3. The trading of goods and services is called bartering. helping verb
4. Finally, people were accepting certain objects as payment. helping verb
5. These objects were valuable to everyone. linking verb
6. The objects were anything from animal skins to shells. linking verb
7. Some of the objects were metal. linking verb
8. Gold and silver were demanded by many people. helping verb
9. Governments were given the power to mint coins. helping verb
10. One of the first coin-makers was an ancient Roman. linking verb
11. The first paper money was Chinese. linking verb

Write sentences using each verb as indicated.

is (linking verb) Sentences will vary.

is (helping

are (helpin

are (linking verb)

was (linking verb)

was (helping verb)

page 50

Present a Present

compact
conduct
conflict
content
contest
convict
impact
insult
object
permit
present
protest
rebel
record
refund
refuse
subject
suspect

Fill in the blank with the correct homograph. Place an accent mark on the appropriate syllable of each homograph.

1. They had to convict the convict for committing another terrible crime.
2. A young rebel will often rebel against parents or teachers.
3. I am content with the content of my research paper.
4. The nasty insult used to insult him made him feel bad.
5. I will subject myself to this subject.
6. Someday, my parents will permit me to get my driver's permit.
7. The singer hopes to record a hit record.
8. My mom will object if I throw this object.
9. We are expected to conduct ourselves with self-control and overall good conduct.
10. I will present her with a lovely present.
11. I refuse to touch that stinky refuse.
12. I suspect he is the guilty suspect.

Write the six homographs that were not used in the correct category. For each homograph, place an accent mark on the appropriate syllable.

Verbs:	Nouns:
compact	compact
conflict	conflict
contest	contest
impact	impact
protest	protest
refund	refund

page 51

Geometric Figures

Example	Description	Symbol	Read
Point A	A point is an end of a line segment (an exact location in space).	A	point A
Line E D	A line is a collection of points in a straight path that extends in two directions without end.	$\overleftrightarrow{DE}$	line DE
Line Segment R S	A line segment is part of a line with two endpoints.	$\overline{RS}$	segment RS
Ray B C	A ray is part of a line having only one endpoint.	$\overrightarrow{BC}$	ray BC
Angle C D E	An angle is two rays having a common endpoint.	∠CDE	angle CDE
Plane S T U	A plane is an endless flat surface.	plane STU	plane STU

Use the figure to **write** the symbol for each.

1. 1 ray _____
2. a plane _____
3. 3 points _____
4. 2 lines _____
5. 3 angles _____, _____, _____
6. 3 line segments _____, _____, _____

Answers will vary.

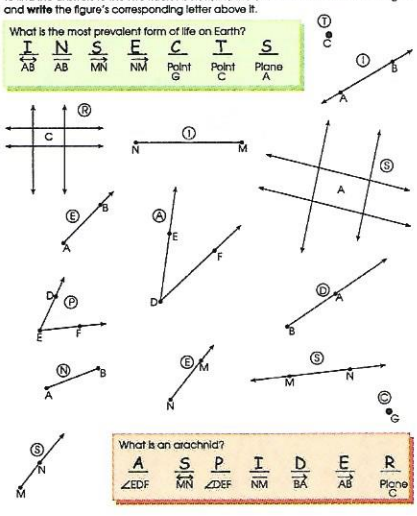
page 52

What Am I?

To find the answers to the two riddles below, find the answer that matches each figure and **write** the figure's corresponding letter above it.

What is the most prevalent form of life on Earth?

I	N	S	E	C	T	S
$\overleftrightarrow{AB}$	$\overline{AB}$	$\overrightarrow{MN}$	$\overleftrightarrow{NM}$	Point G	Point C	Plane A



What is an arachnid?

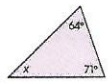
A	S	P	I	D	E	R
∠EDF	$\overrightarrow{MN}$	∠DEF	$\overleftrightarrow{NM}$	$\overrightarrow{BA}$	$\overrightarrow{AB}$	Plane C

page 53

Classifying Triangles

The sum of the angles in any triangle is 180°.

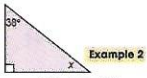
Example	Name	Description
	acute	3 angles less than 90°
	obtuse	1 angle greater than 90°
	right	a 90° angle
	scalene	no equal sides
	isosceles	2 equal sides
	equilateral	3 equal sides



Find x.

Example 1

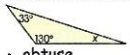
64° + 71° = 135°
180° − 135° = 45°
x = 45°



Example 2

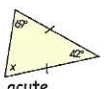
90° + 38° = 128°
180° − 128° = 52°
x = 52°

Write two names for each triangle and find x.

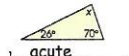


1. obtuse
2. scalene
x = 17°

1. acute
2. equilateral
x = 60°

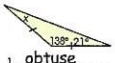


1. acute
2. isosceles
x = 69°



1. acute
2. scalene
x = 84°

1. right
2. scalene
x = 23°



1. obtuse
2. scalene
x = 21°

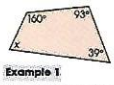
page 54

Classifying Quadrilaterals

The sum of the angles in any quadrilateral is 360°.

Name	Description	Example
trapezoid	1 pair of opposite sides parallel	
parallelogram	opposite sides parallel; opposite sides and opposite angles congruent	
rhombus	parallelogram with all sides congruent	
rectangle	parallelogram with four right angles	
square	rectangle with four congruent sides	

Find *x*.



Example 1

93° + 39° + 160° = 292°
360° − 292° = 68°
x = 68°

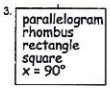
Example 2

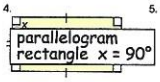
90° + 90° + 56° = 236°
360° − 236° = 124°
x = 124°

Give all names for each quadrilateral. Then, find each missing angle measure.

1. 

2. 

3. 

4. 

5. 

6. 

page 55

Y Says "I"

Match each spelling word from the list to its proper pronunciation. Refer to a dictionary, if necessary.

bylaw
cycle
cyclone
dynamic
dynamite
dynasty
gyrate
hydrant
hydraulic
hydrogen
hygiene
hyphen
hypothesis
lyre
python
typhoon
typist
tyrant

hyphen — hī fən	dynamic — dī năm ĭk
hygiene — hī jēn	typist — tī pĭst
gyrate — jī rāt	cycle — sī kəl
bylaw — bī lô	dynamite — dī nə mīt
typhoon — tī fōōn	python — pī thŏn
hydrant — hī drənt	dynasty — dī nə stē
hydraulic — hī drô lĭk	hypothesis — hī pŏth ĭ sĭs
cyclone — sī klōn	tyrant — tī rənt
hydrogen — hī drə jən	lyre — līr

Write a metaphor using spelling words. A metaphor is a direct comparison that does not use **like** or **as** to compare one thing to another. **Example:** The typhoon was an enraged monster destroying the small oceanside town.

Answers will vary.

page 60

Summer Daze

Write the number of the definition that applies to each **bold** word.

3 1. When Mr. Wong works, he never **putters** around.
2 2. Mabel would **cop** the prize as the best stickball player in the sixth grade.
2 3. The two small girls will **stalk** the tiger swallowtail very carefully.
3 4. The **cop** smiled as Shirley humbly scurried by.
1 5. I would wear gloves if I wished to climb that **spruce** in the forest.
2 6. Shirley imagined spiders **stalking** her in the furnace room.
1 7. She never considered that she might **cop** fruit from the market.
3 8. Will the students **spruce** up the playground before they leave for the summer?
2 9. The **putter** missed the ninth hole by a mile.
1 10. Shirley discovered that she liked celery **stalks** very much.

Glossary

stalk 1) a plant stem 2) to stealthily pursue one's prey 3) to walk with a slow, stiff stride

putter 1) a golf club used on the green 2) a golfer who putts 3) to work slowly

cop 1) to steal 2) to capture 3) a police officer

spruce 1) an evergreen tree 2) the wood from this tree 3) to make neat

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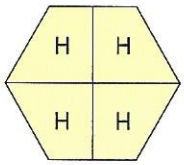
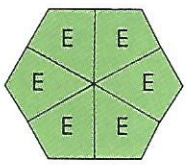
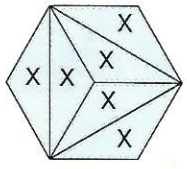
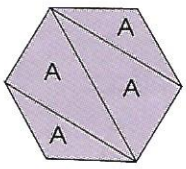
Hexagon Puzzles

Each of the puzzles H, E, X and A will fit on the hexagon outline. **Cut out** one set of pieces at a time and use them to make the hexagon.









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Polyhedrons

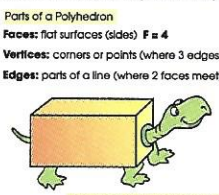
A **polyhedron** is a space figure with many flat faces shaped like polygons.

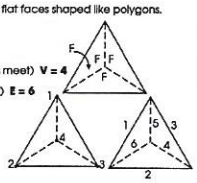
Parts of a Polyhedron

Faces: flat surfaces (sides) **F = 4**

Vertices: corners or points (where 3 edges meet) **V = 4**

Edges: parts of a line (where 2 faces meet) **E = 6**





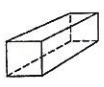
Use this formula to tell if a space figure is a polyhedron.

E = F + V - 2

Example: 6 = 4 + 4 − 2
6 = 8 − 2
6 = 6

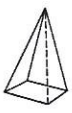
Find the parts of the figures and tell if they are polyhedrons.

1. F = 6
V = 8
E = 12
E = F + V − 2
Yes X No ___



2. F = 2
V = 0
E = 1
E = F + V − 2
Yes ___ No X

3. F = 5
V = 5
E = 8
E = F + V − 2
Yes X No ___



4. F = 3
V = 0
E = 2
E = F + V − 2
Yes ___ No X

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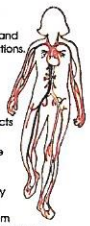
The Circulatory System I

Read the information below. **Underline** the two main functions and the main organ of the circulatory system. Then, answer the questions.



The circulatory system is responsible for transporting materials throughout the body and for regulating body temperature.

The heart is vital to the circulatory system. It pumps blood to all parts of the body. The blood then carries nutrients and other important materials to the cells. Blood also carries waste products away from cells to disposal sites like the liver, lungs and kidneys.

The circulatory system also acts as a temperature control for the body. Warmer blood from the center of the body is brought to the surface to be cooled. On a cold day, the blood vessels contract very little allowing little blood to flow through. This is why skin might appear pale, or even blue. However, in hot weather, blood vessels widen and more blood is able to flow through them to increase the loss of heat. Thus, your skin looks pinker and feels warmer.

1. What are the two main functions of the circulatory system? transporting materials throughout the body and regulating body temperature
2. The blood carries important nutrients to the cells.
3. Blood carries waste products away from cells and to the liver, lungs and kidneys.
4. Warmer blood is brought from the center of the body to the surface of the body to be cooled.
5. In cold weather, why does your skin appear pale, or even blue? Blood vessels contract, allowing little blood to flow through.

A "Hearty" Experiment

You will need: a tennis ball and a watch with a second hand.

Hold the tennis ball in your stronger hand and give it a hard squeeze. This is about the strength it takes your heart muscle to contract to pump one beat. Squeeze the ball as hard as you can and release it 70 times in 1 minute.

Record how you

Answers will vary.

Conclusion: ___

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The Circulatory System II

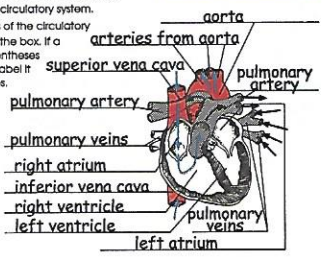
There are two circulatory systems in the human body. Each begins and ends in the heart. The larger system is called the **systemic circulatory system.** It branches out to all parts of the body with oxygenated blood and returns to the heart with "bad blood." The smaller system is called the **pulmonary circulatory system.** It is much shorter because it travels only to the lungs and back to the heart with oxygenated blood.

Blood vessels that carry blood to the heart are called **veins.** Those that carry it away are called **arteries.** Blood from the systemic circulatory system flows from the **superior and inferior vena cavas** into the **right atrium,** then into the **right ventricle** and out through the **pulmonary arteries** to the lungs. At the same time, blood from the lungs enters the atrium from pulmonary veins, drops into the **left ventricle,** is pumped into the body's largest artery, called the **aorta,** then flows into blood vessels that carry it to various parts of the body.

aorta
superior and inferior vena cava
right and left atriums
right and left ventricles
pulmonary veins (2)
arteries leading from aorta
pulmonary arteries (2)

Follow the directions below.

1. **Color** the systemic circulatory system red.
2. **Color** the pulmonary circulatory system grey.
3. **Draw** blue arrows to show the flow of the systemic circulatory system.
4. **Draw** black arrows to show the flow of the pulmonary circulatory system.
5. **Label** the parts of the circulatory system listed in the box. If a number in parentheses follows a part, label it that many times.



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Agreement of Subject and Verb

A **singular subject** takes a singular verb.
Example: Bill washes the dishes.

A **plural subject** takes a plural verb.
Example: They watch television.

A **compound subject** connected by **and** takes a plural verb.
Example: Mary and Bill read books.

For a **compound subject** connected by **either/or** or **neither/nor,** the verb agrees with the subject closer to it.
Examples: Either my aunt or my uncle takes us to games. Neither my grandfather nor my grandmothers are over 85 years old.

A **singular indefinite pronoun** as the subject takes a singular verb (anybody, anyone, everybody, everyone, no one, somebody, someone, something).
Example: Everyone enjoys games.

Write the correct present-tense form of each verb on the line.

1. Everyone enjoys wearing interesting hats. (enjoy)
2. Many people wear hats for various activities. (wear)
3. One factory makes only felt hats. (make)
4. Either bamboo grass or the leaves of a pine tree make wonderful straw hats. (make)
5. Factories produce straw hats, too. (produce)
6. Somebody braids the straw material. (braid)
7. Either machines or a worker bleaches the braided material. (bleach)
8. Chemicals and gelatins stiffen straw hats. (stiffen)
9. Ironing finishes the hat-making process. (finish)

page 70

Tony's Tuxedo

banjo
buffalo
echo
halo
mosquito
patio
portfolio
ratio
rodeo
silo
soprano
stereo
studio
tobacco
tomato
tornado
tuxedo
zero

Write the spelling words in the correct category. The first one is done for you.

Two-Syllable Words	Three-Syllable Words
b a n • j o	t o • b a c c • o
e c • h o	r o • d e • o
h a • l o	t o m • a • t o
s i • l o	m o s • q u i • t o
z e • r o	s o • p r a • n o
r a t • i o	s t e r • e • o
	t u x • e • d o
	b u f • f a • l o
	t o r • n a • d o
	s t u • d i • o
	p a t • i • o

Four-Syllable Word
p o r t • f o • l i • o

Alliteration is a poetic device that groups words together with the same initial sound. **Write** a sentence using alliteration that includes at least two of your spelling words.
Example: Tony the tourist tried to tuck in his untidy tuxedo during a terrible tornado in town.

Answers will vary.

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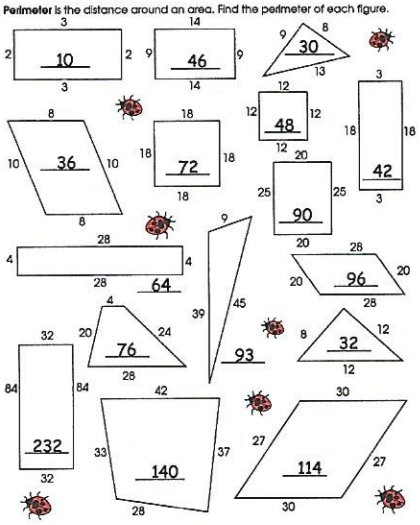
Perimeter

Perimeter is the distance around an area. Find the perimeter of each figure.



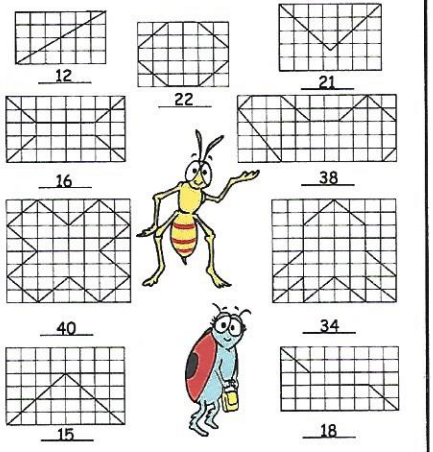
page 72

Area

Area is the number of square units contained in a surface. Find the area of each outlined shape by counting units.

Hint $\frac{1}{2}$ of 4

Hint $\frac{1}{2}$ of 10



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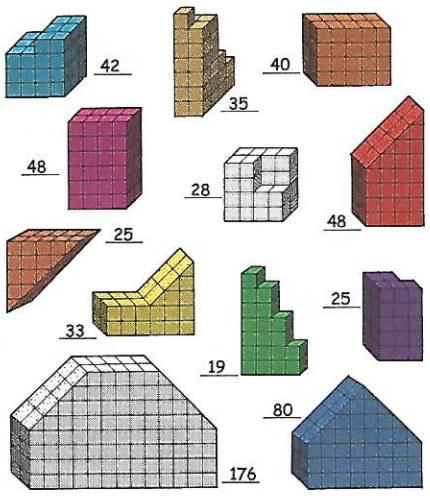
Volume

Volume is the measure of the inside of a figure. Find the volume. Count the boxes.



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Volume of Prisms

Volume is measured in cubic units.
Volume of a nonrectangular prism = base area • height

$V = b \cdot h$
$V = (\frac{1}{2} \cdot 4 \cdot 6) \cdot 12$
$V = 144 \text{ in}^3$

4 in., 6 in., 12 in

Volume of a rectangular prism = l • w • h

$V = 8 \cdot 5 \cdot 3$
$V = 120 \text{ m}^3$

8 m, 3 m, 5 m

Find the volume of each prism

1. 1050 cm^3 — 14 cm, 15 cm, 5 cm
2. 12.768 $ft.^3$ — 2.1 ft., 1.9 ft.
3. 50 m^3 — 5 m, 2 m, 5 m
4. 343 $in.^3$ — 7 in., 7 in., 7 in.
5. $1\frac{1}{5}$ cm^3 — $\frac{1}{5}$ cm, $1\frac{1}{2}$ cm
6. 120 $in.^3$ — 3 in., 8 in., 5 in.
7. 18 $ft.^3$ — 1 ft., 3 ft., 6 ft.
8. 60 mm^3 — 5 m, 6 m

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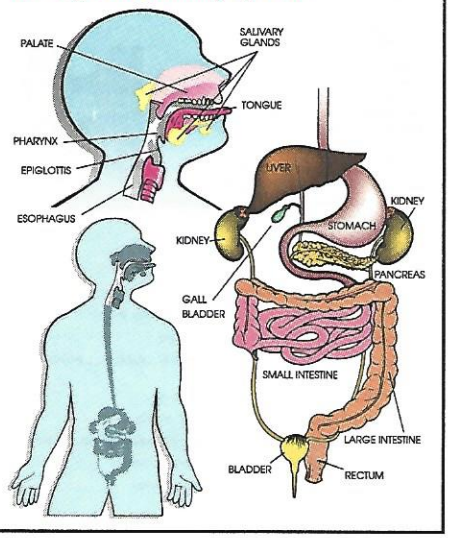
The Digestive/Urinary System



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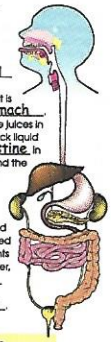
Traveling the Alimentary Canal

After you take a bite of food, it travels along a path through the human body called the **alimentary canal**, or the digestive tract. The canal, as it is shown here, is not how it actually is inside the body. Inside your body, it is folded back and forth so that it fits.

Fill in the missing words in the paragraph below. Use the words in the Word Box. You might also need a science book or an encyclopedia to help you.



Food and water enter the alimentary canal by way of the mouth. Digestion of food begins here where it is chewed and broken into smaller pieces. Digestive enzymes, produced by salivary glands, help to break down food further before it is swallowed and passed through the esophagus into the stomach. In the stomach, the food is mixed with enzymes and digestive juices in a churning motion. As the food is digested, it changes into a thick liquid called chyme. The chyme passes into the small intestine, in small amounts. The pancreas produces pancreatic juices, and the liver produces bile, which is stored in the gall bladder. These are released into the small intestine as needed to work with intestinal juices and contractions made by the intestine's walls to move the chyme along. The digested food is absorbed by tiny, blood, and lymph vessels in the walls of the small intestine and carried through the circulatory system to feed the body. Small amounts of water and minerals are removed from undigested food matter, and this and waste food products are stored in the large intestine. This waste becomes a solid, brown material called feces, which is finally eliminated through the rectum.

salivary glands	enzymes	large intestine	chyme
pancreas	mouth	small intestine	esophagus
rectum	stomach	gall bladder	feces
circulatory	chewed	blood	walls
liver	bile		

Fascinating Fact! Did you know that during your lifetime, your digestive system may process between 60,000 and 100,000 pounds of food?

page 77

Comparing With Adjectives

The **comparative** form of an adjective is used to compare two nouns. It is formed in two ways: by adding the suffix **er** to the adjective or by using the words **more** or **less** with the adjective.

Examples:

David is a **faster** runner than Thomas.
David is **more** diligent at track practice than Thomas.

The **superlative** form of an adjective is used to compare three or more nouns. It is also formed in two ways: by adding the suffix **est** to the adjective or by using the words **most** or **least** with the adjective.

Examples:

David is the **fastest** runner on the track team.
David is the **most** diligent worker on the track team.

Circle the adjective of comparison in each of the following sentences. On the line, **write** if the adjective is written using the comparative form or the superlative form.

1. Central High has the (shortest) basketball team in the league. superlative
2. One of their (most skillful) plays is to pass the ball through their opponents' legs. superlative
3. Central wins a lot of games because the team's players are (more clever) dribblers than the opposing players. comparative
4. The opposing team is (dizzier) because Central dribbles circles around them. comparative
5. The (toughest) game of the year was against South High. superlative
6. Central's captain won the game with the (onciest) shot of the game. superlative

page 82

Desert Merchant

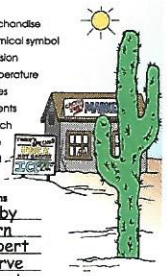
clergy
clerk
concern
derby
desert
dessert
error
fern
fertilizer
intern
merchant
mercury
referee
reserve
serpent
sherbet
temperature
thermostat

Write a spelling word to complete each phrase. Be sure to write the possessive form when it's required.

Possessive Nouns

1.	mercant's	merchandise
2.	mercury's	chemical symbol
3.	referee's	decision
4.	thermostat's	temperature
5.	serpent's	scales
6.	intern's	patients
7.	clergy's	church
8.	clerk's	store
9.	desert's	sand

misspelled



Nouns

10.	man's felt	derby
11.	patio's potted	fern
12.	Susie's orange	sherbert
13.	gas tank's	reserve
14.	diner's delicious	dessert
15.	mathematician's	error
16.	farmer's	fertilizer
17.	Carol's constant	concern
18.	sick child's	temperature

Use the nouns from the list to form possessives in a few sentences.

Sentences will vary.

page 83

Understanding Rembrandt

Answer the questions below from your reading of Rembrandt.

True or False
Rembrandt . . .
T was one of the greatest artists of all time.
F was born on July 15, 1606, in Florence, Italy.
T began painting at an early age.
F traveled to Amsterdam at the age of fifteen to study architecture.

Check and write:
Rembrandt used ☐ soft ☑ bright colors and glossy paints.

Underline:
In 1634, Rembrandt married . . .
a wealthy and educated girl named Saskia.
a poor girl from Amsterdam named Saskia.

Check and write:
Although Rembrandt was successful as an artist,
☑ tragedy ☐ good fortune began to strike his family.
Three of his 4 children died at a very early age.
In 1642, ☐ Rembrandt's father died. ☑ Rembrandt's wife died.
Rembrandt's sadness caused him to use ☑ darker ☐ lighter colors.

Check, circle and write:
Rembrandt died on October 4, ☑ 1669. ☐ 1700.
Rembrandt's most famous painting was called The Night Watch.
Rembrandt's works included:
☑ paintings ☑ drawings ☑ etchings ☑ self-portraits

page 85

Multiplication

Multiply.

1. 649 x 8 = 5,192	2. 858 x 7 = 6,006	3. 7,642 x 5 = 38,210	4. 8,219 x 3 = 24,657	5. 5,238 x 6 = 31,428
6. 8,249 x 4 = 32,996	7. 6,518 x 7 = 45,626	8. 8,943 x 9 = 80,487	9. 3,268 x 5 = 16,340	10. 4,637 x 8 = 37,096
11. 5,387 x 4 = 21,548	12. 8,264 x 9 = 74,376	13. 4,875 x 7 = 34,125	14. 5,689 x 8 = 45,512	15. 9,243 x 4 = 36,972
16. 8,540 x 6 = 51,240	17. 3,726 x 5 = 18,630	18. 83,243 x 6 = 499,458	19. 74,254 x 7 = 519,778	20. 62,435 x 9 = 561,915
21. 73,643 x 8 = 589,144	22. 51,476 x 4 = 205,904	23. 73,629 x 5 = 368,145	24. 87,642 x 7 = 613,494	25. 25,624 x 4 = 102,496
26. 98,215 x 6 = 589,290	27. 41,826 x 9 = 376,434	28. 53,214 x 8 = 425,712	29. 83,265 x 4 = 333,060	30. 65,429 x 5 = 327,145
31. 46,254 x 7 = 323,778	32. 91,242 x 8 = 729,936	33. 73,263 x 6 = 439,578	34. 35,584 x 2 = 71,168	35. 79,267 x 2 = 237,801

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The Stock Market

Choose a stock to follow for the next 4 weeks. **Fill in** the information about your stock in the box below. Then, track the information you find in the newspaper on the chart.

Name of stock
Information will vary.
Total cost ______

Date	High	Low	Close	Net Change

Date	High	Low	Close	Net Change

Answers will vary.

After 4 weeks, complete the following analysis of your stock's performance.

1. What was the highest price per share during the past 4 weeks? ______
2. At that price, what would have been the total value of your stock? ______
3. If you had sold your shares that day, what would have been your profit or loss? ______
4. What was the lowest price per share during the past 4 weeks? ______
5. At that price, what would have been the total value of your stock? ______
6. If you had sold your shares that day, what would have been your profit or loss? ______

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This, That, These, Those

The adjectives **this** and **that** are singular. The adjectives **these** and **those** are plural. **This** and **these** refer to things that are nearby. **That** and **those** refer to things that are farther away.

Examples: This elevator we are riding is called a "lift" in England.
Those apartments across the street are called "flats."

Use **this** and **that** correctly in the sentences below.

1. This cookie I have in my hand is called a "biscuit" in England.
2. That car trunk over there is called a "boot."
3. This parking lot is called a "car park."
4. That vacation we took last year would be called a "holiday."
5. That box of French fries Monica has is called "chips."
6. That can of fruit on the shelf is called a "bottle" of fruit.

Use **these** and **those** correctly in the sentences below.

1. Those dollars she is handing you are the English form of currency called "pounds."
2. Isn't it interesting how those baby carriages across the street are called "prams"?
3. Those bathrooms we just passed are called "loos."
4. Those 7 gallons of gas you purchased at the last gas station would be called "petrol" in England.
5. All Those soccer games you had fun playing in would be called "football games."
6. These differences show that even though people in both countries speak English, we are separate and unique in our own language.

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Proper Nouns and Adjectives

Proper nouns and **adjectives** always begin with a capital letter.

Examples: Mount Rainier
the Sahara Desert (**the** is usually not capitalized)
the English language
Italians

Underline each geographical name that should be capitalized.

australia is the smallest continent on Earth. The western half of this continent is dominated by the great sandy desert, the gibson desert and the great victoria desert. Two mountain ranges, the macdonnell range and the musgrave range, are located in this area. The great dividing range is a long mountain chain that runs along australia's eastern coastline. Surrounding this small continent are the indian ocean, the timor sea, the arafura sea, the coral sea and the pacific ocean. You may have read about the great barrier reef, which lies between its northeast shoreline and the coral sea.

australia is divided into six main areas: western australia, south australia, the northern territory, queensland, new south wales and victoria. The capital of australia is canberra, which is located in new south wales. Its highest point is mt. kosciusko, which is southwest of canberra. Two large lakes, lake eyre and lake torrens, lie in south australia. The darling, warrego and murray rivers flow through the southeast corner. Much of australia's land is used for grazing sheep and cattle.

Underline each word that should be capitalized.

1. americans and the english speak the english language.
2. english is a germanic language, as are german and dutch.
3. swedish, norwegian and danish are also germanic languages.
4. italian and spanish are two romance languages.
5. The romance languages come from latin, the language of all romans.
6. The languages of the russians, poles, czechs and slavs have a common origin.
7. Many africans speak hebrew and arabic.
8. The language of indians and pakistanis is hindustani.
9. Many american students study french and german.
10. spanish and latin are also often studied.

page 93

Scrambled Eggs

breakfast, breath, cleanse, dread, feather, health, heavy, instead, leather, meant, spread, sweat, thread, threat, tread, wealth, weapon, weather

Unscramble each group of letters to spell a word from the list.

trlehae	leather	hhetal	health
lwehat	wealth	tnmea	meant
tsewa	sweat	dhtrae	thread
rddae	dread	tterah	threat
ayveh	heavy	eteharw	weather
dtare	tread	oanwpe	weapon
tekarbasf	breakfast	sdatnei	instead
dsarpe	spread	cesenal	cleanse
herfate	feather	ebhatr	breath

Which sound does **ea** make in each word? short e

Write two other words that have the **ea** combination and make the short **e** sound.

1. ______ 2. ______

Answers will vary.

A **couplet** is a two-line poem that rhyme… (two sets of two) using at least four words from the…

Example:
When my butt… …read,
But I wa… …ble gum instead.

This unfo… …now fills me with dread.
Before Mo… …s me, to my room I will tread.

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A Land of Many Peoples

The Iroquois were a group of tribes joined together by a common language. Their enemies, the Algonquin, were several tribes of another language group.

Listed below are the names of some Native American tribes and the states that claim them. Remember that Native Americans often moved from state to state.

Write each tribe's name in or by its state name on the map. Then, **color** each state the correct color. The colors symbolize common language groups.

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Many Times Over

Mrs. Ten-twenty's class was studying multiples. Each student wrote a problem for the others to solve. **Write** the number sentence and answer for each problem.

1. If it takes the average student 10 minutes to finish 20 problems, how long would it take to finish 40?
   10 + 10 = 20 minutes
2. If it takes 20 minutes to write 15 number facts, how long would it take to write 45?
   20 + 20 + 20 = 60 minutes
3. The design received 30 points. If the points were tripled, how many points would the design have received?
   30 + 30 + 30 = 90 points
4. Each flower on the bush had 7 pink petals. If there were 20 flowers on the bush, how many petals would there be altogether?
   20 X 7 = 140 petals
5. Baby Rita's shoe weighs 2 oz. Debbie's shoe weighs 10 times as much. How much does Debbie's shoe weigh?
   10 X 2 = 20 oz.
6. Tyrone kept a bug collection in 10 boxes that each held 20 different kinds of bugs. Nikki had 30 boxes of 20 bugs each. How many bugs did they have altogether?
   (10 X 20) + (30 X 20) = 200 + 600 = 800 bugs
7. Barbara was making glitter stars for her wizard costume. If it took her 36 minutes to make 16 stars, how long would it take her to make 40 more stars?
   36 + 36 + 18 = 90 minutes
8. The boy scouts were making model cars. Each model car had 62 parts. If they made 8 model cars, how many total parts would there be?
   8 X 62 = 496 parts

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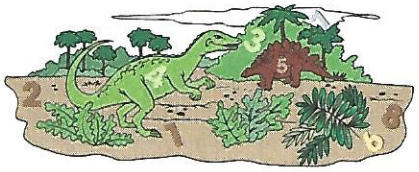
Millions Mysteries

Follow the clues to **fill in** the mystery numbers.

4, 8, 7, 6, 9, 5, 3

1. Use the numbers 3 to 9. Each is used only once.
2. The ones, tens and hundreds are odd numbers.
3. The hundred thousands, ten thousands and thousands are in backwards counting order.
4. There are 3 times as many hundreds as ones.
5. There are 2 times as many hundred thousands as millions.



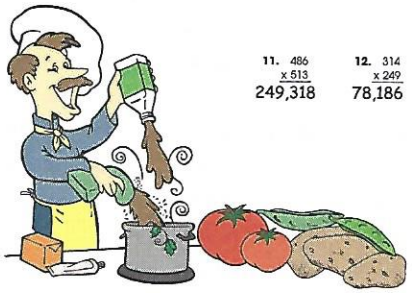
5, 7, 6, 8, 2, 3, 4

1. Use the numbers 2 to 8. Each is used only once.
2. The hundreds, tens and ones are in counting order.
3. The sum of the ones, tens and hundreds is 9.
4. There are 2 times as many ten thousands as tens.
5. There are 2 times as many thousands as ones.
6. The sum of the millions, hundred thousands and ten thousands is 18.

page 97

Multiplication

1. 467 x 35	2. 538 x 47	3. 393 x 82	4. 304 x 529	5. 246 x 824
16,345	25,286	32,226	160,816	202,704
6. 146 x 532	**7.** 308 x 236	**8.** 326 x 92	**9.** 735 x 45	**10.** 268 x 39
77,672	72,688	29,992	33,075	10,452



11. 486 x 513	12. 314 x 249
249,318	78,186

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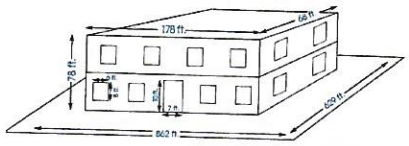
Problem Solving

Mr. Solve-It's class measured the school and the school grounds when solving problems dealing with area, perimeter and volume.



1. What is the perimeter of the building? 492 ft.
2. What is the area of the front door? 70 ft.²
3. What is the area of a window? 48 ft.²
4. There are the same number of windows on the other two sides of the school. If glass for the windows costs $8.25 a square foot, how much would it cost to replace the glass in all the windows? $9,504.00
5. What is the perimeter of the property? 2,982 ft.
6. What is the area of the property? 542,198 ft.²
7. What portion of the property is not used for the school building? 530,094 ft.²
8. What is the volume of the school building? 944,112 ft.³

Find the dimens... 1 to 8 using those figures on anoth... Answers will vary.

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Adjectives and Adverbs

Adjectives describe or modify nouns. They tell what kind, how many or which one.
Examples: a **tall** building (what kind)
three buildings (how many)
that building (which one)

Adverbs usually describe or modify verbs. They tell how, when and where the action of a verb is performed.
Examples: He ran **quickly.** (how) He ran **today.** (when) He ran **away.** (where)

Circle the adjectives and **underline** the adverbs. In the blank, **write** what each one tells about the noun or verb it modifies.

1. (a) (fast) sailboat — what kind
2. rapidly blinked — how
3. ran outside — where
4. the (speckled) egg — what kind
5. (seven) sailors — how many
6. discussed later — when
7. (that) rose — which one
8. quickly covered — how
9. played again — when/how
10. (four) kittens — how many
11. fell forward — where
12. woke early — when
13. the (tired) worker — what kind
14. (several) pages — how many
15. softly whistled — how
16. hidden nearby — where

Rewrite each sentence adding an adjective and an adverb. **Circle** all the adjectives and **underline** all the adverbs in the new sentences.

1. The pond melted in the sunshine.
2. Fro...
3. Birds warbled in the tree...
4. Turtles sunned themselves on the rocks.

Sentences will vary.

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More About Adverbs

Adverbs that modify verbs function as adverbs of time, place or manner.
Adverbs that modify adjectives or other adverbs function as adverbs of degree, also called intensifiers.

Examples: We went to the big game **today.** (time)
People were selling programs **everywhere.** (place)
He was **really** tired after his workout. (degree)

Circle each adverb. Tell if it is an adverb of time, place, manner or degree.

1. The roads were impassable because it snowed (today). time
2. We (unwillingly) resigned ourselves to staying at home. manner
3. Could we travel (there) in this storm? place
4. We would be (greatly) cheered by a weather change. degree

Circle each intensifier, or adverb of degree. **Draw** an arrow to the word it modifies. On the line, identify the modified word as an adverb or adjective.

1. She was (quite) really upset by any change in plans. adverb
2. We made (rather) extensive plans for our summer vacation. adjective
3. We are planning an (extremely) exciting trip. adjective
4. She (very) firmly refused to go at all. adverb

Many adverbs have a **positive**, a **comparative** and a **superlative** form.

seen, softly	sooner, more softly	soonest, most softly

Rewrite each sentence twice. Use the comparative form of the underlined adverb first, then use the superlative form.

1. He ran fast in the race. He ran faster in the race. He ran fastest in the race.
2. She walked home from school quickly. She walked home from school more quickly. She walked home from school most quickly.

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Confusing Adjectives and Adverbs

Good, bad, sure and real are adjectives. They modify nouns.
Examples: That was a **good** dinner. He made a **bad** choice.

Badly, surely and really are adverbs.
They modify verbs, adjectives and other adverbs.
Examples: He ran **badly**. He **really** wanted to go.

Better, worse, best and worst are adjectives if they modify nouns. They are adverbs if they modify verbs, adverbs or adjectives.
Examples: That's my **best** work. (adjective)
He sang **best** last night. (adverb)

Well is an adjective if it refers to health.
Well is an adverb if it tells how something is done.
Examples: She feels **well** today. (adjective)
He rode the horse **well**. (adverb)

Circle the correct word in parentheses. On the line, **write** whether it is an adverb or adjective. Then, **underline** the word(s) in the sentence it modifies.

1. Tim was (sure/surely) he could go to the museum. adjective
2. He wanted to go with his friends (bad/badly). adverb
3. He (sure/surely) could finish his work before noon. adverb
4. Susan had done a (good/well) job of convincing him to try. adjective
5. Tim thought he could manage (good/better) with a schedule. adverb
6. He could make (better/well) time if he was organized. adjective
7. His list of chores was (worse/bad) than he thought. adjective
8. Tim first cleaned up his room (real/really) well. adverb
9. He just had to see the (real/really) dinosaur fossil. adjective
10. Tim felt (well/good) and whistled as he worked. adjective
11. He always worked (best/good) under pressure. adverb
12. It turned out to be a (real/really) pleasure to help. adjective

page 106

Keep Behavin'

It was time for another of Mr. Fridley's science classes on behaviors. This time, the class was going to discuss learned behaviors. Mr. Fridley explained that learned behaviors are behaviors that change as a result of experience.

First, Mr. Fridley explained learning by association. This type of learning connects a stimulus with a particular response. He asked if anyone could give him an example. Lee suggested that when the bell rings at the end of class, the students put away their pens and pick up their books. Mr. Fridley congratulated Lee on his answer and said that the students learned to associate the stimulus of the bell with the response of leaving class.

There are several kinds of learning by association. One results in a conditioned response—a desired response to an unusual stimulus. Mr. Fridley reminded them of Ivan Pavlov's experiments with dogs. In the experiments, Pavlov found that dogs salivated when they smelled meat. Pavlov began ringing a bell every time he was about to give meat to a dog. In time, the dog salivated when the bell rang, whether or not there was any meat. Pavlov had trained the dogs to respond to the bell instead of the food.

Another kind of learning by association involves teaching animals to act in a certain way by rewarding them for their behavior. This is called positive reinforcement and may be as simple as a rat pressing a lever to get food. This type of learning, however, may also involve a complex series of tasks.

Match:

conditioned response	study hard—get a good grade
positive reinforcement	hear siren—panic

Underline:
Both types of learning by association involve . . .
a stimulus. a learned association.
a response. experiments.

Circle:
If a squirrel learns to climb into a bird feeder to obtain food, it has learned by . . .
conditioned response. unconditioned response.
positive reinforcement. negative reinforcement.

Write:
Write examples of something you have learned by conditioned response and something you have learned by positiv Answers will vary.

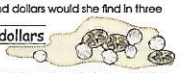
page 107

Even Distribution

Some students in Ms. Statistic's class used their own experiences to study the distributive property.

1. Marcus bought three sets of baseball cards each time he went to the store. The first week, he went to the store twice. The second week, he went once. The third week, he went four times. How many sets of cards did he buy during the three weeks? 3 (2 + 1 + 4) = 21 sets

2. Jessie found six seashells and three sand dollars on her first visit to the beach. With the same luck, how many shells and sand dollars would she find in three visits? 3 (6 + 3) = 27 seashells and sandollars



3. Alicia saved $.30 out of her allowance for several weeks so that she could buy a bottle of nail polish for $1.79. How many weeks did she need to save $.30?
6 weeks

4. Kim hit one single, one double and two home runs in her first softball game this season. If she could continue at this rate, how many home runs, singles and doubles would she have after six games?
1 x 6 = 6 singles 1 x 6 = 6 doubles
2 x 6 = 18 home runs

5. Each person in the class was given two sheets of green construction paper, one sheet of brown and three sheets of orange. There are 27 students in the class. How many sheets of colored paper did Ms. Statistic need?
27 (2 + 1 + 3) = 162 sheets

6. Tony, a novice runner, ran $\frac{1}{2}$ mile on his first try, $1\frac{1}{4}$ miles on his second try and 2 miles on his third try. How far would he run in 2 weeks if he ran the same distances the next week?
2 ($\frac{1}{2}$ + $1\frac{1}{4}$ + 2) = $7\frac{1}{2}$ miles

Extension: Design an art project. Figure how much of each type of material you will need.

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Nine-Week Test

1. **Write** the number 3,512,978 in words.
three million, five hundred twelve thousand, nine hundred seventy-eight

2. Subtract the following from the number 2,846,238:
4,000 2,842,238
20,000 2,826,238
600,000 2,246,238

3. Round 38.462 . . . to the nearest tenth. 38.5
to the nearest ten. 40
to the nearest hundredth. 38.46

4. **Draw** a triangle on another sheet of paper with the following specifications:
$\overline{AB}$ is perpendicular to $\overline{AC}$.
$\overline{AB}$ is 10 cm.
∠ACB is 45°

5. Name the type of triangle. right isosceles triangle

6. Calculate the area. If $\overline{BC}$ is 14cm, what is the perimeter?
area 50 cm^2
perimeter 34 cm

7. Multiply.

78 x 3	48 x 12	362 x 38	40,286 x 245
234	576	13,756	9,870,070

8. **Write** 6^4 in factor form and standard form. 6 x 6 x 6 x 6 1,296

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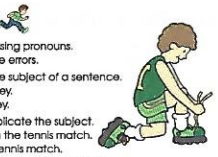
Pronoun Blunders



Three errors are often made when using pronouns. Follow the rules below to avoid these errors.

Do not use an object pronoun as the subject of a sentence.
Incorrect: Us are playing hockey.
Correct: We are playing hockey.

Do not add extra pronouns that duplicate the subject.
Incorrect: Bonnie, she has won the tennis match.
Correct: Bonnie has won the tennis match.

In a sentence with a compound subject, it is incorrect to put the pronoun **I** before the noun.
Incorrect: I and Sheila will attend the game.
Correct: Sheila and I will attend the game.

Rewrite each sentence correctly on the line below.

1. I and Mr. James were planning the school Sports Day. Mr. James and I were planning the school Sports Day.
2. Mrs. Shawn and Mrs. Thompson they volunteered to help Mr. Thompson and me with the concession stand. Mrs. Shawn and Mrs. Thompson volunteered to help Mr. Thompson and me with the concession stand.
3. I and Mrs. Thompson will also prepare the food. Mrs. Thompson and I will also prepare the food.
4. Bob, he will make arrangements for all the sports equipment. Bob will make arrangements for all the sports equipment.
5. We had challenged them the eighth graders to a game. We had challenged the eighth graders to a game.
6. Us were forming a relay team. We were forming a relay team.
7. John will time we in the races. John will time us in the races.
8. John, he has been involved in many races. John has been involved in many races.

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Reflexive Pronouns

Reflexive pronouns reflect the action of the verb back to the subject.

Myself, yourself, herself, himself, itself, ourselves, yourselves and themselves are reflexive pronouns.

Examples: Roger made **himself** a model of the space shuttle.
The shuttle landed **itself**, using only gravity to pull it down.

Complete each sentence with the appropriate reflexive pronoun.

1. The Davenport children congratulated themselves on the good spot they found.
2. We sure found ourselves a good viewpoint from which to watch the shuttle landing.
3. David imagined himself trying to maneuver in a space shuttle that was hurtling toward earth.
4. "I told myself that I will become a commander someday," Earl said.
5. Deborah enjoyed herself at the shuttle launch.
6. "You could train yourself for space travel if you built a model simulator," David's parents suggested.

Write the reflexive pronoun from the box that matches each subject listed below.

1. Peter himself
2. The dog itself
3. Gwen herself
4. Monica and I ourselves
5. Heather and Kimberly themselves
6. You and Carolyn yourselves
7. I myself
8. You yourself

myself
yourself
himself
yourselves
themselves
itself
herself
ourselves

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Pursuing Pronouns

A **personal pronoun** takes the place of one or more nouns. An **interrogative pronoun** introduces a question. A **relative pronoun** introduces a group of words that acts as an adjective.

Examples: I am excited about the track meet today. (personal pronoun)
What event does Bill plan to enter? (interrogative pronoun)
The track meet, **which** we went to last week, was an exciting event. (relative pronoun)


Write personal, interrogative or **relative** in the blank to identify each pronoun.

1. **Which** sprinting race is your favorite? interrogative
2. **We** both like the same type of running shoes. personal
3. The high jump is a challenge **that** I would like to take on. relative
4. **Who** would like to warm up with me? interrogative
5. A boy **whom** I knew won the track meet. relative
6. **You** are a natural when it comes to long-distance running. personal
7. Is it true that **she** would like to join our running club? personal
8. **Whose** house should the team go to for the end-of-the-year party? interrogative

Complete each sentence with a pronoun.

1. I tried to find my shoes ___that___ were lost. (relative)
2. ___They___ told us it won't be a problem for them to run today. (personal)
3. The boy ___who___ won the race is a great runner. (relative)
4. ___Who___ would like to be our fourth runner in the relay race? (interrogative)

page 116

Easygoing

beast
beneath
breathe
defeat
disease
eavesdrop
freak
greasy
increase
lease
leave
meager
plead
release
repeat
scream
weave
wreath

Write each spelling word next to either its antonym or its synonym. Use a thesaurus if necessary.

1. meager	ample
2. release	hold
3. beneath	above
4. defeat	victory
5. disease	health
6. leave	arrive
7. increase	decrease

1. freak	oddity
2. beast	animal
3. weave	braid
4. lease	rent
5. eavesdrop	overhear
6. greasy	slick
7. wreath	garland
8. breathe	inhale
9. plead	beg
10. scream	yell
11. repeat	say again

List four more words that contain the long **e** sound of **ea.** **Write** either an antonym or a synonym for each word. Label each one **A** (antonym) or **S** (synonym).

New Word		A/S
Answers will vary.		
clean	dirty	A

page 117

Mr. Quotient's Class Divides

Mr. Quotient's class was studying division. Help them solve the following problems.

1. Use the numbers 0, 3, 4, 5, 6, 7, 8 and 9. Using three different numbers, write the largest possible 3-digit divisor using the 6 in the tens place. With the remaining numbers, write the smallest dividend using the 5 in the ten-thousands place. What is the quotient?
   50,347 ÷ 968 = 52.01
2. There were 3,192 people in attendance at the football game. There were 45 bleacher rows in the stadium. If 84 people could sit in each bleacher row, did everyone have a seat?
   Yes, there were 3,780 total seats available.
3. There were 1,848 candy bars available for the candy sale. There were 154 students ready to sell them. To keep sales equal, how many candy bars should be put in each salesperson's box?
   1,848 ÷ 154 = 12 candy bars
4. Marathon Mike worked 7,272 problems in 36 weeks. How many did he average each week?
   7,272 ÷ 36 = 202 problems
5. Mr. Quotient's class collected a total of 972 leaves for a science project. There were 27 students in the class. What was the average number each student collected?
   972 ÷ 27 = 36 leaves
6. Shanna wrote 144 Spanish vocabulary words during the months of April and May. How many words, on average, did she write each week during those months?
   144 ÷ 8 = 18 words per week

Extension: 96,785,642 ÷ 24 ÷ 35 ÷ 3 = 38,407

page 118

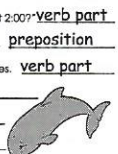
Preposition, Adverb or Verb?

Don't confuse prepositions with adverbs or with phrases made of **to** plus a verb.

Examples: All the students went **to** the zoo. (preposition)
We really wanted **to** go. (verb part)
We started getting excited **before** the trip. (preposition)
Have you gone to the zoo **before**? (adverb)

Identify each **bold** word as a preposition, adverb or verb part.

1. It was incredible how they had trained the animals **to** move like that! verb part
2. A monkey followed me **to** the concession stand. preposition
3. A beautiful dove flew **around** the audience. preposition
4. A seal tossed a ball **around** to show off. adverb
5. We took pictures of the walrus **before** the show. preposition
6. I had never seen a walrus up close **before**. adverb
7. The walrus waddled beyond the stage over **to** the audience. preposition
8. My friends were brave, and they decided **to** stay and pet him. verb part
9. David asked us, "Who wants **to** see the Dolphin Show at 2:00?" verb part
10. The whale catapulted **to** the top and grabbed the fish. preposition
11. The monkeys would have liked **to** swing through the trees. verb part
12. I looked **up** when I heard the parrot talk. adverb
13. I noticed a pigeon flying **around**. adverb
14. The elephants came **near**. adverb
15. The pigeon carried the message **to** its destination. preposition
16. The chimpanzees shouted **across** the water. preposition

page 124

Prepositional Phrases

A **prepositional phrase** is a group of words that begins with a preposition and ends with a noun or pronoun. It can act as an adjective or adverb.

Examples: Pineapple is also grown **outside of Hawaii.** (adverb)
The sandwiches **with the peanut butter** were the best ones. (adjective)
We ate the peanut butter sandwiches **at night.** (adverb)

Underline the prepositional phrase in each sentence.

1. Peanuts are enjoyed around the world.
2. Peanuts are native to South America.
3. Peanut pods develop beneath the ground.
4. The pegs, which are the pod stems, push their way under the soil.
5. Peanuts are part of the legume family.
6. Most peanuts are grown in Africa and Asia.

Tell whether each prepositional phrase acts as an **adjective** or an **adverb.**

1. Wait until choir practice is over to eat peanut butter. adverb
2. Peanut butter on a spoon is a delicious and quick snack. adjective
3. Have you ever enjoyed celery with peanut butter and raisins? adjective
4. Try your peanut butter sandwich with cold milk. adverb
5. I love peanut butter on toast. adjective
6. I enjoy eating peanuts at a ball game. adverb

page 125

Missing Freight

Add vowels to each set of consonants to spell words from the list.

beige
caffeine
conceit
conceive
foreign
forfeit
freight
heifer
height
leisure
neither
perceive
protein
receipt
receive
seizure
skein
weight

neither nthr	forfeit frft	perceive prcv
beige bg	leisure lsr	height hght
receive rcv	seizure szr	protein prtn
caffeine cffn	skein skn	receipt rcpt
heifer hfr	conceit cnct	freight frght
weight wght	conceive cncv	foreign frgn

Choose six spelling words to divide into syllables.

1. ___ 2. pro • tein
3. Answers will vary.
5. ___ 6. ___

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I would not have a child disregard the true order of operations

What's the Difference?

One day, David and Donald were discussing alligators. David insisted that alligators and crocodiles were the same animal but that people called them by different names. Donald insisted, however, that the two animals were entirely different reptiles. Kim walked up just in time to save the boys from further squabbling. Kim, who had lived in Florida for ten years, could settle this one.

She told David that alligators and crocodiles are separate reptiles. She told them that although they are similar looking and are both called crocodilians, they are very different. Both have a long, low, cigar-shaped body, short legs and a long, powerful tail to help them swim. But most crocodiles have a pointed snout instead of a round one like the alligator's. She also pointed out that while both have tough hides, long snouts and sharp teeth to grasp their prey, the crocodile is only about two-thirds as heavy as an American alligator of the same length and can therefore move much more quickly. David and Donald were impressed with Kim's knowledge.

Kim also told the boys another way to tell the two reptiles apart. She said that both have an extra long lower fourth tooth. This tooth fits into a pit in the alligator's upper jaw, while in the crocodile, it fits into a groove in the side of the upper jaw and shows when the crocodile's mouth is closed. David and Donald thanked Kim for the information, looked at each other sheepishly and walked away laughing.

Match:

crocodile — fourth tooth shows when mouth is shut; round snout; called crocodilian

alligator — fourth tooth is in a pocket in upper jaw; pointed snout

Write three ways they are different.

Answers may include:

Alike	Different
tough hide	alligators have round snout, crocodiles have pointed
short legs	crocodiles are lighter
long, powerful tail	crocodiles are faster

Name two other animals that are sometimes thought to be the same.

Answers will vary. toad frog

page 127

Missing Signs

Fill in the circles with +, −, x, or ÷ to make the problem true.

3 + 3 + 3 → 9	3 + 3 x 3 → 18
3 ÷ 3 − 3 → 3	3 x 3 ÷ 3 → 3
3 + 3 + 3 → 2	3 x 3 − 3 → 6
3 + 3 + 3 → 4	3 − 3 x 3 → 0
3 x 3 + 3 → 12	3 x 3 x 3 → 27
5 + 5 x 5 → 50	5 x 5 − 5 → 20
5 ÷ 5 x 5 → 5	5 + 5 + 5 → 6
5 x 5 + 5 → 30	5 x 5 x 5 → 125
5 + 5 + 5 → 2	5 − 5 x 5 → 0
5 + 5 + 5 → 15	5 ÷ 5 ÷ 5 → 5

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A Number Challenge

Fill in the blanks to make each problem true. To check your work, start at the left and do each operation in order to get the given answer.

1. __ + __ − __ = 2	9. __ ÷ __ x __ = 6
2. __ − __ ÷ __ = 3	10. __ x __ + __ = 7
3. __ + __ ÷ __ = 4	11. __ ÷ __ + __ = 12
4. __ + __ x __ = 15	
5. __ − __ x __ = 20	
6. __ x __ ÷ __ = 3	14. __ x __ ÷ __ = 8
7. __ ÷ __ + __ = 4	15. __ + __ x __ = 24
8. __ ÷ __ − __ = 5	

Answers will vary.

page 129

Skill Lessons

Read the paragraphs about penguins. Make sure all pronouns and their antecedents agree. Correct run-on sentences.

Penguins are unusual birds found in Antarctica and other southern locations. They spend a lot of time in the icy ocean waters, yet they do not get cold. They are covered with short thick feathers that help to keep them warm. Plus, beneath their skin, penguins have a layer of blubber. These thick layers of fat keep the penguins warm in icy water.

Baby penguins, called chicks, do not have as much insulation as their parents have. They do not yet have blubber or waterproof feathers to keep them warm and dry. The chicks' fluffy down feathers plus their parents' body heat keep them safe from the cold. A small penguin may huddle under the warm body of an adult, and sometimes the adults form a tight circle around a group of several chicks and eventually the little penguins will be able to survive on their own.

Complete the article by adding a final paragraph.

Paragraphs will vary.

page 134

The Mischievous Thief

achieve, ancient, believe, brief, field, hosiery, kerchief, mischief, niece, piece, pierce, retrieve, shield, shriek, siege, thief, wield, yield

Use the code to retrieve the stolen words. Crack the code by assigning a number to each letter of the alphabet.
Example: A = 1, B = 2

a n c i e n t (1 14 3 9 5 14 20)	p i e r c e (16 9 5 18 3 5)
f i e l d (6 9 5 12 4)	y i e l d (25 9 5 12 4)
t h i e f (20 8 9 5 6)	s h r i e k (19 8 18 9 5 11)
n i e c e (14 9 5 3 5)	a c h i e v e (1 3 8 9 5 22 5)
b e l i e v e (2 5 12 9 5 22 5)	w i e l d (23 9 5 12 4)
s i e g e (19 9 5 7 5)	s h i e l d (19 8 9 5 12 4)
b r i e f (2 18 9 5 6)	h o s i e r y (8 15 19 9 5 18 25)
p i e c e (16 9 5 3 5)	k e r c h i e f (11 5 18 3 8 9 5 6)
m i s c h i e f (13 9 19 3 8 9 5 6)	
r e t r i e v e (18 5 20 18 9 5 22 5)	

page 135

Beth Is Sick

Poor Beth is sick, and she doesn't know why. She felt great yesterday, but this morning she woke up with a headache, a fever and a horrible sore throat. Beth is disappointed because today is the day her class is going to the new science museum. Why did she have to be sick on a field trip day? How did she get ill so quickly?

Beth and Kim talk on the phone about Beth's situation for twenty minutes. Because they planned to be field trip partners, Kim is really sad Beth isn't going to school today. Kim tells Beth she probably got sick because she didn't wear a jacket to school yesterday, and it was a cold day. She tells Beth that if your body gets cold, you catch germs more easily. Beth tells Kim that is silly. She believes Kim has a virus.

Beth remembers learning about viruses in science class. Mr. Fridley told them that viruses are noncellular structures that can only be seen through an electron microscope, which magnifies them thousands of times. On its own, a virus is a lifeless particle that can't reproduce, but when a virus enters a living cell, it starts reproducing and can sometimes harm the host cell. Viruses that harm host cells cause disease like chicken pox, the flu and colds. Mr. Fridley told them that shaking hands with or being sneezed or coughed on by an infected person may infect you with the virus. Beth believes that she became infected from someone since lots of people are sick at this time of year. Kim promises Beth a full report on the science museum.

Underline the main idea of the story.

Beth has a headache, fever and a sore throat.
Beth and Kim try to discover why Beth is sick.
Viruses cause diseases.
Mr. Fridley taught them about viruses.

Check the correct answers.

Viruses...

- ☑ can't be seen through an ordinary light microscope.
- ☑ pass easily from one person to another.
- ☐ are thousands of times bigger than regular cells.
- ☑ enter living cells and start reproducing.

What are some

Answers will vary.

page 136

Statistical Experiments

Statistical experiments involve collecting, organizing and analyzing data. Ms. Botanical's class is interested in growing a flower garden for the whole school to enjoy. To collect data on flower preferences, they surveyed all 435 students in the school. They noted the results below.

Favorite Flowers

Types of Flowers	Number of Votes
Black-eyed Susans	57
Petunias	63
Irises	32
Tulips	78
Hollyhocks	7
Daffodils	53
Daisies	84

Organize the data:
List the flowers in order from the most popular to the least. daisies, tulips, petunias, black-eyed Susans, daffodils, irisis, hollyhocks

Analyze the data:

1. Based on these data, which five flowers should the students plant? daisies, tulips, petunias, black-eyed Susans and daffodils
2. Which flower should definitely not be planted? hollyhocks
3. Do the number of votes justify planting a garden? Why or why not? Yes. A majority of students have demonstrated their interest by participating in the survey.
4. What is the mean? 53.43
5. What is the mode? no mode
6. What is the median? 57
7. What is the range? 77

page 137

Weight and Capacity

Weight
1 pound (lb.) = 16 ounces (oz.)
1 ton (T.) = 2,000 pounds

Capacity
1 cup (c.) = 8 fluid ounces (fl. oz.)
1 pint (pt.) = 2 cups
1 quart (qt.) = 2 pints
1 gallon (gal.) = 4 quarts

Example 1
To change from a larger unit to a smaller unit, multiply.
5 T. = _____ lb.
1 T. = 2,000 lb.
5 x 2,000 = 10,000
5 T. = 10,000 lb.

Example 2
To change from a smaller unit to a larger unit, divide.
176 fl. oz. = _____ c.
8 fl. oz. = 1 c.
176 ÷ 8 = 22
176 fl. oz. = 22 c.

Example 3
Express remainders in terms of the original unit.
25 c. = 12 pt. 1 c.
25 c. = _____ pt.
2 c. = 1 pt.
25 ÷ 2 = 12 R1

Complete.
1. 16 pt. = 8 qt.
2. 12 gal. = 48 qt.
3. 5 lb. = 80 oz.
4. 150 oz. = 9 lb. 6 oz.
5. 5 gal. 3 qt. = 23 qt.
6. 2 lb. 3 oz. = 35 oz.

Compare using >, <, =.
7. 1 gal. < 6 qt.
8. 560 oz. = 35 lb.
9. 15 pt. > 25 c.

page 138

Chemical Magic Square

Use the Periodic Table to help you complete this activity. Read the clues concerning the elements in the boxes below. **Write** the correct atomic number in the box. Add the numbers across, down and diagonally to produce a magic square.

What is your answer? 34

This element is located directly above lithium. 1	This element is located to the left of sulfur. 15	This element is located directly below carbon. 14	This element is located directly above magnesium. 4	34
This element is located to the right of sodium. 12	This element is located to the left of nitrogen. 6	This element is located directly above phosphorus. 7	This element is located directly above chlorine. 9	34
This element is located to the left of fluorine. 8	This element is located below helium. 10	This element is located directly above potassium. 11	This element is located directly above aluminum. 5	34
This element is located to the left of silicon. 13	This element is located directly below hydrogen. 3	This element is located directly above neon. 2	This element is located to the left of chlorine. 16	34
34	34	34	34	34

page 139

Interjections

An **interjection** that shows strong feeling is followed by an exclamation point. The next word begins with a capital letter.
Example: Quiet! He's not finished yet.
An **interjection** that shows mild feeling is followed by a comma. The next word is not capitalized.
Example: Oh, is that correct?

Rewrite the sentences to show strong feeling. Punctuate and capitalize properly.

1. hurrah we won the game.
   Hurrah! We won the game.
2. whew that was a close one.
   Whew! That was a close one.

Rewrite the sentences on the lines. Punctuate and capitalize properly.

1. yes you may go to the movies.
   Yes, you may go to the movies.
2. well we're glad you're finally here.
   Well, we're glad you're finally here.

Rewrite the sentences below correctly.

1. hush you don't want to upset her.
   Hush! You don't want to upset her.
2. well we're glad you came to the meeting.
   Well, we're glad you came to the meeting.
3. quiet you'll wake up everyone.
   Quiet! You'll wake up everyone.

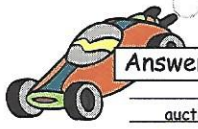
page 144

Automobile Exhaust

applause
assault
audience
automobile
autumn
caulk
daughter
exhaust
fraud
laundry
naughty
nausea
nautical
pauper
restaurant
sauna
slaughter
trauma

Complete the word associations using the spelling words.

1. prince and pauper
2. nautical and ship
3. crisis and trauma
4. laundry and soap
5. autumn and fall
6. entertainer and audience
7. sauna and spa
8. fraud and deceit
9. cheering and applause
10. exhaust and fumes
11. automobile and transportation
12. son and daughter
13. naughty and nice
14. caulk and seal
15. kill and slaughter
16. assault and battery
17. restaurant and diner
18. upset stomach and nausea



Write four more words containing **au**.
Answers will vary.
_____ and _____
auction and sale
_____ and _____

page 145

Multiply or Divide?

These key words will help you know when to multiply and when to divide.
Multiplication key words: **in all, altogether, times** and **each**
Division key words: **per, each**

Circle the key words and **solve** the story problems.

1. There are 9 classrooms at the vocational school. The average number of students per classroom is 27 students. How many students (altogether) are there in the school?
   27 x 9 = 243
   243 students
2. Thirty-five students are studying auto mechanics. Three (times) that many are studying business. How many students are studying business?
   35 x 3 = 105
   105 students
3. The semester is 16 weeks long. Students attend class 5 days a week. How many days (in all) must a student attend class each semester?
   16 x 5 = 80
   80 days
4. In one class of 27 students (each) student used $30.00 worth of materials. (Altogether) how much did materials cost this class?
   27 x 30 = 810
   $810.00
5. Lunch cost each student $11.50 for a 5-day week. How much does (each) lunch cost?
   $11.50 ÷ 5 = $2.30
   $2.30
6. The average student drives a total of 8 miles per day to attend classes. How many miles (in all) does a student drive during the 80-day semester?
   80 x 8 = 640
   640 miles

page 146

Shifty Sam's "Rip-Off" Record Shop

Shifty Sam sells the latest rock releases along with some oldies. You have to keep a close eye on Sam, or you may get ripped off.

Solve the problems on another sheet of paper. **Write** your answers in the spaces provided.

The Ear Splitters' latest release, regularly $8.98, is on sale at 5 CDs for $46.95. How much more or less would you pay at the sale price for all 5 CDs?	$2.05 more
The Funky Monkeys' new CD went fast. Sam made $4,540.90 on 455 copies. The correct price should be $7.99. How much did Sam charge for each CD? How much extra did he charge?	$9.98 each $1.99 extra
Sam made $4.59 profit on each copy of the 323 CDs he sold by the Brainbangers. He is supposed to make only $3.29 profit on each one. How much extra did he make on the 323 CDs?	$419.90 extra
Your aunt wanted to buy some CDs by Hart N. Soule which regularly sell for $3.67 each. Sam offered to sell her a dozen CDs for $44.00. How much will she save by buying 12 CDs?	She will save $.04
You wanted 180 copies of Hits of the 1940s to use as Frisbees. Each record cost $.79. Sam gave you $47.80 in change from $200. How much did he cheat you?	$10.00
Sam sold 7,000 copies of Golden Oldies for $3.99 each. He made a $2.00 profit on each record. How much money did he get for all 7,000 copies? How much profit did he earn?	$27,930.00 for all $14,000.00 profit
Sam charged $1.79 more for each copy of the Dippers' new CD than he was supposed to. His price was $7.89, and he sold 3,500 copies. How much extra money did he get?	$6,265.00 extra
Sam sold 4,328 copies of Country Classics at $4.99 each. His profit was $1.45 on each one. How much money did he get in all? How much profit did he earn?	$21,596.72 total $6,275.60 profit

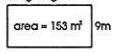
page 147

Division Review

Divide.

1. $32\overline{)6{,}543}$ 204 R15
2. $69\overline{)112{,}345}$ 1,628 R14
3. $9\overline{)876}$ 97 R3

4. How many hours are in 255 minutes? 4 hours 15 minutes
5. How many weeks are there in 90 days? 12 weeks 6 days
6. Find the missing length.



17 m

7. $17x = 272$, $x = 16$
8. Write the remainder as a fraction. $27\overline{)6{,}925}$ $256\frac{13}{27}$
9. A chicken farm produced 7,256 eggs each day. How many egg cartons are needed each day? (A carton holds one dozen eggs.) 605 cartons

page 148

Testing for Starch

Starch is found in many foods and plants. Iodine is an indicator of starch. It turns blue-black when placed on a substance containing starch. **Safety Note: Iodine can be dangerous. Do not taste, spill or misuse it in any way.** Place a drop of iodine on each of the substances listed in the chart. Record the results. The first one is done for you.

Substance	Color of Iodine	Starch: Yes or No
white bread	blue-black	yes
brown bread	blue-black	yes
dry cereal	blue-black	yes
brown leaf	blue-black	yes
popped popcorn	blue-black	yes
oatmeal	blue-black	yes
orange peel	brown	no
lemon peel	brown	no
liquid starch	blue-black	yes
newspaper	brown	no
paper towel	brown	no
tissue	brown	no
water	brown	no
alcohol	brown	no
dish soap	brown	no
cloth	brown	no

page 149

Diamonds Are a Girl's Best Friend

diabetes
diabolic
diacritical
diadem
diagnosis
diagonal
diagram
dialect
dialogue
dialysis
diameter
diamond
diaper
diaphragm
diaries
diathermy
diatomic
diatribe

Fill in the blanks with the correct missing letters to complete the spelling words.

Answers may vary.

dia gram dia lect
dia critical
dia dem dia gnosis
dia betes dia bolic
dia mond dia logue
dia meter dia lysis
dia ries dia per
dia phragm
dia gonal
dia thermy
dia tomic
dia tribe

Choose one of the spelling words. Do some research on it. Then, **write** a paragraph (5 or 6 sentences) telling what you learned about the word.

Answers may vary.

page 154

Equations

Solve the equations on another sheet of paper. **Write** your answers here.

1. $5+6-4=7$
2. $(3\times4)+3=4$
3. $(32\div8)+3=7$
4. $(40+8)-2=3$
5. $6+(8\times3)=30$
6. $14\div12-6=20$
7. $(2\times9)\div4=22$
8. $(8\times8)\div6=70$
9. $6+(6\div6)=7$
10. $45\div(5\times3)=3$
11. $9\div7-10=6$
12. $(15\times2)+3=10$
13. $(3\times7)-1=20$
14. $(18+9)\times8=16$
15. $(36\div9)+8=12$
16. $(21+7)+6=9$
17. $7+8-8=7$
18. $9+6-12=3$
19. $12+7-8=11$
20. $(56+8)+4=11$
21. $(64+8)+5=13$
22. $14+(2\times8)=30$
23. $(7+9)+2=8$
24. $(15+3)\times2=10$
25. $(5+3)\times3=24$
26. $15-7+3=11$
27. $(3+7)\times(10+2)=50$
28. $6+(8+2)=10$
29. $3\times(5+6)=33$
30. $15+(3\times2)=21$
31. $14-(8-2)-1=7$
32. $16-(10-4)=10$
33. $(14+6)\div5=4$
34. $(3+2)\times(4+6)=50$
35. $12\times(3+2)=60$
36. $6\times(4+5)=54$
37. $3+6\times2+5=20$
38. $8+(4\times5)=28$
39. $(6\times8)+2=50$
40. $30+(16\times2)=62$
41. $3\times(9+2)=33$
42. $52-(5+3)=44$
43. $(64+8)\times3=24$
44. $25-(3+8)=14$
45. $21+(3+4)=3$

page 155

Games

4. One week (Sunday through Saturday) there is a birthday party every day. No two children are invited to the same party. Find out the day that each child attends a party.

Hint: Use a chart with days of the week across and children's names down the side.

a. Lisa and Pat don't go to a party on a Friday or a Saturday.
b. Pat and Alice don't go on a Tuesday, but Sandy does.
c. Jennifer goes to a party on Wednesday.
d. Jim goes to a party the day after Jennifer.
e. Lisa goes to a party the day before Pat.
f. Paul goes to a party on a Saturday.

Sunday	—	Lisa
Monday	—	Pat
Tuesday	—	Sandy
Wednesday	—	Jennifer
Thursday	—	Jim
Friday	—	Lisa
Saturday	—	Paul

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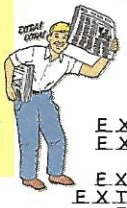
Extra Extraordinary

Complete the puzzle using the spelling words. Use each word once. One word has been filled in for you.

example: Answers may vary.

expense, expert, explore, extend, extent, exterior, exterminate, external, extinct, extinguish, extol, extract, extraordinary, extravagant, extreme



EXTINCT
EXTRACT
EXTERIOR
EXTERNAL
EXTERMINATE
EXPENSE
EXTENT
EXTREME
EXERCISE
EXAMPLE
EXTOL
EXPLORE
EXTEND
EXTINGUISH
EXCHANGE
EXTRAVAGANT
EXPERT
EXTRAORDINARY

Use your own words to create a puzzle. Each word should link with another.

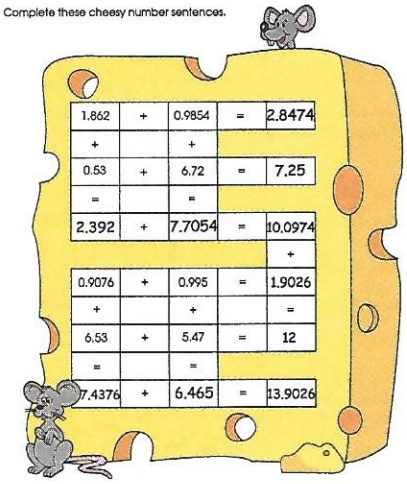
Example:

```
    H
    A
SHEEP
U   P
G   Y
A
R
```

page 162

Swiss Sentences

Complete these cheesy number sentences.

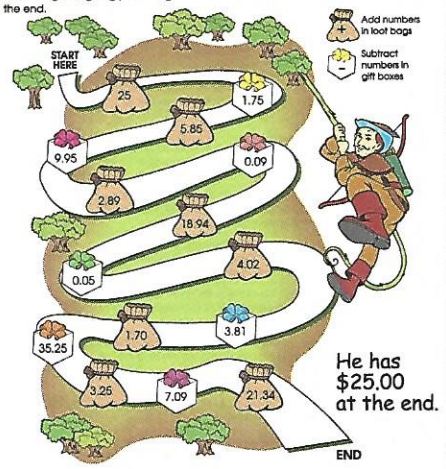


1.862	+	0.9854	=	2.8474
+		+		
0.53	+	6.72	=	7.25
=		=		
2.392	+	7.7054	=	10.0974
				+
0.9076	+	0.995	=	1.9026
+		+		=
6.53	+	5.47	=	12
=		=		
7.4376	+	6.465	=	13.9026

page 163

Robin Hood's Loot

As you know, Robin Hood stole from the rich and gave to the poor. Follow his stealing and giving path to figure out how much he has left for himself at the end.



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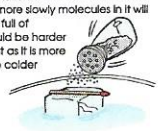
Salt and Ice

Adding solute to a liquid creates a solution. This solution will be denser than the liquid water by itself. The denser a solution is, the more slowly molecules in it will move. Imagine trying to swim in a swimming pool full of pudding, which is much denser than water. It would be harder for you to move quickly in the denser medium, just as it is more difficult for molecules. The denser a solution is, the colder it has to be before the solution will freeze.



Part 1
Fill a bowl or a glass with water almost to the top, and float an ice cube in it. Set an unlighted wooden match across the top of the ice cube. Make sure that some of the match hangs off the edge of the ice cube. Sprinkle salt lightly over it. Wait approximately 2 minutes. Then, try to lift the match

What happened?
Why do

Answers will vary.

Part 2
Fill three glasses half-full with water, each having the same temperature. Put a little piece of masking tape on each one and label them #1, #2 and #3. Leave #1 as plain tap water. Add 1 teaspoon of salt to #2 and stir. Add 1 tablespoon of salt to #3 and stir. Next, place an ice cube in each glass. Add the cubes to the three glasses at the exact same time, and do not stir. Time how long it takes for the ice cube in each glass to melt. Record your data on the chart below.

Sample	Time to Melt (see
#1	
#2	
#3	

Data will vary.

page 165

Colons and Lists

Use a **colon** when writing a list of items if "follows" or "the following" is used in the introduction and the list of items immediately follows. Commas (and sometimes semicolons) are used to separate the items in the list.

Example: The clown was wearing **the following:** striped pants, a polka-dot shirt, floppy shoes and baggy socks.

Do not use a colon if the list of items is introduced by such words as "namely," "for instance," "for example" or "that is." Instead, set off the phrase with commas.

Example: A clown could wear, **for example,** striped pants, a polka-dot shirt, floppy shoes and baggy socks.

There are eight different outfits that could be made from the clothes listed. Fill in the blanks and correctly punctuate the eight different lists.

Ties (striped, paisley) **Shirts (white, blue)** **Pants (khaki, gray)**

1. John could wear the following: a striped tie, white shirt and khaki pants.
2. He could also wear, for instance, a striped tie, blue shirt and khaki pants.
3. John could wear the outfit as follows: a paisley tie, white shirt and khaki pants.
4. He might try wearing, for example, a paisley tie, blue shirt and khaki pants.
5. He could try, namely, a striped tie, white shirt and gray pants.
6. Otherwise, he might try as follows: a striped tie, blue shirt and gray pants.
7. He could outfit himself in the following: a paisley tie, white shirt and gray pants.
8. John could choose a last choice as follows: a paisley tie, blue shirt and gray pants.

page 170

Classified Ads

adapt, address, adequate, adhere, adjective, adjust, admire, admit, admonish, adopt, adorn, adult, advance, advantage, advent, adventure, advice, advise

Write each spelling word under the proper category (noun, verb or adjective). Some words can act as more than one part of speech.

Noun	Verb
1. address	1. adapt
2. adjective	2. address
3. adult	3. adhere
4. advance	4. adjust
5. advantage	5. admire
6. advent	6. admit
7. adventure	7. admonish
8. advice	8. adopt
	9. adorn
	10. advance
	11. advise

Adjective
1. adequate
2. advance

Write a brief classified ad for a newspaper using at least five spelling words.
Example: Adults wanted. Please adopt my pet mouse. Mice adapt easily to new surroundings. My mom admonished and advised me to give him up.

Answers will vary.

page 171

Charting the Weather

For four months, the students in Ms. Forecaster's class charted the sunny, partly sunny and cloudy days. The following chart shows their findings to the nearest tenth.

1. How many more sunny days did January have than December? 2.1 days
2. In November, how many more cloudy days were there than sunny days? 2.9 days
3. How many more partly sunny days were there than sunny days in January? 8.3 days
4. What is the difference in days between the month with the most cloudy days and the month that had the fewest cloudy days? 8.9 days
5. Which month had the most sunny days? How many more sunny days did it have than the month with the second most? Which month came in second? October/5 days
January
6. Which month had the most cloudy days? Which month had the fewest cloudy days? How many total cloudy days were there in these four months? December/October
34.3 days

Extension: Find the total number of sunny, partly sunny and cloudy days in these four months. Then, find the average number of days for each type of weather.

Sunny: 35.1 days
Partly Sunny: 53.6 days
Cloudy: 34.3 days

Averages
Sunny: 8.8 days
Partly Sunny: 13.4 days
Cloudy: 8.6 days

page 172

Acids and Bases

Acids and **bases** are chemical compounds. Some of these compounds are strong and abrasive. Many are used as cleaning agents. Litmus paper is an indicator. Indicators are affected when acid or base is present in a substance. Blue litmus paper turns red when dipped in an acid. Red litmus paper turns blue when dipped in a base.

Use blue and red litmus paper to test each one of the substances on the chart. Record the results by writing the color the paper turns when dipped and whether the substance is an acid or a base. The first one is done for you.

Substance	Blue Litmus	Red Litmus	Acid, Base or Neither
lemon juice	red	red	acid
vinegar	red	red	acid
ammonia	blue	blue	base
orange juice	red	red	acid
tea	red	red	acid
milk	blue	red	neither
baking soda and water	blue	blue	base
cleanser and water	blue	blue	base
water	blue	red	neither (b)
vinegar and salt	red	red	acid
grapefruit juice	red	red	acid
antacid pills and water	blue	blue	base
cola	blue	red	neither (a)

page 173

Semicolon

A **semicolon** is used to join two independent clauses that are closely related if a conjunction is not used. An **independent clause** is a group of words that could stand as a complete sentence by itself.

Read each pair of sentences. **Rewrite** those that could be joined by a semicolon.

1. The tiny hummingbird builds a small nest. Its jelly bean-sized eggs fit nicely into it.
   The tiny hummingbird builds a small nest; its jelly bean-sized eggs fit nicely into it.
2. Some birds build with unusual materials. You may find string or ribbon woven into a nest.
   Some birds build with unusual materials; you may find string or ribbon woven into a nest.
3. A nest's location can tell you a bird's diet. Most birds live near their food supply.
   A nest's location can tell you a bird's diet; most birds live near their food supply.
4. A gull's nest is on the shore. Gulls eat fish and other kinds of seafood.
   A gull's nest is on the shore; gulls eat fish and other kinds of seafood.
5. A woodpecker lives in a hole in a tree. It eats insects that live in trees.
   A woodpecker lives in a hole in a tree; it eats insects that live in trees.
6. Some birds take over old nests. Purple martins live in birdhouses.
   These sentences are not closely related.
7. A woodpecker makes a hole to live in and later moves out. An elf owl moves right into it.
   A woodpecker makes a hole to live in and later moves out; an elf owl moves right into it.
8. A swan builds a nest among the reeds. The reeds help hide the nest from the swan's enemies.
   A swan builds a nest among the reeds; the reeds help hide the nest from the swan's enemies.

page 178

You're a Pro

1. probe
2. produce
3. profane
4. promise
5. profound
6. progress
7. prohibit
8. project
9. prolong
10. promote
11. pronoun
12. pronounce
13. propel
14. proportion
15. propose
16. prosper
17. protein
18. provoke

Complete the magic square. **Write** the number of each spelling word in the lettered square that corresponds to its definition. Two of the words will not be used.

A. create; vegetables
B. to stop
C. stir up; make angry
D. speak clearly; articulate
E. stick out; a plan
F. deep and intense
G. a replacement for a noun
H. suggest
I. move forward
J. an essential part of diet
K. growth; to improve
L. blasphemous
M. have good fortune
N. to raise to a higher level
O. agreement to do something
P. to lengthen

A 2	B 7	C 8	D 12
E 8	F 5	G 11	H 15
I 13	J 17	K 6	L 3
M 16	N 10	O 4	P 9

Check your work by adding each row and then each column of numbers. If all the sums are the same, you have matched correctly.

Write the two words that were not included in the square.

1. probe 2. proportion

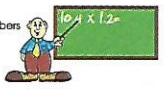
Write the six words that can be used either as nouns or as verbs.

1. probe 2. produce
3. promise 4. progress
5. project 6. proportion

page 179

Comparison

Mr. Bigfoot's class was comparing numbers by multiplying decimals. Round your answer to the nearest hundredth.



1. Andy's shoe is 10.4 inches long. Tony's is 1.2 times as long. How long is Tony's shoe?
   12.48 inches
2. Alicia can jump 24.8 inches. Jill can jump 1.05 times as high. How high can Jill jump?
   26.04 inches
3. The paper basket holds 288 sheets of paper. It is 0.25 full. How many sheets of paper are in it?
   72 sheets
4. Misha's dog weighs 98.5 pounds. Tom's dog weighs 1.25 times as much. How much does Tom's dog weigh?
   123.13 pounds
5. The area of Mr. Bigfoot's classroom is 981.75 square feet. The gym is 4.50 times as large. What is the area of the gym?
   4,417.88 square feet
6. The box holds 48 pencils. It was 0.75 full. How many more pencils would fit in the box?
   12 pencils
7. Amy is 5.250 feet tall. The ceiling is 2.075 times Amy's height. How tall is the ceiling?
   10.89 feet

Extension: Place the decimal point in the underlined number.

1. 213.05 x 2.3 = 490.015 2. 4.67 x 0.46 = 2.2402 3. 60.1 x 0.08 = 4.808

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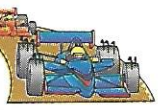
Circumference of Circles



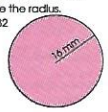
Circumference is the distance around a circle.

$C = \pi \times d$
π (pi) ≈ 3.14 or $\frac{22}{7}$ (≈ means approximately equals to)
d = diameter

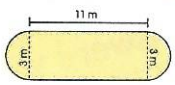
Use π ≈ 3.14 and round to the nearest one.

Example 1:
C = π x d
C ≈ 3.14 x 8.6
C ≈ 27.004 km
C ≈ 27 km

Example 2:
The radius of the circle is 16 mm.
Diameter is twice the radius.
So, d = 16 x 2 = 32
C ≈ 3.14 x 32
C ≈ 100.48 mm
C ≈ 100 mm



Example 3:
Find the perimeter of the figure.
Circumference of the circle ≈ 3.14 x 3 ≈ 9.42 m



9.42 + 11 + 11 = 31.42 m

Find the circumference of each circle. Use π ≈ 3.14 and round to the nearest one.

1. 22 cm, 69 cm
2. 18.9 m, 59 m
3. 7.6 km, 48 km
4. 24 dam, 3.9 dam

Find the perimeter of each figure.

5. 18 cm, 7 cm, 7 cm — 57.98 cm
6. 7 dm, 3 dm — 21.71 dm

page 181

This Is So Fine

Rewrite each sentence below, replacing the word **fine** with one of the synonyms given. Since the synonyms have slight differences in meaning, be careful to choose the correct one.

Fine: clear, delicate, elegant, small, sharp, subtle

1. The queen wore a **fine** gown encrusted with jewels.
   The queen wore an elegant gown encrusted with jewels.
2. I wash this blouse by hand because of its **fine** lace collar.
   I wash this blouse by hand because of its delicate lace collar.
3. The sand in an hourglass must be very **fine** to trickle as it does.
   The sand in an hourglass must be very small to trickle as it does.
4. We need **fine** weather for sailing.
   We need clear weather for sailing.
5. Dad used a whetstone to put a **fine** edge on the knife.
   Dad used a whetstone to put a sharp edge on the knife.
6. Sometimes there is a **fine** line between innocence and guilt.
   Sometimes there is a subtle line between innocence and guilt.

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Shopping for Soccer Supplies

The soccer team members needed to buy their own shin guards, socks, shoes and shorts. A couple of the players volunteered to do some comparative shopping to find the store with the best deal. Use their chart to answer the questions below.

SPORTS CORNER	
Socks	3 pairs for $9.30
Shoes	2 pairs for $48.24
Shin Guards	4 pairs for $32.48
Shorts	5 pairs for $60.30

JOE'S SOCCER	
Socks	2 pairs for $6.84
Shoes	3 pairs for $84.15
Shin Guards	5 pairs for $35.70
Shorts	4 pairs for $36.36

1. Which store had the better price for socks? Sports Corner
   How much less were they per pair? $0.32
2. Which store had the better price for shin guards? Joe's Soccer
   How much would you save per pair? $0.98
3. How much would one pair of shoes and socks cost at Joe's Soccer? $31.47
   How much at Sports Corner? $27.22
4. Which store had the better price for shorts? Joe's Soccer
   How much less were they per pair? $2.97 less
5. Total the price per pair for each item at each store. If you could shop at only one store, which one would give you the best overall deal? Sports Corner
   How much would you save? $0.30

page 187

Dividing by Decimals

What kind of problems will these decimal glasses help you solve? Solve the problems. Then, **write** them in descending order (from greatest to least) beneath the blanks at the bottom of the page. **Write** each matching letter above the number to solve to the riddle.

S $2.1\overline{)8.4} = 21.\overline{)84.}$ — 4

V $0.36\overline{)1.872}$ — 5.2

O $1.24\overline{)0.4712}$ — 0.38

N $8\overline{)1.12}$ — 0.14

D $0.3\overline{)17.7}$ — 59

I $6\overline{)126.}$ — 21

I $.082\overline{)0.3772}$ — 4.6

— $7.4\overline{)103.6}$ — 14

I $5.5\overline{)3.025}$ — 0.55

D I - V I S I O N

page 189

Oil and Water Emulsions

Investigation
Fill a clear glass jar about half-full with water. Add several drops of food coloring. Describe what happens.

Add about 1 inch of oil to the top of the water. Does the oil stay at the top of the jar?
Add several drops of food coloring to the top of the oil. What happens to the food coloring?
Use an eye... to poke a hole in the oil near the food coloring.
What hap...
Put the li... minute. Wait 1 minute. Is the oil on top?
Is oil hea...

Answers will vary.

Emulsions
Let your jar of oil and water settle for a few...
Add a different color of food coloring to the top of the oil. Fill an eyedropper with liquid soap. Drop this soap right on the food coloring. Do this several times. What happens to the food coloring?

Shake the jar several times. Observe the results. What happens to the oil?

Let the jar stand undisturbed for a few minutes. What happens to the oil?

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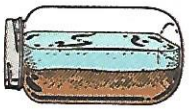
Ocean in a Bottle Emulsions

Investigation



- Fill a glass jar about half-full with water. Add several drops of food coloring to the water. Use blue, blue-green or blue-red food coloring, depending on the color you want the ocean to be. Add oil to the jar until it is about 3/4 full. Tighten the lid and turn the jar on its side. Do you see the ocean effect?

Emulsions

- Stand the jar upright. Add 8 eye droppers full of liquid dish soap to the jar. What happens?
- Shake the ...ously. What happens?
- Shake t... it in a bag filled w... for the oil to...
- After the oil and wa... again vigorously. Place the jar... near a warm radiator or in the hot sun. How many minutes does it take this time for the oil to return completely to the top?

Answers will vary.

Extending the Concept

- Place a spoonful of mayonnaise in one small plastic cup and a spoonful of margarine in another small plastic cup. Fill a third plastic cup half-full with milk. Set each of these in a pan of warm water, in the hot sun or near (but not touching) a warm radiator. Wait 1 hour. Describe what happens to each of these substances.

- How are these substances like oil and water?

page 191

Predictable Prefixes

Complete the puzzle using the spelling words. Use each word once.

precaution	prepare
precise	prepay
predict	preschool
prefer	prescribe
prefix	preserve
prehistoric	presume
premature	prevail
premeditate	prevent
premium	previous

PREVIOUS
PREPARE
PREPAY
PREDICT
PRECISE
PRESCHOOL
PREVENT
PREMATURE
PRESCRIBE
PREVAIL
PREHISTORIC
PRECAUTION
PRESERVE
PREMEDITATE
PREFER
PREMIUM
PREFIX
PRESUME

PREDICTABLE PREFIXES

Change the meaning of two words from the list by adding a different prefix.

1. Answers will vary. 2. Infer

page 196

Shiloh

A **simile** is a comparison using the words **like** or **as**. **Underline** the similes in these sentences. **Write** another simile with the same or nearly the same meaning.

1. My dream leaks out like water in a paper bag.
   Answers will vary.
2. I hold Shiloh as careful as I carry Becky when she s asleep.
3. I'm as happy as a flea on a dog.
4. Keeping Shiloh a secret is like having a bomb waiting to go off.
5. I'm as tense as a cricket at night.
6. Ma hums to Shiloh like he's a baby in a cradle.

Complete these sentences with a simile of your own.

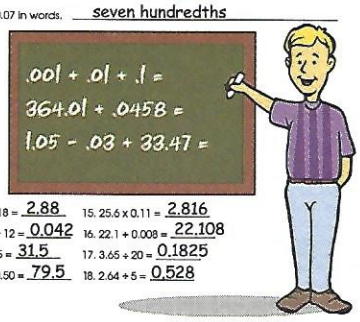
7. Shiloh looked like _____
8. Doc Murphy was _____ with Shiloh.
9. Judd trying to be nice was like _____
10. The Prestons were happy as _____ to have Shiloh.

Answers will vary.

page 197

Decimal Test

1. 0.45 + 0.96 + 0.52 = 1.93
2. 26.3 − 4.8 = 21.5
3. Use > or < to compare each pair of numbers.
   5.01 > 5.003 6.15 > 6.015 3.05 < 5.03
4. Write sixty-one hundredths in numeral form. 0.61
5. 35.1 + 475.11 + 0.54 + 0.3 + 15 = 526.05
6. 81 − 0.04 = 80.96
7. Round 27.553 to the nearest tenth. 27.6
8. Round 62.814 to the nearest hundredth. 62.81
9. Round 5.06921 to the nearest hundredth. 5.07
10. Write 0.07 in words. seven hundredths



11. 16 x 0.18 = 2.88
12. 0.504 ÷ 12 = 0.042
13. 63 x 0.5 = 31.5
14. 90 − 10.50 = 79.5
15. 25.6 x 0.11 = 2.816
16. 22.1 + 0.008 = 22.108
17. 3.65 ÷ 20 = 0.1825
18. 2.64 ÷ 5 = 0.528

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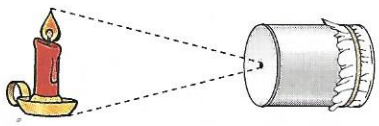
Pinhole Camera



Use a large can that has a very small hole in the center of one end and that is open at the other end. Stretch one sheet of tissue paper over the open end and rubber band it in place. In a darkened room, hold the small opening about 6 inches (10 cm) away from a lighted candle. **As always, be careful when dealing with fire.** Line up the small opening with the candle flame. Hold the end covered with tissue towards you and look at the tissue. You should be able to see the back of an image projected onto the tissue showing through from the inside of the can. Move the can slightly forward and back to focus the image.

Observations
What do you see on the tissue?
Is there anything unusual about the image?

Answers will vary.

Facts to Know
The pinhole camera you have just made models how an image is formed in the human eye. Light enters the eye through a small opening called the pupil and projects an image against the retina on the back of the eyeball. The image is upside down when it reaches the retina, but the brain automatically reverses it so we perceive the image as upright.

Draw lines connecting the parts of the pinhole camera with the corresponding parts of the eye.

retina — tissue
pupil — small opening

page 199

Sentences

Simple, Compound and Complex

A simple sentence has a complete subject and predicate.
Example: The little brown rabbit hopped all around the yard.

A compound sentence has two or more simple sentences joined together.
Example: Patrick tried to pick the rabbit up, but it quickly hopped away.

A complex sentence contains one independent clause and one or more dependent clauses.
Example: After several tries, Patrick finally caught the frightened rabbit.

Label the sentences below as simple, compound or complex.

1. Jack and Sam were planning their summer vacation. simple
2. Jack, who loved to hike and climb, wanted to go to the mountains. complex
3. Sam called the travel agency, but no one answered the phone. compound
4. They needed some advice about their travel plans. simple
5. Since they had been to the mountains last year, Sam thought going to a lake would be better this time. complex
6. They finally decided to fish the first week of their vacation and head for the mountains the second week. complex

Write the sentences below according to the directions.

1. Write a simple sentence with a compound subject.
2. Write a simple sentence with a [illegible]
3. Write [illegible] conjunction.
4. Write a complex sentence using the subordinating conjunction after.

Sentences will vary.

page 204

"Variety Is the Spice of Life"

Writing is more interesting when sentences are written in different ways. Sentences may be short or long, begin with phrases or clauses or change their order.

Rewrite the paragraphs below. Divide some sentences and combine others. Vary their beginnings.

My sister broke her leg playing soccer. She was playing center. She was in a tournament. She tripped over the ball when she tried to trap the ball and fell to the ground immediately. An ambulance came and an ambulance had on its siren and she went away in the ambulance.

The school year was about to begin. I had to get ready [illegible] to the store. I had to get a notebook. I had to get [illegible] and pencils with erasers. I saw my friends [illegible] school too.

Answers will vary.

Jamie's mother got a new car. It was a good-looking one. The car was bright red and it had a sun roof and it had a stereo and it could go fast. It had four speeds. Jamie could not give anyone a lift there were only two seats. Jamie was not old enough to drive. He sat in the seat next to his mom.

page 205

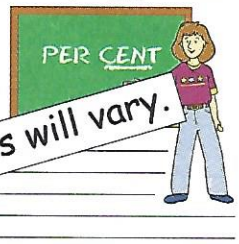
Perplexing Personalities

Divide each spelling word into syllables and **underline** the syllable that is stressed. Refer to a dictionary if necessary.

percent	perhaps	perish	peroxide	persevere	perspire
percussion	peril	permanent	perpendicular	persist	persuade
perfume	period	permit	perplex	personality	perturb

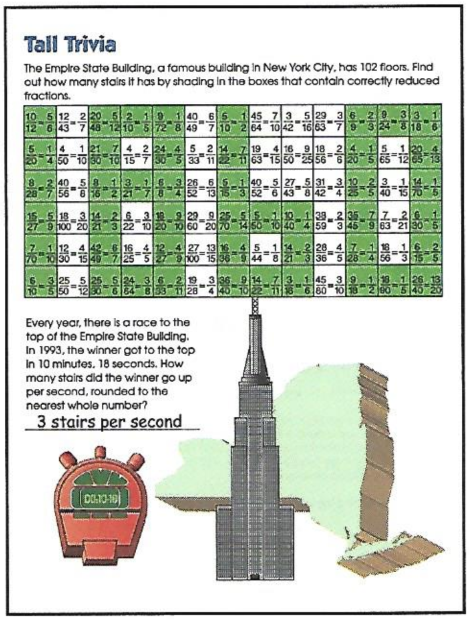
1. per cent
2. per cus sion
3. per fume or per fume
4. per haps
5. per il
6. pe ri od
7. per ish
8. per ma nent
9. per mit or per mit
10. per ox ide
11. per pen dic u lar
12. per plex
13. per se vere
14. per sist
15. per son al i ty
16. per spire
17. per suade
18. per turb

Write a paragraph using as many spelling words as possible. Add your own words beginning with **per**.



Answers will vary.

page 206


Tall Trivia

The Empire State Building, a famous building in New York City, has 102 floors. Find out how many stairs it has by shading in the boxes that contain correctly reduced fractions.

Every year, there is a race to the top of the Empire State Building. In 1993, the winner got to the top in 10 minutes, 18 seconds. How many stairs did the winner go up per second, rounded to the nearest whole number?

3 stairs per second

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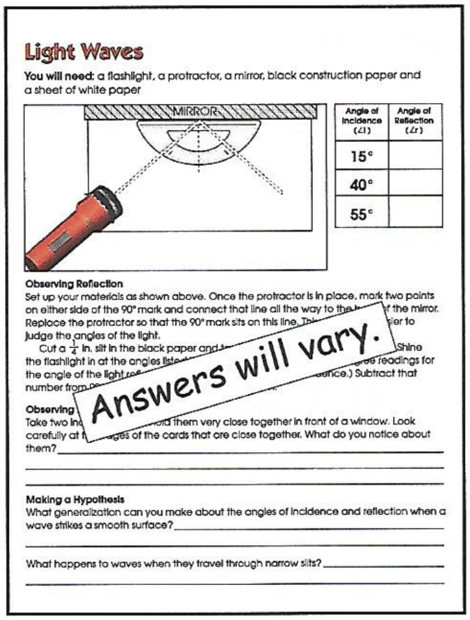

Light Waves

You will need: a flashlight, a protractor, a mirror, black construction paper and a sheet of white paper

Observing Reflection

Set up your materials as shown above. Once the protractor is in place, mark two points on either side of the 90° mark and connect that line all the way to the ... of the mirror. Replace the protractor so that the 90° mark sits on this line. ... to judge the angles of the light.

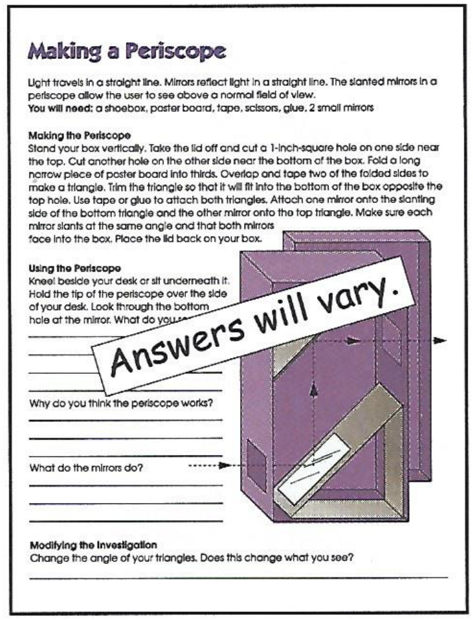
Answers will vary.

Making a Hypothesis

What generalization can you make about the angles of incidence and reflection when a wave strikes a smooth surface?

What happens to waves when they travel through narrow slits?

page 208


Making a Periscope

Light travels in a straight line. Mirrors reflect light in a straight line. The slanted mirrors in a periscope allow the user to see above a normal field of view.
You will need: a shoebox, poster board, tape, scissors, glue, 2 small mirrors

Making the Periscope

Stand your box vertically. Take the lid off and cut a 1-inch-square hole on one side near the top. Cut another hole on the other side near the bottom of the box. Fold a long narrow piece of poster board into thirds. Overlap and tape two of the folded sides to make a triangle. Trim the triangle so that it will fit into the bottom of the box opposite the top hole. Use tape or glue to attach both triangles. Attach one mirror onto the slanting side of the bottom triangle and the other mirror onto the top triangle. Make sure each mirror slants at the same angle and that both mirrors face into the box. Place the lid back on your box.

Using the Periscope

Kneel beside your desk or sit underneath it. Hold the tip of the periscope over the side of your desk. Look through the bottom hole at the mirror. What do you ...

Answers will vary.

Why do you think the periscope works?

What do the mirrors do?

Modifying the Investigation

Change the angle of your triangles. Does this change what you see?

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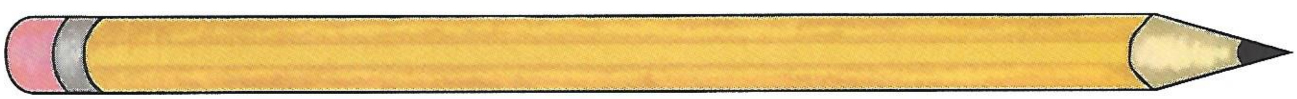

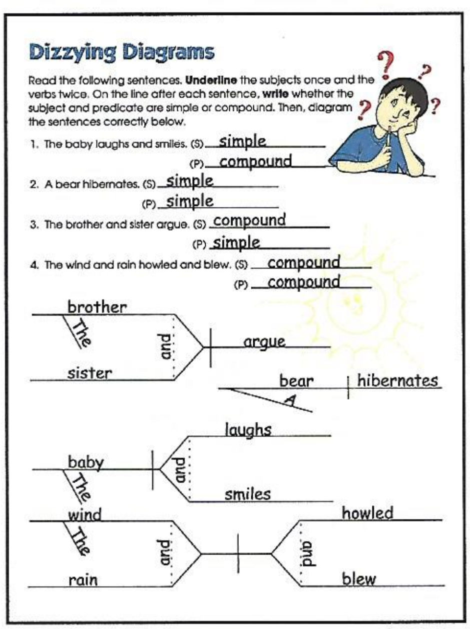
Dizzying Diagrams

Read the following sentences. **Underline** the subjects once and the verbs twice. On the line after each sentence, **write** whether the subject and predicate are simple or compound. Then, diagram the sentences correctly below.

1. The baby laughs and smiles. (S) simple (P) compound
2. A bear hibernates. (S) simple (P) simple
3. The brother and sister argue. (S) compound (P) simple
4. The wind and rain howled and blew. (S) compound (P) compound

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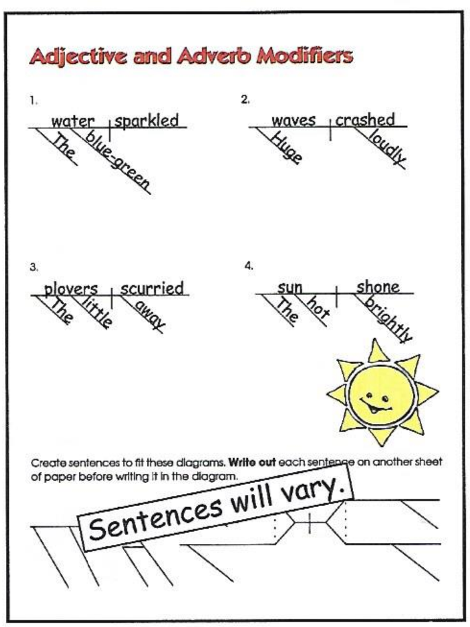
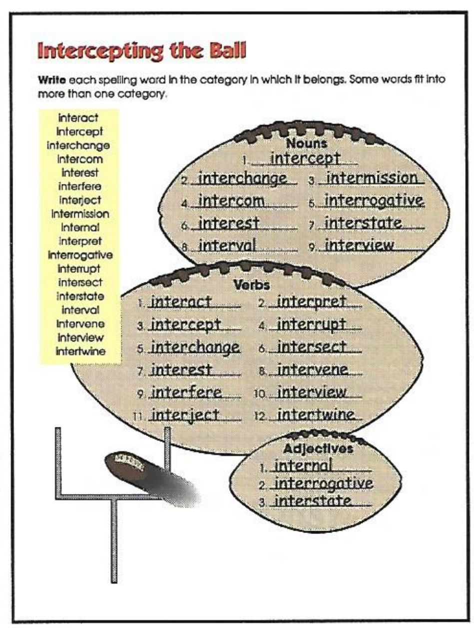

Adjective and Adverb Modifiers

Create sentences to fit these diagrams. **Write out** each sentence on another sheet of paper before writing it in the diagram.

Sentences will vary.

page 215


Intercepting the Ball

Write each spelling word in the category in which it belongs. Some words fit into more than one category.

interact, intercept, interchange, intercom, interest, interfere, interject, intermission, internal, interpret, interrogative, interrupt, intersect, interstate, interval, intervene, interview, intertwine

Nouns
1. intercept
2. interchange
3. intermission
4. intercom
5. interrogative
6. interest
7. interstate
8. interval
9. interview

Verbs
1. interact
2. interpret
3. intercept
4. interrupt
5. interchange
6. intersect
7. interest
8. intervene
9. interfere
10. interview
11. interject
12. intertwine

Adjectives
1. internal
2. interrogative
3. interstate

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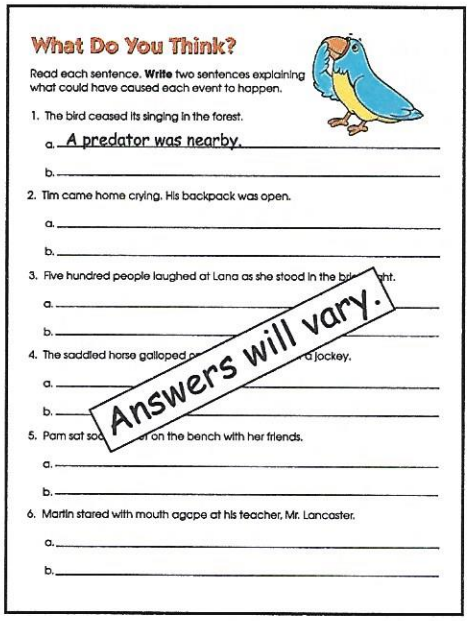

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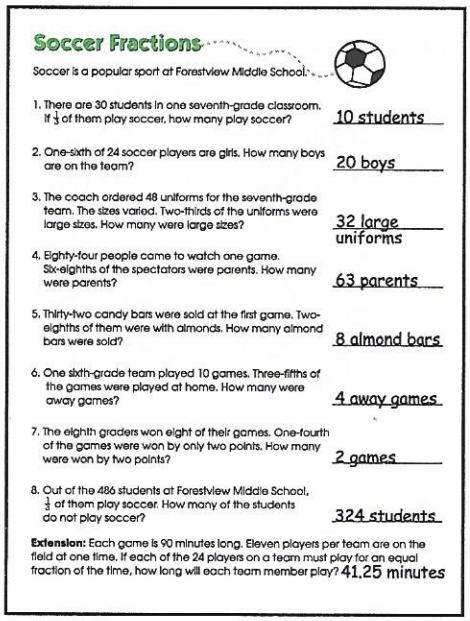

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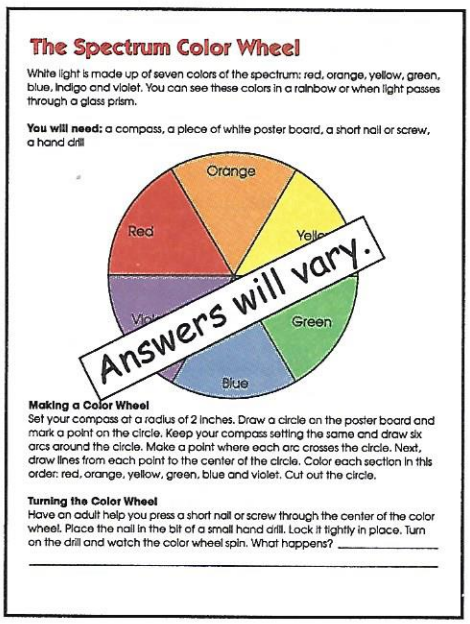

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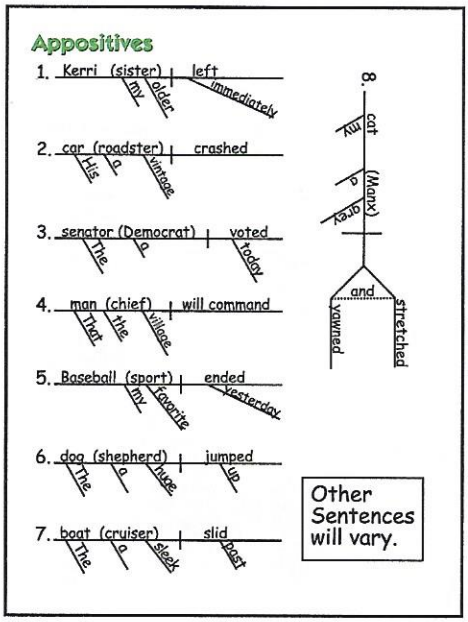

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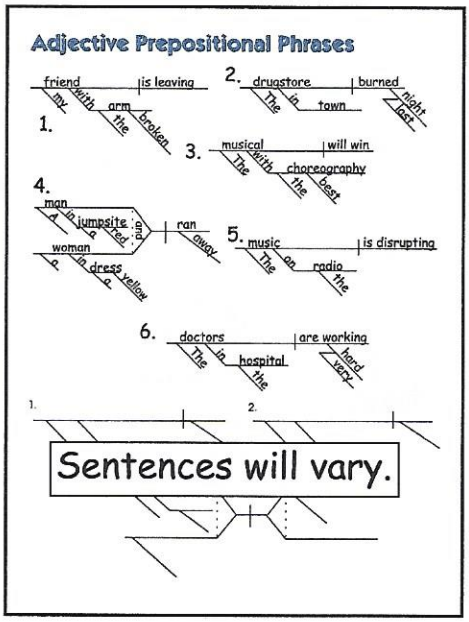

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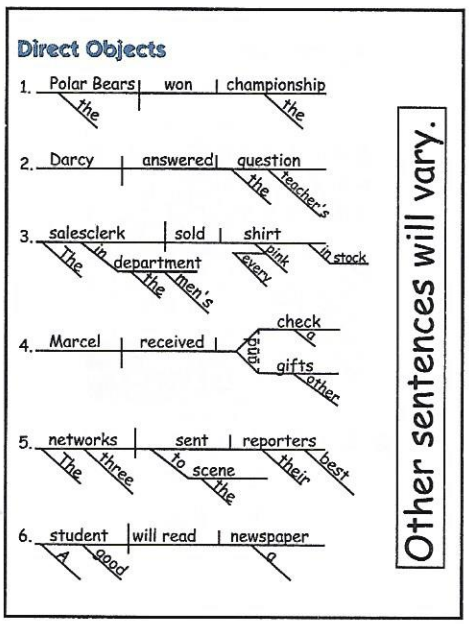


page 226

Indirect Objects

1. She gives headache — me, a
2. Paul told news — them, the, bad
3. director taught song — The, choir, the, a, new
4. He gave symbol — Sharon, a, of love, his
5. I sent postcard — Barbara, from France, a
6. goalie left tickets — The, star, sister, his, at gate, the, two

Other Sentences will vary.

page 227

Inflated Inner Tubes

Infect
Inflate
Inform
Injury
Insecure
Insist
Inspire
Install
Instant
Instead
Instinct
Institute
Instruct
Insult
Intense
Intent
Intrude
Invade

Inflate the inner tubes by adding the missing vowels to each word.

inspire, intense, instead, inform, instant, intrude, insecure, inflate, insult, invade, instinct, intent, insist, instruct, infect, injury, institute, install

Write a short definition for five of the spelling words.

1. _____
2. _____
3. _____
4. _____
5. _____

Answers will vary.

page 228

You Be The Judge

The lawyer is asking the witnesses many questions. Some of the answers are facts, some are opinions. The judge will only accept facts. Read each question and answer. Check fact or opinion next to each answer. If you checked fact, write a second answer that is an opinion. If you checked opinion, write a second answer that is a fact

FACT OPINION?

☑ fact ☐ opinion 1. **question:** Mr. Wallace, what was the stranger wearing?
answer: He was wearing a blue coat, red scarf, black slacks and black shoes.

☐ fact ☑ opinion 2. **question:** Mr. Henry, what did you hear from your window?
answer: I heard a sound that must have been the intruder breaking in.

☑ fact ☐ opinion 3. **question:** Ms. Harris, what time
answer: It was 10:1

☐ fact ☑ opinion 4.
ou know the owner of the stolen
He is the nicest boss I have ever worked for.

☑ fact ☐ opinion 5. **question:** Mr. Samuels, was the painting insured?
answer: Yes, the painting was insured for ten thousand dollars.

☐ fact ☑ opinion 6. **question:** Miss Ryan, did you see the defendant take the painting?
answer: Of course he took it! It had to be him.

Answers will vary.

page 229

Designing Fractions

Mr. Artsy's class was studying design. He drew the following design for the students to study.

Find what fraction each pattern is of the whole square.

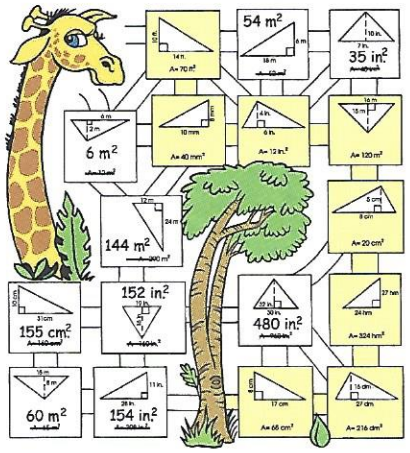
1. $\frac{1}{20}$ 2. $\frac{3}{50}$ 3. $\frac{1}{25}$ 4. $\frac{1}{100}$
5. $\frac{1}{20}$ 6. $\frac{1}{25}$ 7. $\frac{1}{8}$ 8. $\frac{1}{8}$
9. $\frac{1}{8}$ 10. $\frac{1}{8}$ 11. $\frac{3}{20}$ 12. $\frac{1}{10}$

Extension: Make your own design in a square. Look at the patterns and list what fraction of the whole each pattern represents.

page 230

I'm Hungry!

Help Gerry the Giraffe get to the tree by shading in the path that contains the correct areas. Then, find the correct areas for the ones that are wrong.
Remember: area = $\frac{1}{2}$(b x h)



page 231

Alphabetizing Champion

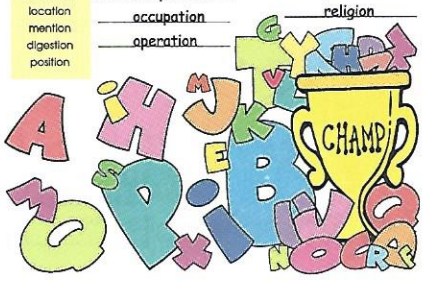
religion
region
portion
collection
competition
companion
onion
champion
cushion
opinion
auction
occupation
election
operation
location
mention
digestion
position

Write each spelling word in the correct category and in alphabetical order.

two-syllable words
auction
cushion
mention
onion
portion
region

three-syllable words
champion
collection
companion
digestion
election
location
opinion
position
religion

four-syllable words
competition
occupation
operation



page 236

Dividing Fractions

$6 \div \frac{1}{4}$
Step 1: Write both numbers as fractions. $\frac{6}{1} \div \frac{1}{4}$
Step 2: Invert the second fraction and multiply. $\frac{6}{1} \times \frac{4}{1}$
Step 3: Reduce. $\frac{24}{1} = 24$

Solve each problem.

1. $7 \div \frac{1}{3}$ 21
2. $8 \div \frac{1}{2}$ 16
3. $16 \div \frac{1}{3}$ 48
4. $6 \div \frac{1}{2}$ 12
5. $5 \div \frac{1}{6}$ 30
6. $18 \div \frac{1}{7}$ 126
7. $8 \div \frac{1}{5}$ 40
8. $7 \div \frac{1}{9}$ 63
9. $15 \div \frac{1}{6}$ 90

page 237

Art Show

Ms. Creative had her students busy preparing for the year-end art show.

1. Kelly needed to finish seven paintings for the show. If she painted $\frac{1}{3}$ of a painting each session, how many sessions would it take her to finish all seven? 21 sessions
2. Fong's responsibility was to glaze six pieces of pottery. He was able to complete $\frac{1}{4}$ of a pot's glaze in one class. How many classes will it take him to glaze all six pieces? 24 classes
3. Karen needed to have nine black-and-white sketches finished for the show. If she finished about $\frac{2}{9}$ of one in each class, how many classes would it take Karen to finish all nine? 18 classes
4. Two sculptures were needed to highlight the entrance of the exhibit. One-sixteenth of each sculpture was completed in each art class. How many classes will it take to complete both sculptures? 32 classes
5. The students took a sheet of art paper that was $\frac{8}{9}$ of a yard long to make a mural. Once the mural was complete it needed to be cut into sections, each $\frac{2}{18}$ of a yard long. How many pieces will there be? 8 pieces
6. A painted carousel horse was the hit of the show. Three-tenths was painted each day. How many days did it take to finish? $3\frac{1}{3}$ days

Extension:

a. $\frac{3}{4}$ a. 12
b. 10 b. $1\frac{1}{8}$
c. $3\frac{1}{3}$ c. $2\frac{2}{5}$

page 238

Invert and Multiply

Solve the problems. Reduce your answers to lowest terms.

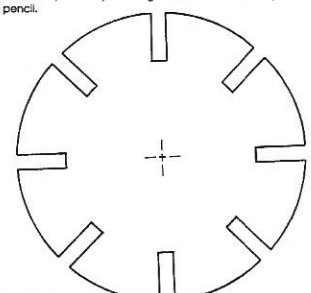
1. $\frac{1}{5} \div 3$ $\frac{1}{15}$
2. $\frac{5}{7} \div 15$ $\frac{1}{21}$
3. $\frac{7}{8} \div 21$ $\frac{1}{24}$
4. $\frac{3}{5} \div 12$ $\frac{1}{20}$
5. $\frac{3}{7} \div 6$ $\frac{1}{14}$
6. $\frac{3}{8} \div 6$ $\frac{1}{16}$
7. $\frac{5}{7} \div 10$ $\frac{1}{14}$
8. $\frac{5}{6} \div 15$ $\frac{1}{18}$
9. $\frac{7}{10} \div 2$ $\frac{7}{20}$
10. $\frac{7}{8} \div 14$ $\frac{1}{16}$
11. $\frac{7}{9} \div 7$ $\frac{1}{9}$
12. $\frac{1}{4} \div 3$ $\frac{1}{12}$

page 239

Stroboscope

You will need: a 6-inch square piece of poster board, a straight pin, a pencil with an eraser

Making a Stroboscope
Cut out the pattern shown below. Place the pattern on a piece of poster board and **cut it out** carefully. Push a pin through the center of the disk, then into the eraser of a pencil.



Using the Stroboscope
Hold the stroboscope in front of one eye. Look at a rotating [illegible] as a fan while you spin the disk. What does it look like?

Answers will vary.

Making and Testing Hypo[illegible]
What would h[illegible]
Look into [illegible]pe. What happens?
Design another stroboscope with a disk of another size. Try more or fewer notches.

page 240

Chemical Reaction

chemical, classical, comical, cylindrical, electrical, identical, medical, musical, optical, practical, radical, skeptical, surgical, technical, theatrical, tropical, typical, vertical

Rewrite the adjectives from the spelling list and add a noun to make a short phrase.
Example: *political — political reaction*

1. chemical reaction
2. classical music
3. comical story
4. cylindrical shape
5. electrical tape
6. identical twins
7. medical breakthrough
8. musical instrument
9. optical nerve
10. practical advice
11. radical surgery
12. skeptical look
13. surgical gloves
14. technical jargon
15. theatrical gesture
16. tropical breeze
17. typical day
18. vertical drop

Write a quatrain (a poem with four rhyming lines). Try to end each line using a spelling word.

Example: Me

Answers will vary.

[illegible] often quite comical.

page 246

Do You Speak Spanish?

Read the story. Then, use context clues to translate the **bold** Spanish words into English.

doll	sun	parrot	bookstore	chair
lake	eat	glass	brother	cool
house	mother	teacher	grandpa	good
door	swim	table	school	sick
money	garden	pretty	windows	hot

The **sol** sun in the sky was shining brightly that day. In our **escuela** school, my **maestra** teacher needed to open all **ventanas** windows to cool the air. I wished we could leave the building to **nadar** swim at the **lago** lake nearby.

To avoid the heat of my walk to my **casa** house, I stopped at a **librería** bookstore. It felt **bueno** good indoors, so I sat and read some of the colorful and **lindo** pretty magazines. My **silla** chair was very hard to sit on so I left. But the weather was **caliente** hot!

At home I stayed in our shaded flower **jardín** garden so I might feel the **fresco** cool breeze. My brother brought me a **vaso** glass of juice and set it on a **mesa** table nearby. I felt **enferma** sick from the heat.

At suppertime my **abuelo** grandpa came for a visit. He knocked at the **puerta** door even though he comes every evening to **comer** eat. Today, he had **dinero** money to buy me a **muneca** doll for my collection. He bought my **hermano** brother a volleyball. For my **mamá** mother, he bought a **loro** parrot that talks and squawks too much!

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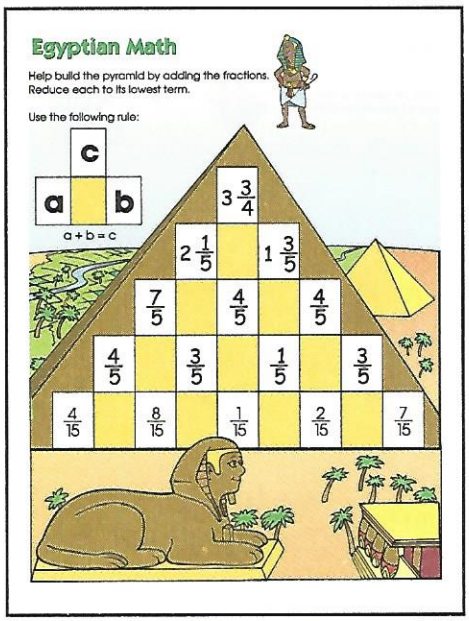

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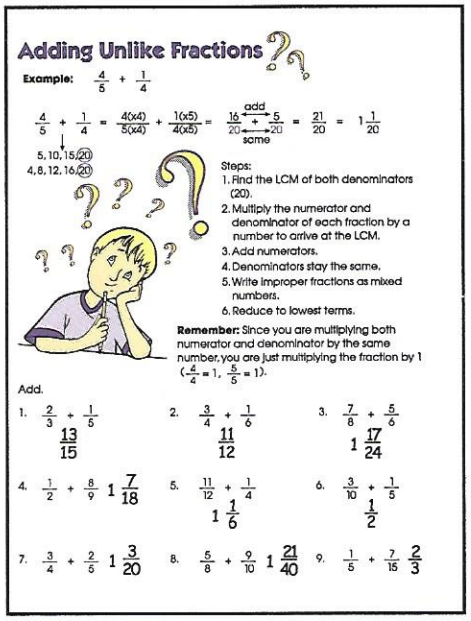

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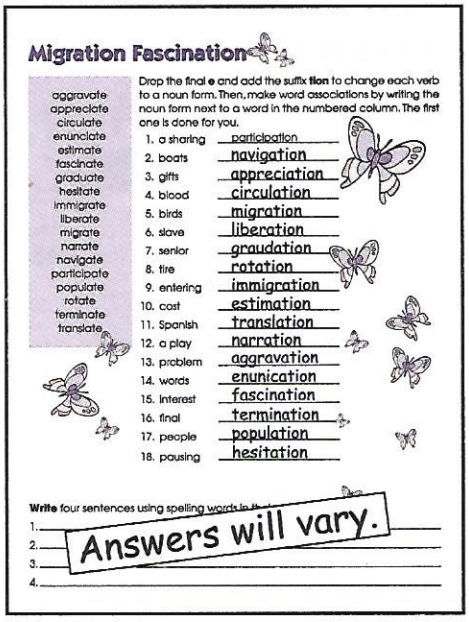

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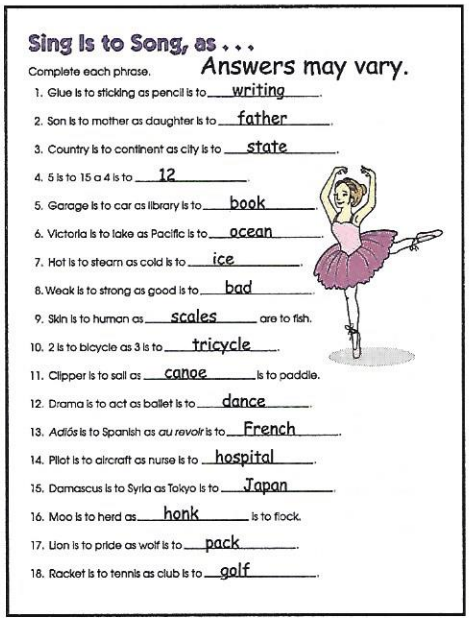

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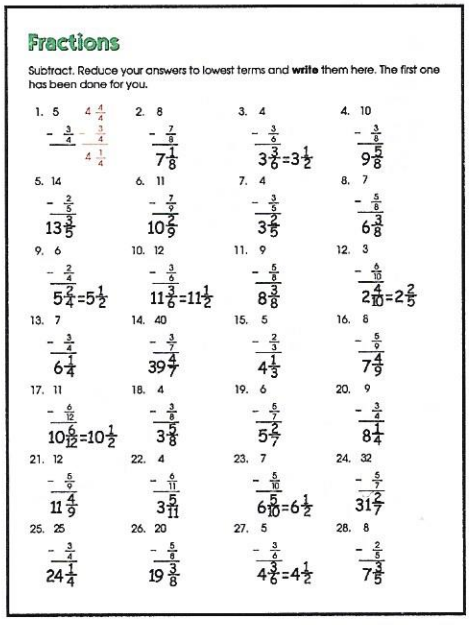

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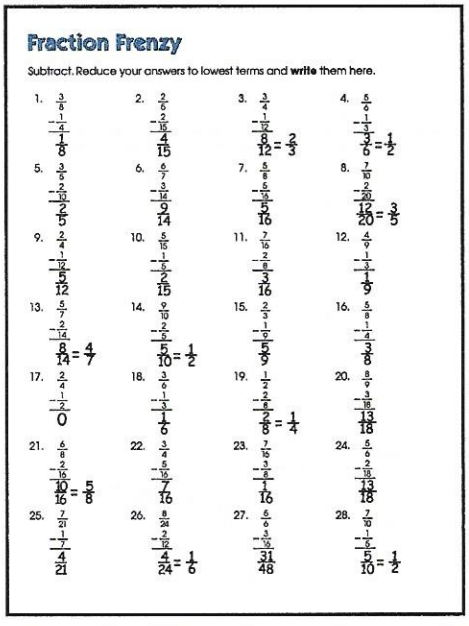

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Subtracting Unlike Mixed Numbers

Example: $41\frac{2}{8} - 20\frac{2}{3}$

$41\frac{2}{8} - 20\frac{2}{3} = 41\frac{2(x3)}{8(x3)} - 20\frac{2(x8)}{3(x8)} = 41\frac{6}{24} - 20\frac{16}{24} = 40\frac{30}{24} - 20\frac{16}{24} =$

8, 16, (24)

3, 6, 9, 12, 15, 18, 21, (24)

$20\frac{14}{24} = 20\frac{7}{12}$

Steps:
1. Find the LCM of both denominators (24).
2. Multiply the numerator and denominator of each fraction by a number to arrive at the LCM.
3. When regrouping, borrow a whole number and write the fraction as an improper fraction.
4. Subtract whole numbers.
5. Subtract numerators.
6. Denominators stay the same.
7. Reduce your answer to lowest terms.

Subtract.

1. $24\frac{2}{9} - 11\frac{2}{3}$ $12\frac{5}{9}$
2. $86\frac{1}{5} - 72\frac{7}{10}$ $13\frac{5}{10} = 13\frac{1}{2}$
3. $44\frac{3}{8} - 26\frac{5}{6}$ $17\frac{13}{24}$
4. $19\frac{1}{4} - 12\frac{2}{3}$ $6\frac{7}{12}$
5. $17\frac{4}{5} - 8\frac{1}{4}$ $9\frac{11}{20}$
6. $50\frac{2}{9} - 26\frac{1}{2}$ $23\frac{13}{18}$
7. $10\frac{1}{2} - 3\frac{2}{3}$ $6\frac{5}{6}$
8. $12\frac{1}{5} - 7\frac{2}{3}$ $4\frac{8}{15}$
9. $28\frac{5}{12} - 11\frac{2}{3}$ $16\frac{9}{12} = 16\frac{3}{4}$

page 258

Fun Facts

The World Trade Center towers in New York are so large and tall that each tower has its own . . .

To find the answer, follow the directions below.

Put an O above number 5 if the estimated difference between $13\frac{1}{3}$ and $5\frac{2}{7}$ is 8.

Put an A above number 6 if the estimated difference between $21\frac{5}{6}$ and $9\frac{4}{9}$ is 12.

Put an R above number 4 if the estimated difference between $16\frac{8}{20}$ and $13\frac{11}{15}$ is 3.

Put a B above number 1 if the estimated difference between $8\frac{3}{5}$ and $3\frac{7}{12}$ is 6.

Put a C above number 4 if the estimated difference between $25\frac{7}{20}$ and $13\frac{7}{12}$ is 11.

Put an E above number 7 if the estimated difference between $32\frac{7}{16}$ and $14\frac{8}{15}$ is 17.

Put a D above number 3 if the estimated difference between $18\frac{1}{9}$ and $15\frac{4}{13}$ is 2.

Put an I above number 2 if the estimated difference between $19\frac{7}{10}$ and $9\frac{4}{11}$ is 10.

Put a P above number 3 if the estimated difference between $58\frac{5}{8}$ and $42\frac{3}{10}$ is 16.

Put a D above number 6 if the estimated difference between $30\frac{13}{20}$ and $19\frac{7}{18}$ is 12.

Put an L above number 1 if the estimated difference between $11\frac{4}{9}$ and $5\frac{2}{5}$ is 6.

Put a Z above number 1 if the estimated difference between $16\frac{3}{8}$ and $9\frac{3}{7}$ is 7.

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Malicious Monsters

Use an adjective from the spelling list to describe each noun below. Both adjective and noun will begin with the same letter.

	Adjective	Noun
Example:	precious	princess
2.	curious	cat
3.	luscious	limes
4.	spacious	sunroom
5.	vicious	villain
6.	furious	Frankenstein
7.	generous	gift
8.	delicious	dessert
9.	enormous	elephant
10.	serious	situation
11.	ferocious	felines
12.	vivacious	violinist
13.	conscious	commitment
14.	atrocious	act
15.	disastrous	demonstration
16.	suspicious	secret agent
17.	gracious	gestures
18.	malicious	mischief

Use four of the adjective/noun phrases above to create an interesting sentence that makes sense. **Underline** each phrase.

Example: Six ferocious felines and one [illegible]acious sunroom e[illegible]

Answers will vary.

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Research Time

Mr. Write-A-Lot assigned research papers to his class. He divided the class into two groups. One person from each group was responsible for each part of the research process.

1. Marisha and John each found several books on their subjects. It took Marisha $2\frac{1}{2}$ hours to skim through her stack of books, and it took John $1\frac{3}{4}$ hours to look through his. How much longer did it take Marisha? $\frac{3}{4}$ hour longer
2. Neal and Geraldo were working on note cards. Neal was able to complete his in $48\frac{2}{3}$ minutes, and it took Geraldo $51\frac{3}{8}$ minutes to finish his. How much longer did Geraldo take? $2\frac{17}{24}$ minutes longer
3. Bobby and Gordon found it difficult to write outlines. It took Bobby $38\frac{2}{3}$ minutes and Gordon $38\frac{3}{4}$ minutes. How many more minutes did it take Bobby? $1\frac{11}{12}$ more minutes
4. Anita finished the first draft of her report in $48\frac{1}{2}$ minutes, while it took Pablo $51\frac{3}{8}$ minutes to write his. How much longer did it take Pablo? $2\frac{7}{8}$ minutes longer
5. The final draft of their reports went smoothly for Katie and Laura. Katie zipped hers off in $18\frac{3}{4}$ minutes, and Laura's took $21\frac{1}{8}$ minutes. How much longer did Laura's final draft take? $2\frac{3}{8}$ minutes longer
6. Find out how long it took Marisha, Geraldo, Bobby, Anita and Katie altogether. Then, find out how long it took John, Neal, Gordon, Pablo and Laura. Find the difference between the two groups' times.

$307\frac{7}{24}$ minutes

$262\frac{11}{12}$ minutes

$44\frac{3}{8}$ minutes

Extension: Subtract $2\frac{7}{8}$ from . . .

a. $1\frac{1}{8}$ d. $3\frac{1}{2}$

b. $2\frac{1}{4}$ e. $4\frac{6}{8} = 4\frac{3}{4}$

c. 6 f. $6\frac{7}{8}$

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Fraction Test

1. $\frac{1}{6} + \frac{4}{6} = \frac{5}{6}$
2. $4\frac{1}{12} + 3\frac{2}{12} = 7\frac{3}{12} = 7\frac{1}{4}$
3. $18\frac{1}{3} + 12\frac{1}{3} = 30\frac{3}{3} = 31$
4. $19\frac{1}{5} + 4\frac{2}{3} = 23\frac{13}{15}$
5. $37 - \frac{3}{11} = 36\frac{8}{11}$
6. $\frac{4}{5} - \frac{1}{4} = \frac{11}{20}$
7. $\frac{4}{5} \times \frac{3}{8} = \frac{3}{10}$
8. $\frac{5}{6} \times 15 = 12\frac{1}{2}$
9. $4\frac{1}{4} \times \frac{2}{5} = \frac{17}{10} = 1\frac{7}{10}$
10. $3\frac{1}{2} \times 2\frac{1}{3} = 8\frac{1}{6}$
11. $7 \times \frac{3}{5} = 1\frac{4}{5}$
12. $\frac{3}{7} + \frac{4}{5} = \frac{15}{28}$
13. $\frac{2}{3} \div 9 = \frac{2}{27}$
14. $2\frac{6}{7} \div \frac{6}{14} = 8$
15. $\frac{1}{2} \div \frac{1}{3} = \frac{3}{2} = 1\frac{1}{2}$
16. $7\frac{1}{3} \div 2\frac{2}{6} = 3\frac{1}{7}$
17. Write $\frac{3}{5}$ as a decimal. 06
18. Leroy got $\frac{7}{8}$ of his 24 homework problems correct. How many did he correct? 21
19. Jean gave $\frac{3}{16}$ of her allowance to her sister and $\frac{1}{8}$ of her allowance to her brother. How much of her allowance did she give away? $\frac{5}{16}$
20. Jack and Jill had a canteen full of 5 quarts of grape juice. They drank $3\frac{5}{9}$ quarts. How much was left? $1\frac{4}{9}$ quarts

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Panpipes

Sound is produced by **vibrations**. A column of air will vibrate when you blow across it. A short column of air will have a high pitch. A long column of air will have a low pitch.

Making the Panpipes

Take five pieces of tubing that are the following lengths: 6 inches, 5 inches, 4 inches, 3 inches and 2 inches. Lay the tubes in a row, arranging them from longest to shortest, about 1 inch apart. With the tops even, tape them together.

Answers will vary.

Playing the P[illegible]

Blow acro[illegible] tube has th[illegible]ke a flute player. Listen to the sounds. Which

Blow across the tubes again going first in one direction, then in the other. Describe the sound.

What do you think makes the pitch change?

What would happen if you added and blew on a tube that is 1 inch longer than the longest tube already on your pipes?

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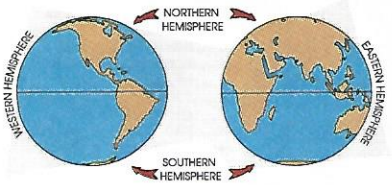
Hemispheres

The earth is a sphere. When the earth is cut in half along a vertical or horizontal axis, hemispheres are created. The **equator** divides the earth into the **Northern Hemisphere** and the **Southern Hemisphere**. The **prime meridian**, which runs from the North Pole to the South Pole, divides the earth into the **Eastern Hemisphere** and the **Western Hemisphere**.



Study the illustration of the hemispheres. Then, read the following country names. Decide in which two hemispheres (Eastern or Western, and Northern or Southern) each is located.
Example: The United States lies in the Northern and Western Hemispheres.
Use a more detailed globe or map to find the exact locations of the countries.

1. Australia Eastern / Southern
2. India Eastern / Northern
3. Japan Eastern/ Northern
4. Italy Eastern / Northern
5. Argentina Western / Southern
6. Ethiopia Eastern / Northern
7. South Africa Eastern / Southern
8. Mexico Western / Northern
9. China Eastern / Northern
10. Canada Western / Northern
11. Israel Eastern / Northern
12. Chile Western / Southern
13. Iraq Eastern / Northern
14. Peru Western / Southern

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Plotting North American Cities

Determine the approximate coordinates of the North American cities on the map above. **Write** the coordinates for each city in the blanks below.

	Latitude	Longitude		Latitude	Longitude
1. Seattle	46°N	122°W	2. St. Louis	38°N	91°W
3. Kingston	18°N	74°W	4. Toronto	44°N	79°W
5. Dallas	33°N	98°W	6. New York	42°N	71°W
7. Vancouver	48°N	123°W	8. Monterrey	24°N	101°W
9. Managua	13°N	86°W	10. Chicago	42°N	88°W

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Hhhmm?

Find the answer to the riddle below by solving the following ratios. Put the corresponding problem letter above each answer below. When you have answered the riddle, **write** each ratio two other ways, then find two equivalent ratios for each one.

E. tennis shoes to sandals 3:6
N. bare feet to men's dress shoes 5:1
S. high heels to tennis shoes 2:3
E. sandals to bare feet 6:5
E. men's dress shoes to high heels 1:2
A. high heels to sandals 2:6
T. bare feet to tennis shoes 5:3
A. high heels to bare feet 2:5
D. tennis shoes to men's dress shoes 3:1
H. men's dress shoes to sandals 1:6
H. bare feet to sandals 5:6
R. sandals to high heels 6:2
H. tennis shoes to high heels 3:2
D. sandals to tennis shoes 6:3
T. men's dress shoes to tennis shoes 1:3
H. tennis shoes to bare feet 3:5
L. high heels to men's dress shoes 2:1
A. men's dress shoes to bare feet 1:5
A. bare feet to high heels 5:2
H. sandals to men's dress shoes 6:1

What do the four H's stand for in the 4-H Club?

H	E	A	D,		H	E	A	R	T,
3:5	6:5	2:5	3:1		5:6	3:6	1:5	6:2	5:3

H	E	A	L	T	H,		H	A	N	D	S
1:6	1:2	5:2	2:1	1:3	6:1		3:2	2:6	5:1	6:3	2:3

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Percents

Convert these proper fractions and mixed numbers into percents. Show your work on another sheet of paper. **Write** your answers here.

1. $\frac{37}{100}$ = 37%
2. $\frac{3}{100}$ = 3%
3. $\frac{65}{100}$ = 65%
4. $\frac{49}{100}$ = 49%
5. $\frac{1}{4}$ = 25%
6. $\frac{12}{100}$ = 12%
7. $\frac{11}{50}$ = 22%
8. $\frac{71}{100}$ = 71%
9. $4\frac{1}{2}$ = 450%
10. $3\frac{1}{4}$ = 325%
11. $1\frac{3}{4}$ = 175%
12. $\frac{2}{5}$ = 40%
13. $\frac{3}{10}$ = 30%
14. $\frac{63}{100}$ = 63%
15. $\frac{1}{20}$ = 5%
16. $\frac{1}{5}$ = 20%
17. $\frac{17}{20}$ = 85%
18. $\frac{57}{100}$ = 57%
19. $\frac{3}{5}$ = 60%
20. $\frac{1}{25}$ = 4%
21. $\frac{7}{10}$ = 70%
22. $5\frac{1}{4}$ = 525%
23. $\frac{37}{50}$ = 74%
24. $\frac{23}{100}$ = 23%
25. $\frac{1}{2}$ = 50%
26. $\frac{9}{10}$ = 90%
27. $\frac{81}{100}$ = 81%
28. $\frac{39}{100}$ = 39%
29. $3\frac{3}{4}$ = 375%
30. $\frac{73}{100}$ = 73%
31. $\frac{7}{20}$ = 35%
32. $9\frac{1}{2}$ = 950%
33. $\frac{4}{5}$ = 80%
34. $\frac{1}{10}$ = 10%
35. $\frac{13}{20}$ = 65%
36. $\frac{91}{100}$ = 91%
37. $\frac{51}{100}$ = 51%
38. $5\frac{1}{4}$ = 525%
39. $\frac{11}{100}$ = 11%
40. $\frac{3}{20}$ = 15%

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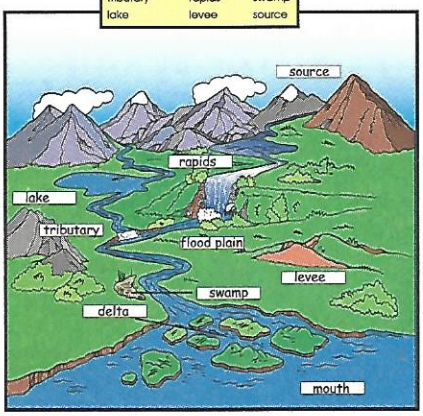
River System

The river systems of the world provide people with transportation, energy and fertile soil, as well as water for drinking, washing and irrigation. The terms below are used to describe a river system. Learn the meanings of these terms, then label the parts of the river on the illustration.

flood plain	delta	mouth
tributary	rapids	swamp
lake	levee	source



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River Cities

Many of the world's great cities began as small towns and settlements along major rivers. Communities near water were easily accessible. Water was readily available for drinking, cooking, washing, irrigation and obtaining food. Use an atlas, almanac or encyclopedia to help you complete the chart.

River	City	Country	Continent
Mississippi	St. Louis	U.S.A	North America
Hudson	New York	U.S.A	North America
Tiber	Rome	Italy	Europe
Nile	Cairo	Egypt	Africa
Thames	London	England	Europe
Rio la Plata	Buenos Aires	Argentina	South America
Seine	Paris	France	Europe
Yangtze	Shanghai	China	Asia

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Organize or Capsize

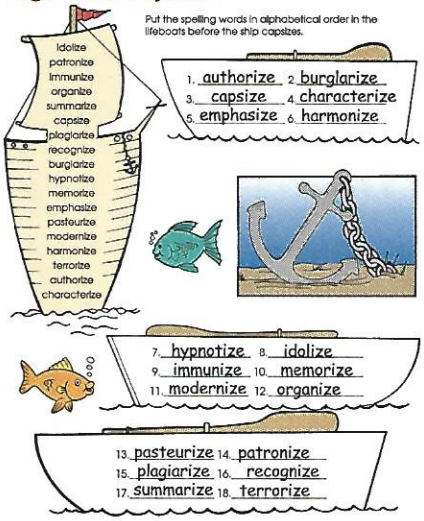
Put the spelling words in alphabetical order in the lifeboats before the ship capsizes.

idolize
patronize
immunize
organize
summarize
capsize
plagiarize
recognize
burglarize
hypnotize
memorize
emphasize
pasteurize
modernize
harmonize
terrorize
authorize
characterize

1. authorize 2. burglarize
3. capsize 4. characterize
5. emphasize 6. harmonize

7. hypnotize 8. idolize
9. immunize 10. memorize
11. modernize 12. organize

13. pasteurize 14. patronize
15. plagiarize 16. recognize
17. summarize 18. terrorize



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Timely Words

Read each sentence. **Circle** the two words that tell when something happens. **Write** each circled word on the correct line to show which word would come before or after the other word in time.

1. Mike hopes to someday visit Washington D.C., but meanwhile he reads books about the capital city.
   before meanwhile after someday
2. Some of the tourists left immediately for the airport while others planned to leave later in the day.
   before immediately after later
3. Although John has put off mowing the yard for now, he knows he must eventually get it done.
   before now after eventually
4. Kim said she would have arrived sooner, but she waited for a phone call that finally came.
   before sooner after finally
5. Tom wanted to appear earlier in the play, but his character did not appear until the last scene.
   before earlier after last
6. The photographer said that Sally would have her picture taken first, but that Kevin would be next.
   before first after next

Circle the word that would come before the other word. Use the circled word in a sentence.

1. (immediately) later: Sentences will vary.
2. (earlier) last:

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Percentages

Sally and Gabriel wrote percentage problems for extra credit. Once you have solved their problems, make up some of your own on another sheet of paper.

1. There were 400 students in the school. If 38% of the students were boys, how many boys were there? 152 boys
2. Out of the 345 sheets of construction paper in Mrs. Rainbow's class, 20% were red and 40% were blue. How many sheets were red? 69 red
   How many sheets were blue? 138 blue
3. Only 19% of the 400 students ate the cafeteria food on Monday. How many students purchased cafeteria food Monday? 76 students
4. 25% of 76 band members can play a clarinet.
   How many can play a clarinet? 19 band members
5. 35 trees were planted around the school. 60% were maples. How many of the trees planted were maple? 21 maples
6. The local pizza parlor gave the eighth-grade class a 25% discount on pizzas they purchased to sell at the football game. Each pizza originally cost $12.00.
   How much did the eighth graders pay per pizza? $9.00
   If they purchased 12 pizzas, how much did they save together? $36.00
7. They saw these signs at the sports shop nearby. Figure each sale price.

$82.45 $18.00 $105.60

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Enlightening Information

An **environment** includes all living and nonliving things with which an organism interacts. These living and nonliving things are **interdependent**, that is, they depend on one another. The living things in an environment (plants, animals) are called **biotic factors**, and the nonliving things (soil, light, temperature) are called **abiotic factors**. **Ecology** is the study of the relationships and interactions of living things with one another and their environment.

Living things inhabit many different environments. A group of organisms living and interacting with each other in their nonliving environment is called an **ecosystem**. The different organisms that live together in an ecosystem are called a **community**. Within a community, each kind of living thing (i.e., frogs) makes up a **population**.

Study the picture. Follow the directions.

1. Label two biotic factors and two abiotic factors in the picture.
   abiotic: sun, sky, water, rock
   biotic: butterfly, dragonfly, fish, turtle, cattails
   snails, frogs, bugs
2. Explain the relationships among the living things in the pictured environment.
   The living things in the picture depend on each other for food,
3. Label the type of ecosystem pictured.
   Pond
4. Circle all the members of the community.
   Circle all the living things—plants and animals.
5. Explain how the organisms in this environment are dependent upon one another.
   Frogs eat insects; insects eat plants; plants grow in water; fish live in water; etc.
6. List the different kinds of populations that live in the environment.
   frogs, fish, turtles, dragonflies, butterflies, etc.

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Cemetery Epitaphs

Use a spelling word to complete each word group.

1. graveyard, burial place, cemetery
2. industrial, purifier, refinery
3. operation, medical procedure, surgery
4. slick, shifting, slippery
5. blazing, glowing, fiery
6. stalk, vegetable, celery
7. theft, stealing, robbery
8. curtains, covering, drapery
9. pain, sorrow, misery
10. handiwork, sewing, embroidery
11. grass, plants, greenery
12. notepad, envelopes, stationary
13. bow shooting, sport, archery
14. engines, power tools, machinery
15. insult, false appearance, mockery
16. prank, joke, trickery
17. foodstuffs, store, grocery
18. incubator, brooder, hatchery

Write an epitaph (a tombstone inscription) for a tombstone you might find in a cemetery. The epitaph may be wacky, creepy or sentimental. Try to use several words from the list.

Example: Here lies George who ate too much celery. He simply couldn't resist any kind of greenery, and the surgery didn't help. I am sad to say that he died in misery.

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Magnify the Situation

Unscramble the letters to find the spelling word (verb) that goes with each clue (direct object). The first one has been done for you.

amplify
beautify
certify
clarify
dignify
falsify
fortify
glorify
horrify
identify
justify
magnify
notify
qualify
rectify
simplify
solidify
verify

	verb	direct object
1. (plifmyls)	simplify	the problem
2. (abyfieut)	beautify	a city park
3. (ulyfaiq)	qualify	your answer
4. (yrrfroh)	horrify	your teacher
5. (fyidosil)	solidify	the liquid
6. (ffsliay)	falsify	the document
7. (yvtrfe)	verify	your identity
8. (ynifot)	notify	the authorities
9. (pfilaym)	amplify	the sound
10. (ifyust)	justify	your actions
11. (frofgly)	glorify	a hero
12. (cfteryi)	rectify	the situation
13. (cfyrail)	clarify	your question
14. (yfftrol)	fortify	the walls
15. (lafymng)	magnify	the cells
16. (fnditely)	identify	the criminal
17. (nglfydi)	dignify	the procedure
18. (ltrecyf)	certify	the check

My name is Sam Sneed. It is my job to clarify the evidence, verify the facts, indentify the murderer, and notify the authorities. I do not intend to glorify but I am the best in my field. In order to qualify for this position I had to study very hard for many years. All the hard work paid off. I am now certified and have a very satisfying position as a detective.

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The Sign of the Beaver

Read the following sentences. Based on context, write a definition for each **bold** word. Then, look up the definitions and **circle** yes if you were correct. If you were not correct, change your answer.

1. "... when his rage died down, that he felt a **prickle** of fear."
   Prickle means _____ yes
2. "... he saw the sunlight glinted through the **chinks** on the roof."
   Chinks means _____ yes
3. "... but h... ught he'd rather have the **pesky** insects himself."
   Pesky m... _____ yes
4. "Matt... ..."
   Pondering me... _____ yes
5. "He strutted and pranced...
   Contortions means _____ yes
6. "Now **wampum** no good to pay for gun."
   Wampum means _____ yes
7. "**Warily**, he made his way through the brush."
   Warily means _____ yes
8. "The brown eyes looked up at the Indian boy with **admiration**."
   Admiration means _____ yes
9. "... they **wielded** their bats with no heed to each other's heads..."
   Wielded means _____ yes
10. "Matt forced himself to eat **sparingly** of these things."
    Sparingly means _____ yes

Answers will vary.

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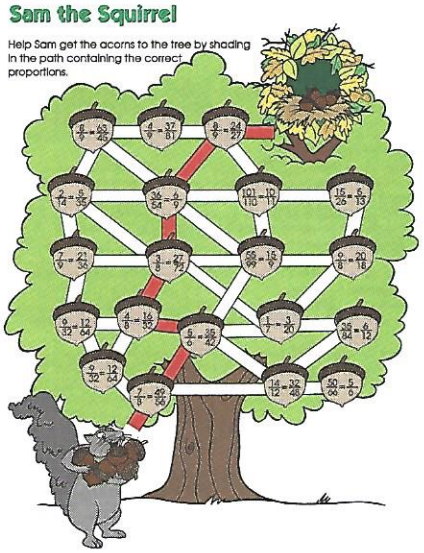
Sam the Squirrel

Help Sam get the acorns to the tree by shading in the path containing the correct proportions.



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Proportions

Solve the problems. **Write** your answers here.

1. $\frac{2}{4}=\frac{n}{8}$ $n=4$	2. $\frac{3}{x}=\frac{9}{15}$ $x=5$	3. $\frac{n}{20}=\frac{5}{4}$ $n=25$	4. $\frac{5}{6}=\frac{30}{n}$ $n=36$
5. $\frac{27}{n}=\frac{9}{10}$ $n=30$	6. $\frac{3}{14}=\frac{n}{42}$ $n=9$	7. $\frac{2}{n}=\frac{24}{72}$ $n=6$	8. $\frac{3}{9}=\frac{x}{54}$ $x=18$
9. $\frac{3}{7}=\frac{x}{42}$ $x=18$	10. $\frac{6}{12}=\frac{12}{n}$ $n=24$	11. $\frac{7}{8}=\frac{42}{x}$ $x=48$	12. $\frac{3}{8}=\frac{n}{48}$ $n=18$
13. $\frac{12}{13}=\frac{24}{x}$ $x=26$	14. $\frac{7}{9}=\frac{21}{n}$ $n=27$	15. $\frac{7}{4}=\frac{x}{28}$ $x=49$	16. $\frac{n}{30}=\frac{5}{3}$ $n=50$
17. $\frac{5}{40}=\frac{2}{m}$ $m=16$	18. $\frac{6}{2}=\frac{t}{20}$ $t=60$	19. $\frac{3}{9}=\frac{x}{15}$ $x=5$	20. $\frac{6}{n}=\frac{4}{8}$ $n=12$
21. $\frac{7}{4}=\frac{49}{y}$ $y=28$	22. $\frac{6}{8}=\frac{n}{48}$ $n=36$	23. $\frac{y}{15}=\frac{1}{3}$ $y=5$	24. $\frac{40}{120}=\frac{4}{n}$ $n=12$
25. $\frac{9}{3}=\frac{27}{y}$ $y=9$	26. $\frac{14}{6}=\frac{n}{3}$ $n=7$	27. $\frac{12}{3}=\frac{12}{n}$ $n=3$	28. $\frac{24}{8}=\frac{m}{m}$ $m=192$
29. $\frac{25}{6}=\frac{75}{n}$ $n=18$	30. $\frac{3}{12}=\frac{x}{48}$ $x=12$	31. $\frac{5}{25}=\frac{t}{20}$ $t=4$	32. $\frac{n}{55}=\frac{2}{11}$ $n=10$

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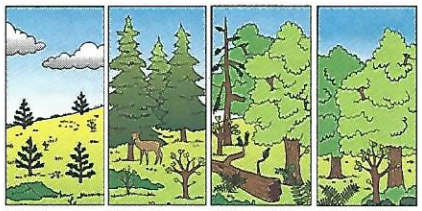
From Field to Forest

Through a series of changes, an abandoned farmer's field can develop into a climax forest. These changes take an orderly pattern called **succession.** Read the description of each step in the succession of an abandoned farmer's field in the southeastern United States.



Farmer's Abandoned Field Ten years after Farmer Brown quit working his farm, small pine seedlings began to grow in the aband... field along... low-growi... shrubs, g... and herbs. List som... animals that would live in this habitat.

Pine Forest Twenty-five years have passed, and the pines have grown tall and mature. Young oak trees start to grow beneath the ...

Oak-Pine Forest The oak trees reach for the sun between the old pine trees. Many older pines die, and young oaks begin to replace them. List some animals ... would live in ...

Oak Climax Forest The large oaks dominate the forest. Young oaks grow in the understory, but young pines cannot grow in the shade of the oaks. List some animals that would live in this habitat.

Answers will vary.

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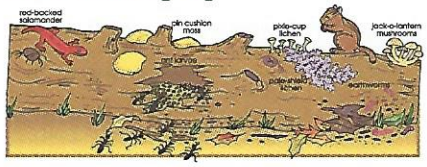
Life on a Rotting Log



The forest community is not limited to animals and plants that live in or near living trees. As the succession of the forest continues, many trees will die and fall to the ground. The actions of plants, animals, bacteria, lichens and weather help break the dead log down and return its components to the forest soil.

1. List the different kinds of plant life that are found on the rotting log. lichen, moss, mushrooms
2. How do the small plants help the log decay? The roots create open spaces in the log.
3. How do the plants benefit from the log? The log offers plants a source of food, protection and a place to grow
4. What kinds of small animals are found in or on the rotting log? salamander, ants, earthworms, chipmunk
5. How do these animals help the log decay? They eat and chew on the long.

The lichen found on the rotting log is an interesting type of plant. It is actually made up of two organisms living together in symbiosis. What two organisms form a lichen? What does each of these organisms need to live? How do the organisms help each other? A lichen is made up of an algae and a fungus. The algae makes food by means of photosynthesis. The fungus absorbs the water that the algae needs to live.

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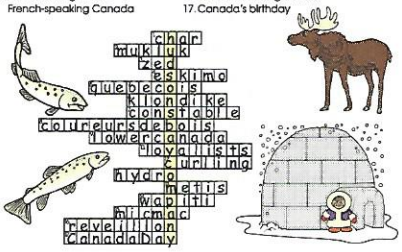
Speaking Canadian

Use the word box to complete the puzzle and discover the name of a company given the rights to a huge tract of land in northern Canada in 1570.

constable	hydro	mukluk	zed
curling	char	metis	revellion
coureur de bois	loyalists	Lower Canada	wapiti
Quebecois	Eskimo	Canada Day	Micmac
			Klondike

1. Trout-like fish
2. Animal-skin boot
3. Letter z (for those who haven't watched Sesame Street)
4. Indian word meaning eaters of raw meat
5. Quebec's French-speaking citizens
6. Area once famed for its gold
7. Police officer
8. French traders not licensed to gather furs
9. Name once given to French-speaking Canada
10. Colonists loyal to Britain during the American Revolution, many of whom fled to Nova Scotia
11. Game in which heavy stones are slid toward a target
12. _____ electricity
13. Descendants of French settlers and their Indian wives
14. elk
15. Indian tribe from Eastern Canada
16. Quebec feast which follows the Christmas Midnight Mass
17. Canada's birthday



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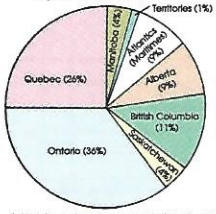
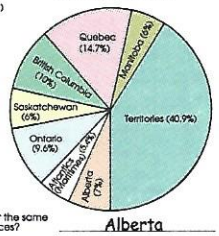
Which Is Which?

Use the charts to answer the questions.

Population Distribution Chart



Area Distribution Chart



1. Which province has a population about the same as that of the Atlantic (Maritime) provinces? Alberta
2. Which two provinces have similar populations? Manitoba & Saskatchewan
3. Which province is the largest in area? Quebec
4. Which province has population and area percentages nearly alike? British Columbia
5. Which lands take up more than 40% of the area of Canada? Territories
6. Which province has a larger population, Alberta or Ontario? Ontario
7. Which province is smaller, Saskatchewan or British Columbia? Saskatchewan
8. Which takes up less area, Alberta or the Atlantic (Maritime) Provinces? the Atlantic Providences
9. Which two provinces together make up more than 60% of Canada's population? Ontario and Quebec
10. Which province has the greatest population density? Ontario

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Cleaning Cabinets

Unscramble the groups of letters in the kitchen cabinets to form words from the word list.

banquet, blanket, bonnet, cabinet, corset, faucet, hatchet, helmet, interpret, jacket, magnet, packet, quiet, racket, scarlet, skillet, velvet, violet

gmenta magnet	tnnboe bonnet	ttehach hatchet
oietvi violet	catejk jacket	theelm helmet
quenbat banquet	tracke racket	caefut faucet
tellsk skillet	vetlev velvet	balcnet cabinet
taselrc scarlet	cakept packet	tablenk blanket
treetprin interpret	tiuqe quiet	trosce corset

Identify the number of syllables in five spelling words. Then, **write** a synonym and antonym for each.

	syllables	synonym	antonym
quiet	2	still	noisy

Answers will vary.

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Up a Tree

Match these expressions with their meanings.

e all the personality of wallpaper paste
f a piece of my mind
c running amok
a beyond a shadow of a doubt
b think straight
h ace in the hole
d shop like a bear about to hibernate
g out of the frying pan and into the fire

a. without question
b. consider clearly
c. becoming wild
d. gather up great quantities
e. a very bland disposition
f. strong opinion
g. from a bad situation to a worse one
h. special advantage

Write two sentences using the above expressions.
Example: When my teacher asked me to give the answer, I couldn't think straight.

1. Sentences will vary.
2.

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Ratio Test

1. A basketball player makes 7 free throws out of every 12 thrown.
   a. **Write** a ratio of the free throws made to the number thrown. 7:12
   b. **Write** a ratio of the free throws taken to the number missed. 12:5
   c. With this same ratio, how many free throws would the player make out of 24 throws? 14 free throws
2. **Write** the following percents as fractions in reduced form:
   12% = $\frac{12}{100} = \frac{3}{25}$ 260% = $2\frac{6}{10} = 2\frac{3}{5}$
3. **Write** the following fractions as percents:
   $\frac{15}{100}$ = 15% $\frac{1}{4}$ = 25% $2\frac{2}{5}$ = 240%
4. **Write** the following percents as decimals:
   68% = 0.68 1% = 0.01
5. **Write** the following decimals as percents:
   0.18 = 18% 0.05 = 5% 3.24 = 324%
6. Find 15% of 40. 6
7. Find 4% of 20. 0.8
8. Two hundred fifty people attended the fiesta. Of the fiesta guests, 52% were female. How many guests were female? 130 female guests
9. The quarterback completed 8 out of 25 passes. What percentage of passes were completed? 32%
10. Are the following ratios in proportion?
    $\frac{3}{8} = \frac{27}{72}$ yes $\frac{1}{7} = \frac{3}{20}$ no
11. Solve for x in the following proportions:
    $\frac{18}{3} = \frac{x}{2}$ $x =$ 12 $\frac{6}{x} = \frac{24}{12}$ $x =$ 3

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Animal Math

This chart lists some of the body statistics of fifteen endangered animals. Use these measurements to solve the problems below.

Animal	Height	Weight	Length
Mountain gorilla	6 feet	450 pounds	
Brown hyena	25 inches	70 pounds	3 feet
Black rhinoceros	5.5 feet	4,000 pounds	12 feet
Cheetah	2.5 feet	100 pounds	5 feet
Leopard	2 feet	150 pounds	4.5 feet
Spectacled bear	2.5 feet	300 pounds	5 feet
Giant armadillo		100 pounds	4 feet
Vicuna	2.5 feet	100 pounds	
Central American tapir	3.5 feet	500 pounds	8 feet
Black-footed ferret		1.5 pounds	20 inches
Siberian tiger	38 inches	600 pounds	6 feet
Orangutan	4.5 feet	200 pounds	
Giant panda		300 pounds	6 feet
Polar bear		1,600 pounds	8 feet
Yak	5.5 feet	1,200 pounds	

1. What is the total height of a mountain gorilla, a vicuna and a yak? 14 ft.
2. What is the total weight of a leopard, a cheetah and a polar bear? 1,850 lb.
3. What is the total weight of a giant panda and a giant armadillo? 400 lb.
4. Add the lengths of a black rhinoceros, a spectacled bear and a Siberian tiger. 23 ft.
5. Add the heights of two leopards, three yaks and four orangutans. 38.5 ft.
6. Subtract the height of a vicuna from the height of a cheetah. 0 ft.
7. Multiply the height of a Central American tapir by the height of a mountain gorilla. 21 ft.
8. Add the heights of a brown hyena and a Siberian tiger. 63 ft.
9. Add the weights of all the animals. 9,671.5 lb.
10. rhinoceros, tapir, polar bear, tiger, panda, cheetah, spectacled bear, leopard, armadillo, hyena, ferret

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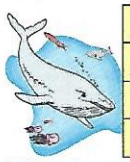
Animal Magic

Read the animal name in Column A. Choose the correct description from Column B. **Write** the number of the answer in the Magic Square below. The first one has been done for you.

Column A
A. grizzly bear
B. koala
C. peregrine falcon
D. California condor
E. black-footed ferret
F. cheetah
G. orangutan
H. giant panda
I. Florida manatee
J. kit fox
K. blue whale
L. whooping crane
M. red wolf
N. green sea turtle
O. brown hyena
P. jaguar

Column B
1. large bear of the American grasslands
2. lives on dry grasslands of South Africa
3. the most valuable reptile in the world
4. largest soaring bird of North America
5. the tallest American bird
6. the fastest animal on land
7. the only great ape outside Africa
8. large aquatic seal-like animal
9. large black and white mammal of China
10. small, fast mammal; nocturnal predator
11. largest animal in the world
12. member of the weasel family
13. has interbred with coyotes in some areas
14. also called a duck hawk; size of a crow
15. eats leaves of the eucalyptus tree
16. know as "el tigre" in Spanish



A 1	B 15	C 14	D 4
E 12	F 6	G 7	H 9
I 8	J 10	K 11	L 5
M 13	N 3	O 2	P 16

Add the numbers across, down and diagonally. What answer do you get? 34
Why do you think this is called a magic square? Every row, column and diagonal adds up to 34.

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Going Into Orbit

1. admit
2. bandit
3. benefit
4. commit
5. credit
6. debit
7. edit
8. emit
9. exhibit
10. habit
11. inherit
12. limit
13. orbit
14. profit
15. prohibit
16. solicit
17. spirit
18. visit

Complete the magic square by writing the number of the word from the list in the lettered square that corresponds to its definition. One of the words will not be used.

Definitions

A. Robber or outlaw
B. To correct or revise
C. Go to see; stay as a guest
D. To restrict; boundary
E. To send forth or to give off
F. Asset; acknowledgment; recognition
G. To receive property after another dies
H. To forbid
I. To revolve around
J. Courage; liveliness
K. A record of debt; to charge with a debt
L. To serve or be useful to
M. To seek or to ask for
N. Repeated behavior, often involuntary
O. To do; to place in confinement
P. To display

	A	B	C	D	
	2	7	18	12	39
	E 8	F 5	G 11	H 15	39
	I 13	J 17	K 6	L 3	39
	M 16	N 10	O 4	P 9	39
	39	39	39	39	

Check your magic square by adding each row and then each column of numbers. If all the sums are the same, you have matched correctly.

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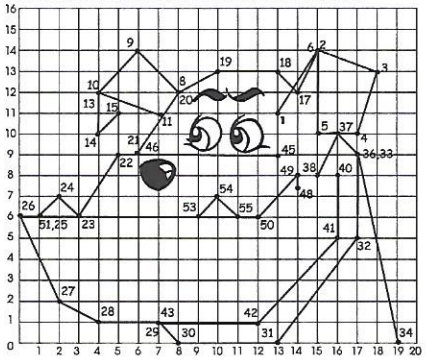
Browser

Graph the ordered pairs in each group. Number each dot. Connect each point with the next point using a straight line. Do not connect the last point in one group with the first point in another group. The first one is done for you.



1. (13,11) 2. (15,14) 3. (18,12) 4. (17,10) 5. (15,10) 6. (15,14) 7. Lift pencil. 8. (8,12)
9. (6,14) 10. (4,12) 11. (7,11) 12. Lift pencil. 13. (4,12) 14. (4,10) 15. (5,11) 16. Lift pencil.
17. (14,12) 18. (13,13) 19. (10,13) 20. (8,12) 21. (6,9) 22. (5,9) 23. (3,6) 24. (2,7)
25. (1,6) 26. (0,6) 27. (2,2) 28. (4,1) 29. (7,1) 30. (8,0) 31. (13,0) 32. (17,5)
33. (17,9) 34. (19,0) 35. Lift pencil. 36. (17,9) 37. (16,10) 38. (15,8) 39. Lift pencil.
40. (16,8)
41. (16,5) 42. (12,1) 43. (7,1) 44. Lift pencil. 45. (13,9) 46. (6,9) 47. Lift pencil.
48. (14,7.5)
49. (14,8) 50. (12,6) 51. (1,6) 52. Lift pencil. 53. (9,6) 54. (10,7) 55. (11,6)

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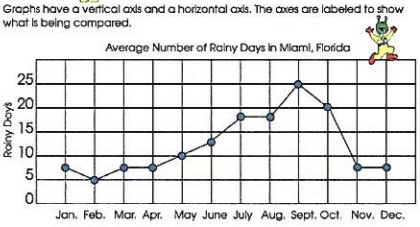
Graphs

Graphs have a vertical axis and a horizontal axis. The axes are labeled to show what is being compared.



Use the data plotted on the graph to answer the following questions.

1. What is the title of the graph? Average Number of Rainy Days in Miami, Florida
2. How is the vertical axis labeled? Rainy Days
3. What is contained in the horizontal axis? Months of the year
4. Which month had the greatest number of rainy days? September
5. Which two-month period shows the greatest change in the number of rainy days? October to November
6. Which month was the driest? February

Use the graph to fill in the blanks below.

7. range: 20 8. mean: 12.08 9. median 8.75 10. mode: 7.5

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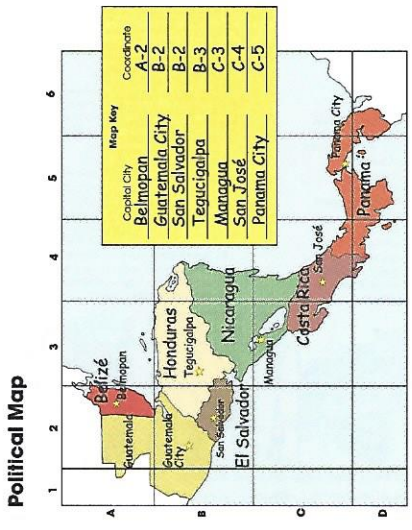
Central America



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Investigator Hector

author
bachelor
collector
conductor
conqueror
creator
dictator
director
editor
emperor
inspector
instructor
monitor
orator
professor
protector
sculptor
senator

Investigator Hector must investigate several people. Read the clues to identify each person's occupation. Write the correct spelling word in the blank.

Clues

1. Arnie Andrew, acclaimed novelist author
2. Darla Day, direction giver director
3. Olive Oyle, opinionated speaker orator
4. Ernie Egoist, empire ruler emperor
5. Clint Corn, card accumulator collector
6. Irene Ink, intelligent informer instructor
7. Edgar Edge, eager reviser editor
8. Dastardly D., dreaded tyrant dictator
9. Carl Carr, cartoon designer creator
10. Sue Smit, sincere Congresswoman senator
11. Sam Son, serious carver sculptor
12. Brad Bad, bearded single bachelor
13. Pete Pane, prominent teacher professor
14. Ivan Ize, investigative examiner inspector
15. Casey Clark, choirmaster conductor
16. Maggie May, money overseer monitor
17. Conrad Carp, courageous victor conquerer
18. Prince Paul, powerful defender protector

Write a short definition for five spelling words.

1. _____
2. _____
3. _____
4. _____
5. _____

Answers will vary.

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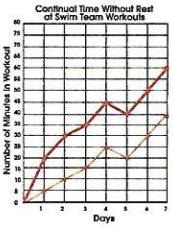
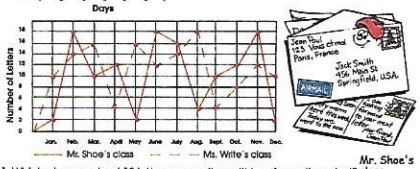
Double Line Graphs



Cyndi swimming in week number 1
Cyndi swimming in week number 2

1. On the very first day of workouts, how soon after Cyndi started did she need to take a rest? 5 min
2. In week number 1, how soon did Cyndi need to rest on day number 3? after 15 min
3. How long could she go without rest on the first day of the second week? 20 min
4. What is the range of week number 1? 40
5. What is the range of week number 2? 60
6. Did Cyndi's performance improve? yes



1. Which class received 18 letters more often within a 1-month period? class
2. Which class received more letters the first month? Ms. Write's class
   The last month? Ms. Write's class
3. How many letters did Ms. Write's class receive in all? 138 letters
4. Which class received more letters? Ms. Write's class
5. Which class only received two letters in January, May and December? Mr. Shoe's class

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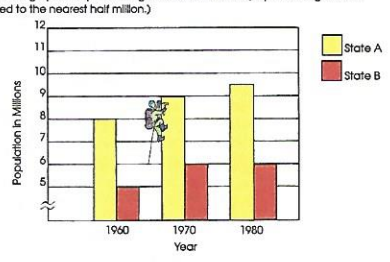
Double Bar Graphs

Double bar graphs allow the comparison of two sets of data. The following double bar graph compares the growth of two states. (Population figures are rounded to the nearest half million.)



Use the graph to **answer** the following questions.

1. What was the population of State A in 1960?
   8 million
2. What was the population of State B in 1960?
   5 million
3. Which state experienced greater growth in population from 1970 to 1980?
   State A
4. What was the growth of State A from 1960 to 1970?
   1 million
5. What was State B's population gain from 1960 to 1970?
   1 million
6. Which state had greater population growth from 1960 to 1980? What was it?
   State A 1 $\frac{1}{2}$ million

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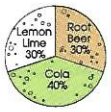
Circle Graphs

Circle graphs are best to use when a total amount has been divided into parts. Each part illustrates a portion of the whole.

Examples:

Favorite Soda Flavors

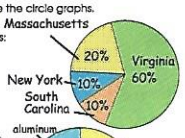
Cola	40%
Root Beer	30%
Lemon Lime	30%



Use the following information to complete the circle graphs.

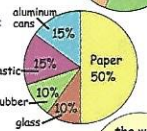
1. Birthplaces of the first ten U.S. presidents:

Virginia	60%
Massachusetts	20%
New York	10%
South Carolina	10%



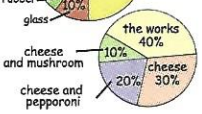
2. Recyclables collected on Ecology Day:

paper	50%
aluminum cans	15%
plastic	15%
rubber	10%
glass	10%



3. Pizza preferences:

cheese	30%
cheese and pepperoni	20%
cheese and mushroom	10%
the works	40%



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Creative Native

adhesive
creative
defensive
expensive
explosive
expressive
fugitive
impressive
impulsive
motive
native
negative
offensive
persuasive
positive
relative
repulsive
sensitive

Circle the two incorrect words in each sentence. **Write** the correct spelling word in the blanks.

1. The detective tried to find a (motion) for the (repulsion) murder.
   motive , repulsive
2. Susie is very (expression) and (persuaded) when she speaks.
   expressive , persuasive
3. My (related) wore an (expenses) leather coat to the mall.
   relative , expensive
4. The team used an (impression) (defensive) strategy in the game.
   impressive , defensive
5. The (fugition) was a (nation) of Canada.
   fugitive , native
6. The (impulsed) child destroyed his (creator) artwork.
   impulsive , creative
7. Because my skin is (sensory) pulling the (adhesion) tape hurt.
   sensitive , adhesive
8. Today, in math, we learned about (position) and (negated) numbers.
   positive , negative
9. The (offensly) unit used (exploded) weapons to defeat its foe.
   offensive , explosive

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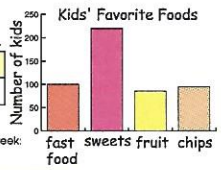
Statistics Test

Create a line, circle or bar graph from the information given.

1. Kids' favorite foods:

Fast Food	Sweets	Fruit	Chips
100	220	85	95



2. Miles traveled by a salesman in 1 week:

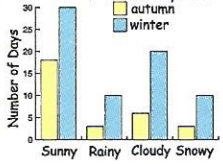
Tuesday	Wednesday	Thursday	Friday
			87

3. Amount of homework per

1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
½ hr.	1 hr.	2 hr.	2 hr.	3 hr.	3½ hr

4. Weather in Anytown:

Type	Autumn	Winter
Sunny	18	30
Rainy	3	10
Cloudy	6	20
Snowy	3	10



Graphs will vary.

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Personality Plus

community
validity
immunity
majority
minority
ability
quantity
personality
opportunity
generosity
curiosity
popularity
oddity
simplicity
security
prosperity
longevity
possibility

Complete each phrase with a spelling word. The words will appear in alphabetical order.

1. Don't waste your a b i l i t y.
2. I live in a c o m m u n i t y.
3. c u r i o s i t y killed the cat.
4. The wealthy man's g e n e r o s i t y helped those less fortunate.
5. John has an i m m u n i t y to the measles.
6. L o n g e v i t y runs in the family.
7. m a j o r i t y rules!
8. The rest of you are in the m i n o r i t y.
9. Mr. Smith's strange collection was an o d d i t y.
10. This is your big o p p o r t u n i t y.
11. Marie has a charming p e r s o n a l i t y.
12. Who will win the p o p u l a r i t y contest?
13. The p o s s i b i l i t y always exists.
14. Good fortune brings p r o s p e r i t y.
15. It is sold in a large q u a n t i t y.
16. There is s e c u r i t y in numbers.
17. Life is made easier by s i m p l i c i t y.
18. The v a l i d i t y of her test scores was confirmed by the teacher.

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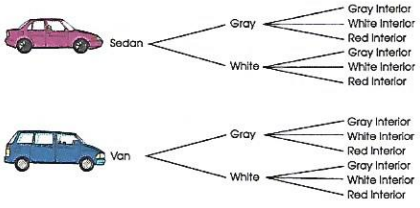
Tree Diagrams & Compound Events

Mary's family is looking at new cars. They have narrowed it down to the following choices. The tree diagram below shows the possible outcomes.



1. The compound event described above has how many possible outcomes? 12
2. What is the probability that Mary's family will select a gray sedan with a black interior? 0
3. What is the probability that they will select a gray van? $\frac{1}{4}$
4. What is the probability that they will select a white van with a red interior? $\frac{1}{12}$

Extension: On another sheet of paper, show a different way to figure the number of possible outcomes in this compound event without drawing a tree diagram.

Answers will vary. $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{3} = \frac{1}{12}$

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Integers

Solve the problems. Write your answers here.

1. $-12 + 1 = -11$
2. $-7 + 9 = 2$
3. $-2 + 10 = 8$
4. $-14 + 7 = -7$
5. $-12 + 12 = 0$
6. $-14 + 3 = -11$
7. $-10 + -10 = -20$
8. $-5 + 0 = -5$
9. $-12 + -11 = -23$
10. $-6 + 9 = 3$
11. $-8 + 12 = 4$
12. $-1 + 12 = 11$
13. $-15 + -10 = -25$
14. $-2 + 8 = 6$
15. $-30 + 2 = -28$
16. $-4 + 5 = 1$
17. $10 - (-14) = 24$
18. $-14 - (-7) = -7$
19. $10 - (-3) = 13$
20. $-10 - 6 = -16$
21. $-5 - (-5) = 0$
22. $-8 - (-9) = 1$
23. $-30 - (-8) = -22$
24. $-14 - 9 = -23$
25. $-16 - (-4) = -12$
26. $20 - 30 = -10$
27. $-10 - 4 = -14$

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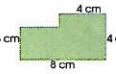
Overview Test

1. **Write** 7,245,206.07 in words: Seven million, two hundred forty-five thousand, two hundred eight and seven hundredths

2. Round 3,657.189 . . .
   to the nearest hundredth: 3,657.19
   to the nearest whole number: 3,657

3. $d \times 14 = 56$, $d =$ 4

4. What is the perimeter? 24 cm
   What is the area? 28 cm^2



5. $\begin{array}{r} 792 \\ \times\ 34 \\ \hline 26{,}928 \end{array}$

6. $2^6 =$ 32

7. $23\overline{)653}$ = 28 R9

8. 50 hours = 2 days 2 hours

9. $15 + 3 \times 2 =$ 21

10. $\begin{array}{r} 0.148 \\ \times\ 0.7 \\ \hline 0.1036 \end{array}$

11. $2.6\overline{)15.47}$ = 5.95

12. $\frac{3}{5} \times \frac{10}{18} = \frac{1}{3}$

13. $2\frac{1}{2} + \frac{1}{2} = 5$

14. $2\frac{5}{8} + \frac{3}{4} = 2\frac{11}{8} = 3\frac{3}{8}$

15. $17 - 5\frac{1}{2} = 11\frac{1}{2}$

16. 15% of 20 = 3

17. 14 is 70 % of 20

18. $\frac{5}{40} = \frac{2}{m}$, $m =$ 16

19. $-6 + 9 =$ 3

20. $14 - (-12) =$ 26

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Mapping Mania

Refer to a map of Canada and the United States to complete the following.

1. A group of islands close to each other is called an archipelago. Name the archipelago that extends southwest from Alaska. Aleutian Islands
2. What state is made up of an archipelago? Hawaii
3. Why are Texas, Louisiana, Mississippi, Alabama and Florida known as the Gulf states? They border the Gulf of Mexico.
4. The Great Lakes hold $\frac{1}{5}$ of all surface freshwater in the world. Name the American states and Canadian province that border these lakes. Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania, New York, Ontario
5. What Canadian province retains its French heritage and language? Quebec
6. Name the Canadian Maritime Provinces. New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland
7. Name the oceans that border Canada. Pacific, Atlantic, Arctic
8. Name the American state that borders two oceans. Alaska
   Name the oceans. Pacific and Arctic
9. Name the state made up of two peninsulas. Michigan
10. Name the three major mountain chains found in North America. Rocky Mountains, Appalachians, Coastal/Cascades
11. Locate a map with time zones. Find the number of time zones within the contiguous United States. Name them. 4 Pacific, Mountain, Central, Eastern
12. Name the states that have the Mississippi River as a border. Minnesota, Wisconsin, Iowa, Illinois, Missouri, Kentucky, Tennessee, Arkansas, Mississippi, Louisiana

Challenge!
There is one place in North America where you could get into a boat at one state capital, sail to the nearby capital of a Canadian province and continue along the coast to another state capital. Name the three capitals. Olympia, WA; Victoria British Columbia; Juneau, Alaska

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Mapping Mania

Refer to a map of Central America and South America to complete the following.

1. Name the large peninsula in Mexico that separates the Gulf of Mexico from the Caribbean. Yucatán
2. Name the four nations that still have possessions in the Caribbean region. Netherlands, U.S., United Kingdom, France
3. Which Central American country is not officially Spanish speaking? (It was formerly British Honduras.) Belizé
4. In 1949, this Central American country abolished its army. Today, it is one of the most stable countries in Latin America. Its president won a Nobel Peace Prize in 1987 for working to end fighting in Central America. It lies west of Panama and south of Nicaragua. Identify the country. Costa Rica
5. Name the countries that border the Gulf of Mexico. United States, Cuba, Mexico
6. Which South American countries lie on the equator? Ecuador, Colombia, Brazil
7. Does any South American country lie completely outside the tropics? If so, which one? Uruguay
8. Name the cape at the southern tip of South America. Cape Horn
9. Name three countries in South America where Spanish is not the official language. Guyana, Suriname, French Guiana
10. In 1935, one of the great scientists in history, Charles Darwin, spent a month in the Galápagos Islands, part of Ecuador. His visit was the inspiration for the theory of natural selection that revolutionized science. Give the absolute and relative locations of the Galápagos. 0.30° S, 90.30°W; approximately 850 miles due west of Quito, Ecuador
11. Name the only country in South America without a coastline. Paraguay

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Write Government Officials

The government needs to hear from kids just like you! Our nation's leaders and the leaders of other countries need to hear our concerns. Most government officials welcome letters and want to know your thoughts.

Write letters that clearly state what you are concerned about and why you are concerned. Using the information that you have learned will help influence the people who make decisions about the laws and funding that govern the safety of our planet.

NO MATTER HOW YOUNG YOU ARE
YOU CAN MAKE A DIFFERENCE.

Here are some addresses of where to write to our government officials.

Representative _____
US House of Representatives
Washington DC 20515

Senator _____
US Senate
Washington DC 20510

(You will need to know the names of your state's Senators and Representatives.)

President _____
The White House
1600 Pennsylvania Ave.
Washington DC 20500
(Begin your letter, "Dear Mr. President.")

If you wish to write to the leaders of other foreign countries, request the proper address from:

(Country's Name) Embassy
The United Nations,
United Nations Plaza
New York, NY 10017