A Total Curriculum Guide to Teach Your Child at Home

From the Editors of American Education Publishing

GRADE 5

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	**Different Kinds of Writing** Have your child write an imaginative story about how a constellation came to be. *See* Language Skills, Week 28, number 1.	Pretest your child on these spelling words: arrange, bore, capture, compare, create, crowd, dance, divide, explore, give, mend, promise, reduce, shake, strange, surprise, tame, write Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	**Library Skills** Have your child read chapters 11 and 12 of *Number the Stars*. Ask your child to define *neutrality*. Then, have your child list five topics about which his/her feelings are neutral. Review the organization of the card catalog or the computer index at the library. *See* Reading, Week 28, number 1.
Tuesday	Have your child write a narrative about a personal experience, describing the events in sequential order. Let your child choose whether to write in the first person or in the third person.	Review this week's spelling words. Have your child complete **Serving up Suffixes** (p. 288).	Have your child read chapters 13 and 14 of *Number the Stars*. Then, have him/her write about the symbolic use of the story, "Little Red Riding Hood." Review the Dewey decimal system and call numbers. *See* Reading, Week 28, number 2.
Wednesday	Have your child think of his/her favorite place or favorite thing to do. Then, have him/her write a descriptive paragraph about it. Encourage your child to use all five senses in his/her description.	Have your child use each of this week's spelling words correctly in a sentence.	Have your child read chapters 15 and 16 of *Number the Stars*. Take your child to the library to research Sweden's history of neutrality or to look up the training of guard dogs. While at the library, continue your discussion of the Dewey decimal system. Have your child use the card catalog or computer index to identify call numbers for given topics. **Examples:** koalas, gardening, limericks, organic chemistry, eastern religions, soccer, tangrams, Latin.
Thursday	Have your child write a paragraph that gives detailed directions. Encourage your child to use clear language and to keep the directions simple. *See* Language Skills, Week 28, number 2.	Have your child study this week's spelling words.	Have your child read chapter 17 and the afterword of *Number the Stars*. Have your child complete **You Be the Judge** (p. 289). Return to the library. Design an activity sheet for your child to complete using the card catalog or computer index. Questions should require your child to find books by a certain author, books on a particular subject and specific titles. Then, give your child several books to shelve.
Friday	Have your child write a persuasive paragraph in which he/she tries to convince someone to believe or do something. First, have your child decide whom he/she is trying to persuade and what he/she wants the person(s) to think or do.Then, have your child write a persuasive argument with supporting details to convince the intended audience.	Give your child the final spelling test. Have your child record pretest and final test words in his/her Word Bank.	Choose a final project for your child to complete that will demonstrate his/her understanding of the book *Number the Stars*. See page 13 for book project ideas.

Math	Science	Social Studies
Decimals Decimals are very similar to fractions. *See* Math, Week 28. Demonstrate that decimals are simply fractions with 10, 100 or 1000 in the denominator. Teach your child how to read decimals. *See* Math, Week 28, numbers 1 and 2. Have your child read about decimals in an encyclopedia. Then, have your child look for numbers in the newspaper that are written as decimals.	**Force, Motion and Work** Introduce the science of force, motion and work. A *force* may be a push or pull on an object. Forces create *motion*, which can be used to accomplish *work*. The rate of motion can be affected by friction, gravity and other forces. *See* Science, Week 28, number 1. Have your child add a glossary page on force, motion and work to his/her Science Log. *See* Science, Week 28, number 2.	**Famous Inventors** In addition to being great politicians, Thomas Jefferson and Benjamin Franklin were also creative inventors. Have your child read about their inventions. Have your child draw a picture of Monticello, the home that President Jefferson designed and built. Then, have your child write a paragraph describing some of the unique features of the house.
Make several copies of **Base-Ten Squares** (p. 290). Teach your child how to shade the boxes to represent given decimals. Each base-ten square represents 1, or the whole. The square is then divided into 100 little squares. Each little square represents one hundredth (0.01). Ten little squares (or a bar) make up one tenth (0.1). your child should recognize that this is the same concept as fractions. *See* Math, Week 28, number 3.	Have your child begin a concept map of force, motion and work. Have your child write "force, motion and work" in the center of a large piece of paper and circle it. Then, have him/her draw lines radiating out from the circle for subheadings. Fill in the subheadings and details as you study them in the unit. Key terms might include *gravity, speed, friction, pressure, laws of motion, simple machines* and *compound machines*.	Have your child choose one major invention and write a report about it. The report should include information about the life of the inventor, the need for this invention, how it was conceived, what impact it had and any improvements that have been made on the invention since its inception.
Teach your child to read decimals to the thousandths place. Discuss how large a thousandth would be in the base-ten squares. Ask your child to imagine the size of a thousandth of an inch or a thousandth of a football field. Have your child read aloud some decimals with thousandths: 0.008, 0.032, 0.215, 0.875. Lead your child to discover that digits appearing far to the right of the decimal point represent smaller and smaller numbers.	Have your child look for a definition of *force* in a science textbook or another resource. Demonstrate force and motion with a simple activity. Discuss the different types of force. *See* Science, Week 28, numbers 3 and 4.	Discuss today's inventions. *What sorts of things are people inventing today?* Discuss the fields (science, medicine, etc.) that generate most of today's inventions. *How has the nature of inventing changed since the time of Thomas Edison?* Ask your child to think of a need that is not being met. Have your child design (on paper) an invention that will fill that need. If time permits, your child may even want to try and build his/her invention.
In baseball, batting averages are expressed in decimals to the thousandths place. A batting average is the number of hits divided by the number of times at bat. Gather the batting averages of some of the greatest baseball players of all time. Have your child arrange the averages in order from highest to lowest. Then, ask your child questions that require him/her to add and subtract the averages. This will provide great practice with decimals.	Have your child read about and define the force of gravity. Discuss the contributions of Sir Isaac Newton. The force of *gravity* pulls objects toward the center of the earth. It acts upon objects in motion, causing a change in the object's trajectory. If you throw a ball into the air, the force of gravity pulls the ball downward. Have your child name other examples of the force of gravity (waterfalls, parachuting, skydiving, jumping off a diving board, seesawing).	Discuss the history of transportation. *How have people moved from one location to another over time?* Ask your child to choose one form of transportation (boat/plane/train/car) and research its history. *What did the earliest form look like? When was it invented? Who were the key inventors in its development?* Have your child draw pictures to show the progression of the form of transportation. *What will cars (boats/planes/trains) look like in 20 years?*
Dictate 10–15 number words to your child. Have him/her write each number in decimal form. Use a variety of numbers. **Examples:** *one thousand and eleven hundredths* (1000.11) *seven thousand fifteen and six hundred twenty-five thousandths* (7015.625) *eight tenths* (0.8) Review your child's work immediately and reteach, if necessary.	Investigate gravity with your child. Help him/her perform the experiment described in **Egg Drop** (p. 291). Have your child read about the lack of gravity in space. *Why is this so?*	Arrange for your child to perform some community service.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Different Kinds of Writing)


The Constellation Orion

1. Look at pictures of constellations with your child. Name some of the constellations. Stargazers, since the beginning of time, have made pictures by connecting the stars with imaginary lines. Many of the constellation names are accompanied by imaginative stories that explain their origins.

   Copy the constellation at right for your child to study. Have your child name the constellation and write an imaginative story about the group of stars.

2. Have your child follow written directions to complete a drawing.

   Example: *Draw a five-inch square in the center of the paper. In the upper right corner of the square, make a circle with a one-inch diameter. Draw a second circle just like it in the upper left corner of the square. Color the circles green. Color the square orange. Write your name below the square.*

   Next, have your child write a paragraph giving simple directions. Discuss how to make the directions clear and concise. Follow your child's directions and see if you create the desired results. If your results are different than your child expected, discuss which steps could be written more clearly.

READING (Library Skills)

1. Spend some time at the library this week. Libraries use a cataloging system to keep track of books and to help you locate books easily. A card catalog contains three sets of cards: subject, title and author cards. Each book in the library is represented by these three cards. A computer index allows you to access books through the same three categories.

2. The Dewey decimal system is used in many libraries. Call numbers in this system are made up of numbers and letters. The number tells you where in the library the book is found and the letters represent the author's last name. Call numbers are arranged first by number, then by letters. **Example:** 92.1 Ab comes before 92.1 Tr.

000–099	General works (encyclopedias, bibliographies, periodicals, journals)
100–199	Philosophy and related disciplines (philosophy, psychology, logic)
200–299	Religion
300–399	Social Sciences (economics, sociology, law, civics, education, vocations, customs)
400–499	Language (languages, grammar, dictionaries)
500–599	Pure sciences (biology, botany, zoology, chemistry, physics, mathematics, astronomy, geology, paleontology)
600–699	Technology and applied sciences (medicine, engineering, agriculture, home economics, radio, television, aviation, business)
700–799	The arts (painting, music, photography, recreation, architecture, sculpture)
800–899	Literature (novels, plays, poetry, criticism)
900–999	Geography, history and related disciplines

MATH (Decimals)

BACKGROUND

Decimals and fractions are both systems for naming parts of a whole. Use the same models to teach decimals as fractions, but stress that decimal fractions are always a power of 10. Just as numbers to the left of the decimal have place value, so do numbers to the right. The first place to the right of the decimal is the *tenths* place (0.5 = five tenths). The second place to the right is the *hundredths* place (0.03 = three hundredths). The third place to the right is the *thousandths* place (0.008 = eight thousandths). Place value to the right increases infinitely just as it does to the left.

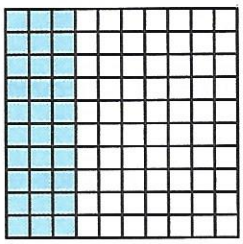
1. One slice of a pizza that is cut into ten pieces can be represented as $\frac{1}{10}$. This same quantity can be represented in decimal form as 0.1 (read "one tenth"). Five slices of the same pizza can be written as $\frac{5}{10}$ or 0.5 (read "five tenths"). Fractions with 100 parts, such as pennies, are written with a denominator of 100. Seventy-five pennies is $\frac{75}{100}$ of a dollar in fraction form and 0.75 in decimal form. Eight pennies can be written as $\frac{8}{100}$ or 0.08. The placement of the 8 is very important. A misplaced decimal point could change 0.08 ($\frac{8}{100}$) to 0.8 ($\frac{8}{10}$).

2. Always read a decimal as a fraction. Read 3.14 as "three and fourteen hundredths," not as "three point fourteen" or "three point one four." Reading the decimal as a fraction reinforces its meaning. Since all decimals are to be read as fractions, they will all end in a *th* sound, as in tenth, hundredth and thousandth. The word *and* is used to separate the whole number from the decimal fraction. Read 214.37 as "two hundred fourteen *and* thirty-seven hundredths." Finally, to reinforce the idea that a decimal is part of a whole, always include a value in the ones place to the left of the decimal point (0.4, not .4).

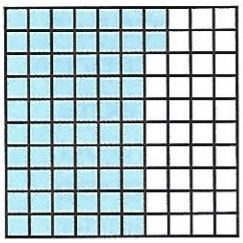
3. Have your child color a base-ten square to represent a decimal fraction.

Examples:

0.3 (three tenths)



0.62 (sixty-two hundredths)



Now, have your child try shading these decimals.

0.4	0.7	0.2	0.5	0.43	0.59
0.20	0.54	0.73	0.11	0.99	0.05

SCIENCE (Force, Motion and Work)

1. Collect pictures of the following for your child to observe: tools, machines, playground equipment, amusement park rides, cars, airplanes, boats, exercise equipment, athletic events and people working. Ask your child to name what is in motion in each picture. Ask your child to name the force that set it in motion. Have your child classify the pictures into those with a strong force and those with a weak force.

2. Add the following words to this week's spelling list. Have your child look up each word in a dictionary or science resource. Discuss the meaning. Have your child make a glossary of force, motion and work words. Have him/her arrange the entries in alphabetical order and write a definition for each word.

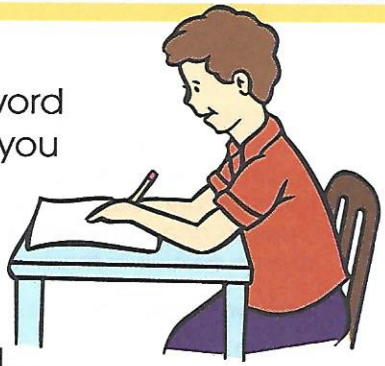
acceleration	gravity	machine	pressure	wedge
force	inclined plane	motion	pulley	weight
friction	laws of motion	pendulum	screw	wheel and axle
fulcrum	lever	power	speed	work

3. Place a block on a table and push it gently across the surface. Ask your child whether the motion was caused by a push or a pull. Continue pushing until it falls off the table and hits the floor. *What force caused the motion this time?* (pull by gravity to the floor) Have your child then pick up the block from the floor and explain the force used to do this task. Explain that a force can be either a push or a pull. Have your child name the type(s) of force at work in the following situations:

   What force is used to throw a baseball? (push)
   What force is used to open a door? (pull or push)
   What force is used to paddle a boat? (push and pull)
   What force is used to raise a window? (push)
   What force is used to cut an apple? (push)
   What force is used to cut paper with scissors? (push and pull)

4. Discuss the motion caused by natural forces such as wind, water, ice, volcanoes, earthquakes, tornadoes and hurricanes. What type of motion occurs with these forces? Can the forces be singled out as either pushes or pulls?

Serving up Suffixes



A **suffix** is a group of letters added to the end of a root word to form a new word. When the root word ends in silent **e**, you usually drop the final **e** before adding the suffix.

Examples: trade + **ed** = traded
move + **er** = mover
surprise + **ing** = surprising

arrange
bore
capture
compare
create
crowd
dance
divide
explore
give
mend
promise
reduce
shake
strange
surprise
tame
write

Use the spelling words to **write** the correct root word.

1. comparing _____
2. surprising _____
3. promised _____
4. captured _____
5. dancer _____
6. writing _____
7. stranger _____
8. creating _____
9. shaker _____
10. taming _____
11. arranged _____
12. giving _____
13. bored _____
14. reducing _____
15. divided _____
16. exploring _____

Write the two spelling words you have not used. Then, **write** each one, adding the **ed** and the **ing** endings.

1. _____ _____ _____

2. _____ _____ _____

Brainstorm and list more words to fit the rule.

_____

_____

_____

You Be the Judge

1. Rank these people from 1 to 4, with 1 being the bravest. Explain in one paragraph why you ranked them this way.

   _____ Henrik _____ Mrs. Rosen _____ Kirsti _____ Mama

   _____

   _____

   _____

2. How would you compare this book with the last book you read? How is it similar? How is it different?

   Title of last book: _____

Similar	Different
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____

3. **Write** three sentences from different chapters in the book that you believe illustrate the emotion of fear.

   Page no. _____ _____

   _____

   Page no. _____ _____

   _____

   Page no. _____ _____

   _____

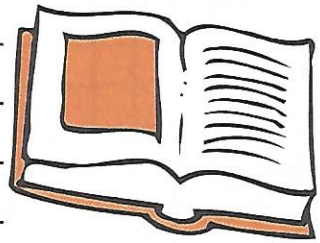
4. Argue either for or against this statement: *Number the Stars* is a book written especially for girls because its main character is a girl.

   _____

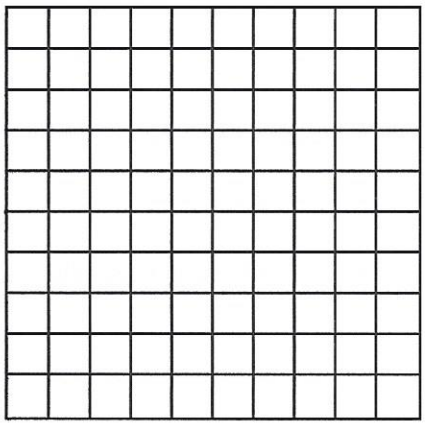
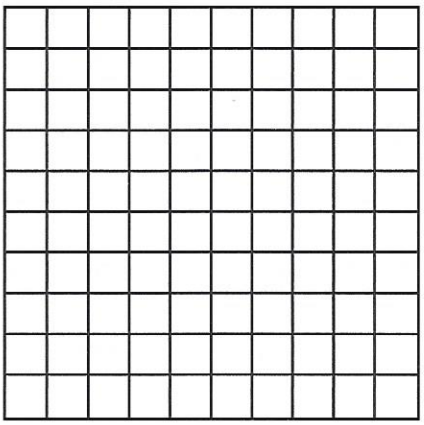
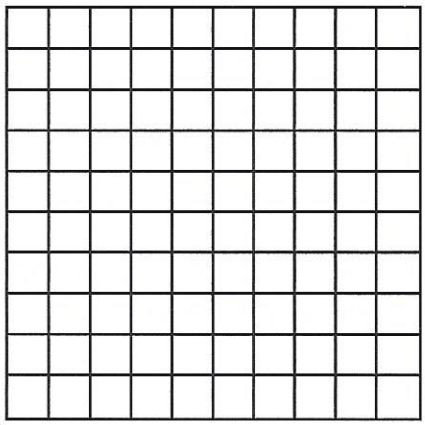
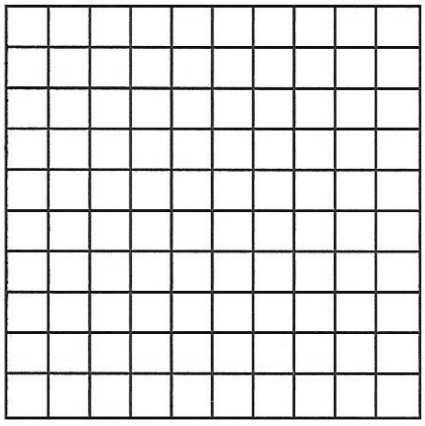
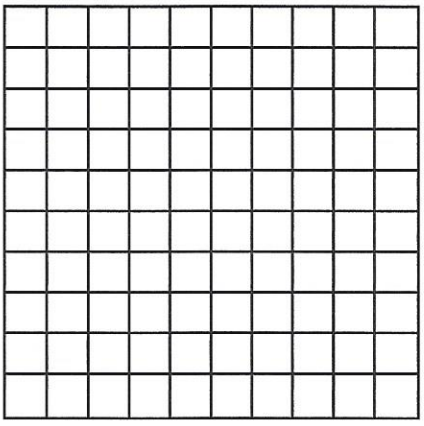
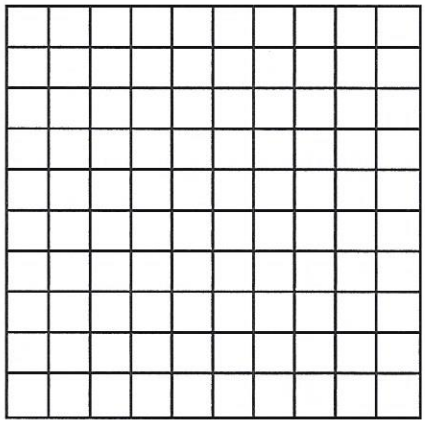
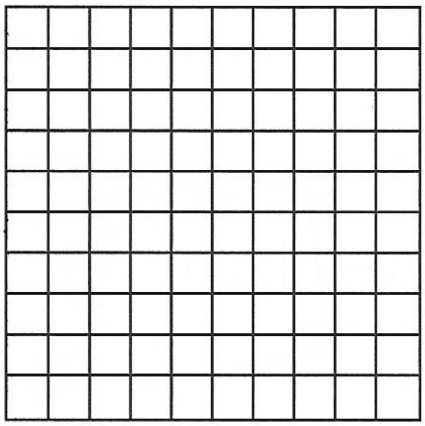
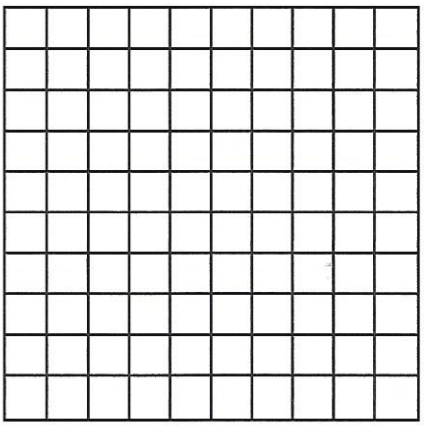
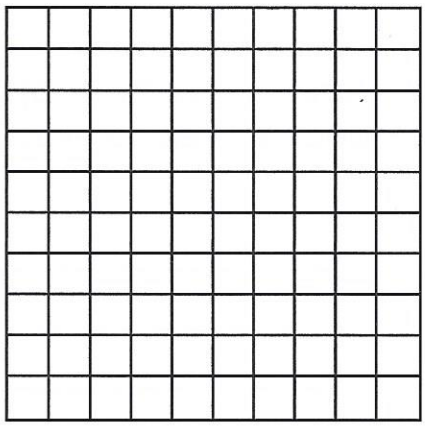
   _____

   _____

   _____



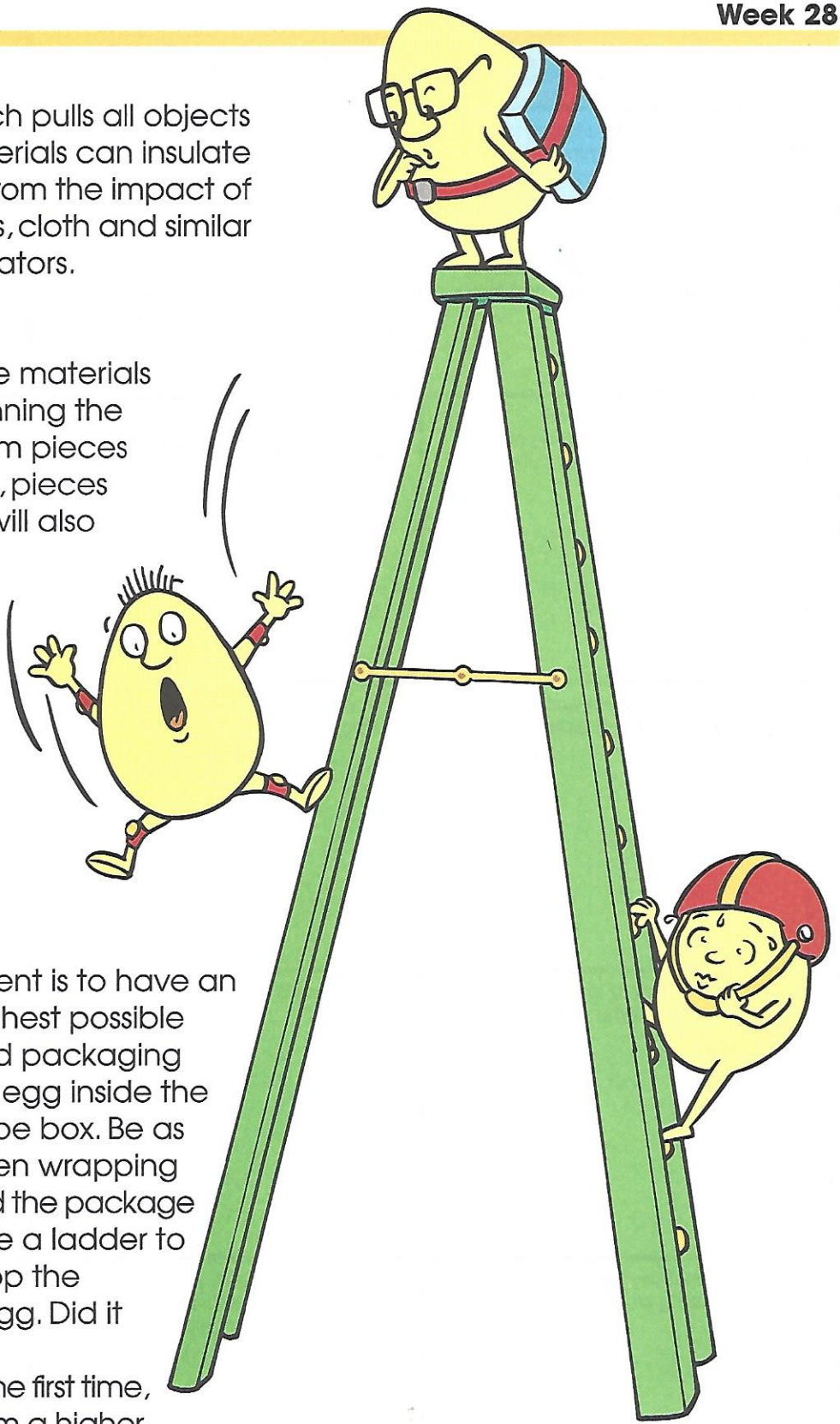
Base-Ten Squares

Egg Drop

Gravity is the force which pulls all objects toward Earth. Some materials can insulate and cushion an object from the impact of gravity. Paper, foam cups, cloth and similar materials are good insulators.

You will need:
Collect as many of these materials as possible before beginning the project: newspaper, foam pieces or "peanuts," pantyhose, pieces of cloth and string. You will also need one or more raw eggs and a shoe box or cardboard carton.



Experiment:
The goal of this experiment is to have an egg survive from the highest possible height. Use the collected packaging materials to protect the egg inside the cardboard carton or shoe box. Be as creative as you can when wrapping the egg. Let an adult hold the package as high as possible or use a ladder to stand on. He/she will drop the package. Check your egg. Did it break? _____
If your egg didn't break the first time, have an adult drop it from a higher point. Did it break this time? _____
From how high do you think the egg can be dropped before it breaks? _____

	Language Skills	Spelling	Reading
Monday	Help your child choose a writing topic for this week's writing assignment. Have your child follow the steps in the writing process as he/she writes independently this week. For more information on the writing process, see page 6. Have your child make a plan for writing, then begin work on the rough draft today.	Pretest your child on these spelling words: attached, attended, avoiding, builder, catcher, concerned, drawing, enjoying, escorted, established, poster, prisoner, repeated, scalding, scooter, seller, spelling, younger Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Introduce *The Muffin Fiend* by Daniel Pinkwater. Before reading Pinkwater's book, have your child read about Mozart in a nonfiction source. Have your child read *The Muffin Fiend* up to page 25.
Tuesday	Let your child continue to work independently on his/her writing project. Review writing and grammar skills as the need arises.	Review this week's spelling words. Have your child complete **Searching for Suffixes** (p. 296).	Discuss the story elements so far. Have your child identify the characters, setting and problem. Ask your child to predict the solution to the problem before reading further. Have your child read the rest of *The Muffin Fiend*. Discuss the solution to the problem. How accurate was your child's prediction?
Wednesday	Let your child continue to work independently on his/her writing project.	Have your child use each of this week's spelling words correctly in a sentence.	Discuss what type of literature *The Muffin Fiend* is. *Is it an adventure, biography or mystery? How did the author get his idea for the story?* Discuss the style of writing used by the author. *See* Reading, Week 29. Have your child imitate Pinkwater's writing style to write an original story. Have your child place familiar characters in an outrageous situation.
Thursday	Let your child continue to work independently on his/her writing project.	Have your child study this week's spelling words.	Discuss the style of illustrations in *The Muffin Fiend. Why do you think the author and publisher chose this style of drawings?* Have your child continue to work on his/her story. Encourage him/her to add illustrations. Then, have your child revise and edit the story with the help of another.
Friday	Have your child do a final edit and revision of his/her writing project.	Give your child the final spelling test. Have your child record pretest and final test words in his/her Word Bank.	Daniel Pinkwater often writes about outrageous characters or situations. Have your child read other books by the author. (Look in the card catalog for other titles.)

Math	Science	Social Studies
Review decimal concepts taught so far, including how to read decimal numbers. Have your child complete **More Puzzling Problems** (p. 297).	Have your child read *Why Doesn't the Earth Fall Up?* by Vicki Cobb. As your child reads, he/she will find the answers to the question in the title, as well as to the "not-so-dumb" questions listed in Science, Week 29, number 1.	**Political and Social Reform** Discuss the meaning of *reform. What are some of the issues in the past that have caused people to seek political or social reform? What are some issues today in need of reform? See* Social Studies, Week 29, numbers 1 and 2.
Using models, demonstrate that adding zeros to the right of a decimal does not change the size of the decimal fraction. *See* Math, Week 29, number 1. Have your child write equivalent fractions for decimals. *See* Math, Week 29, number 2.	Have your child read about and define *friction.* Like gravity, friction acts on objects in motion and causes a change in motion. Explore friction with the simple activities and questions found in Science, Week 29, numbers 2 and 3. Have your child create a poster that illustrates and explains the concept of friction.	Have your child do some research on American reformers and their causes. *See* Social Studies, Week 29, number 3.
Teach your child to compare decimal fractions using the > and < signs. *See* Math, Week 29, numbers 3 and 4. Have your child compare pairs of decimals. **Examples:** 0.29 1.29 21.23 21.13 3.54 3.541 Then, have your child name the greatest or least number from groups of three decimals. Have your child complete **Missing Train** (p. 298).	Help your child conduct an experiment on friction. *See* Science, Week 29, number 4. You will need a copy of **Exploring Friction** (p. 299).	Discuss reform as it relates to the Amendments to the Constitution. *Which Amendments were the result of a reform movement? Who were the leaders of these movements?* Have your child copy one of the Amendments to the Constitution and read it carefully. Then, have your child explain, in his/her own words, the significance of that Amendment.
Teach your child to round decimals to a given place. Rounding with decimals is like rounding with whole numbers. If the number is 5 or more, round up. If the number is 4 or less, round down. **Example:** *Round 4.78 to the nearest tenth.* Since 78 is nearly 80, round up to 8 tenths = 4.80 *See* Math, Week 29, number 5. Write several decimals on the chalkboard. Have your child round each to a given place.	Introduce the concept of *speed.* Speed is measured by comparing the distance traveled to the time it takes to go that distance. Help your child discover how fast he/she walks. Measure accurately a mile course. Have your child walk the mile and mark the time with a stopwatch. When finished, have your child determine the number of minutes it took to walk the mile. That is your child's speed. Based on that speed, how long would it take your child to walk 3 miles?	Discuss the work of Martin Luther King, Jr. *See* Social Studies, Week 29, number 4. Have your child create a time line of the major events and accomplishments in the life and work of Martin Luther King, Jr.
It is more likely that your child will need to round a decimal to the nearest whole number than to the hundredths place. The number in the tenths place determines whether to round the number up or down. **Examples:** 45.60 is rounded to 46. 29.29 is rounded to 29. 5.7893 is rounded to 6. 100.00001 is rounded to 100.	Have your child research and read about the fastest Olympic runner, car, animal, etc. He/she may want to look at the *Guinness Book of World Records* to find more interesting speed facts. Have your child compile this information into a chart of "fast facts." Have him/her include two or three illustrations or pictures (from magazines) on the chart as well.	Arrange for your child to perform some community service.

TEACHING SUGGESTIONS AND ACTIVITIES

READING SKILLS (Types of Writing)

Review these different types of writing: expository, descriptive and narrative. *Expository* writing explains or presents information. *Descriptive* writing uses words—especially adjectives—to create vivid images. *Narrative* writing tells a story or recounts an experience. A narrative may be told in the first person or in the third person.

MATH (Decimals)

1. The decimals 0.3, 0.30 and 0.300 each represent 3 tenths.

   Give your child a copy of **Base-Ten Squares** (p. 290). Have him/her shade 0.3. In a separate box, have your child shade 0.30. Compare the two models and discuss. Ask your child to predict what 0.300 would look like. (same) Relate this to fractions: $\frac{3}{10}$ represents the same fraction as $\frac{30}{100}$. One fraction is just the simplified (or reduced) version of the other.

2. Have your child write an equivalent fraction for each of the given decimal fractions.

   Example: 0.45 = $\frac{45}{100}$ or $\frac{450}{1000}$ or $\frac{9}{20}$

0.5	0.9	0.34	0.03	0.125
0.7	0.1	0.57	0.22	0.012

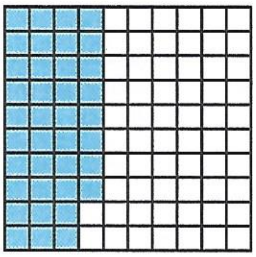
3. To compare decimal fractions, look at one digit at a time.
   a. Start with the whole number. The decimal with the larger whole number is the greater number. **Example:** 3.87 > 1.87 If the whole numbers are the same, move right to the tenths place.
   b. Compare the tenths. The decimal with the larger number in the tenths place is the greater number. **Example:** 5.6 > 5.59 (Check your answer using the base-ten squares.) If the tenths are equal, move right to the hundredths place.
   c. Compare the hundredths. The decimal with the larger number in the hundredths place is the greater number. **Example:** 6.37 > 6.368 If the hundredths are equal, move right to the thousandths place.
   d. Compare the thousandths. The decimal with the larger number in the thousandths place is the greater number. **Example:** 4.235 > 4.231

4. If your child finds this method confusing, try an alternate method. Because 5.6 > 5.59 can look strange to your child, change the first decimal to an equivalent decimal, 5.60. When the decimals have the same number of digits (5.60 > 5.59), your child can see more easily which number is greater. Clearly, 60 hundredths is greater than 59 hundredths.

5. Use a base-ten square to demonstrate rounding with decimals. Sketch the given decimal fraction. Have your child study the drawing to decide whether the decimal should be rounded up or down to the given place.

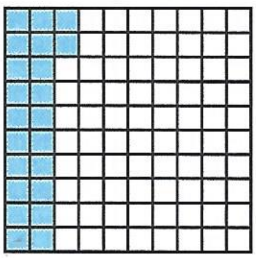
   Examples:

   Round 0.38 to the nearest tenth

   Closer to 0.4

   Round 0.22 to the nearest tenth

   Closer to 0.2

SCIENCE (Force, Motion and Work)

1. *Why does a rolling ball stop rolling?*
   Why can't you stand an egg on its end?
   Why doesn't the moon fall to Earth?
   Which falls faster, a bowling ball or a marble?
   How do we know the Earth is moving when it looks as if the sky is moving?

2. Introduce the concept of *friction*. The force of friction causes an object to slow down or stop. Friction can also produce heat. Explore the following examples and ask your child to think of other instances of friction.
   a. Strike a match on a smooth surface, then on a rough surface. Discuss the different reactions.
   b. Have your child examine the soles of different shoes and decide which pair would provide the best traction on a slippery sidewalk.
   c. Collect several advertisements for car and truck tires. Have your child look for statements about the tires that are best for snow or wet roads.
   d. Have your child describe the method of stopping on a bicycle, skateboard or skis.

3. Discuss the answers to the following questions:
   Could you walk easily without friction?
   How is the heat from friction in an automobile engine controlled?
   Look at stones found in a river or on a lakeshore. What caused the rocks to become smooth and rounded?

4. Obtain a spring balance that is used to measure force. Have your child explore the amount of force necessary to pull the same object across different surfaces. Discuss why this is a significant experiment in the study of friction. Before the experiment, have your child predict which surface will create the most friction for the object. After completing the experiment described on **Exploring Friction** (p. 299), ask your child to ponder the following questions:
   What else could be done to make the movement of an object across a surface easier?
   Why is the ice on an ice rink scraped and swept after a lot of use?
   Have you ever slid down a water slide or a metal slide? Which slide goes more easily?
   Why is sand spread on icy bridges and roads in the winter?
   Why are ball bearings used in many machine parts?

SOCIAL STUDIES (Political and Social Reform)

1. The American Revolution was the first American act of political and social reform. The colonists were very unhappy with the influence of Britain. *Who were some of the important reformers of the American Revolution? Who were some of the important reformers of the Civil War?*

2. Discuss the methods of social and political reform. *What methods are most effective in bringing about change? What are some non-violent methods of protest? What are some violent methods?*

3. Have your child choose two leaders of social or political reform to research. Using a Venn diagram or other graphic organizer, have your child compare the two leaders. Repeat this exercise with two other leaders.

Jane Addams	Samuel Gompers	Muckrakers (a group)
Susan B. Anthony	Jesse Jackson	Ralph Nader
Amelia Bloomer	Mary Harris Jones	Carry Nation
Carrie Catt	Martin Luther King, Jr.	Rosa Parks
Cesar Chavez	John L. Lewis	Eleanor Roosevelt
Frederick Douglass	Horace Mann	Elizabeth Cady Stanton
W. E. B. Du Bois	Thurgood Marshall	Gloria Steinem
Betty Friedan	Lucretia Mott	Harriet Tubman

4. Martin Luther King, Jr., is probably one of the best-known American reformers. He led the fight for civil rights in the 1950s and 1960s. His actions were probably the most significant factor in the passage of the Civil Rights Act. Read about the Civil Rights Act of 1964. Discuss the difference between an act and an amendment. Have your child identify amendments to the Constitution that address civil rights.

Searching for Suffixes

This group of spelling words has the same suffixes used in Week 28, but these suffixes were added without any changes to the root words.

attached
attended
avoiding
builder
catcher
concerned
drawing
enjoying
escorted
established
poster
prisoner
repeated
scalding
scooter
seller
spelling
younger

Examples: clean + **ed** = cleaned
clean + **er** = cleaner
clean + **ing** = cleaning

Exception: When a word ends in a single consonant preceded by a short vowel, the consonant is usually doubled before adding a suffix that begins with a vowel.

Examples: sit + **t** + **ing** = sitting
pad + **d** + **ed** = padded

Write each spelling word in the appropriate category.

Root + er

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

Root + ing

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

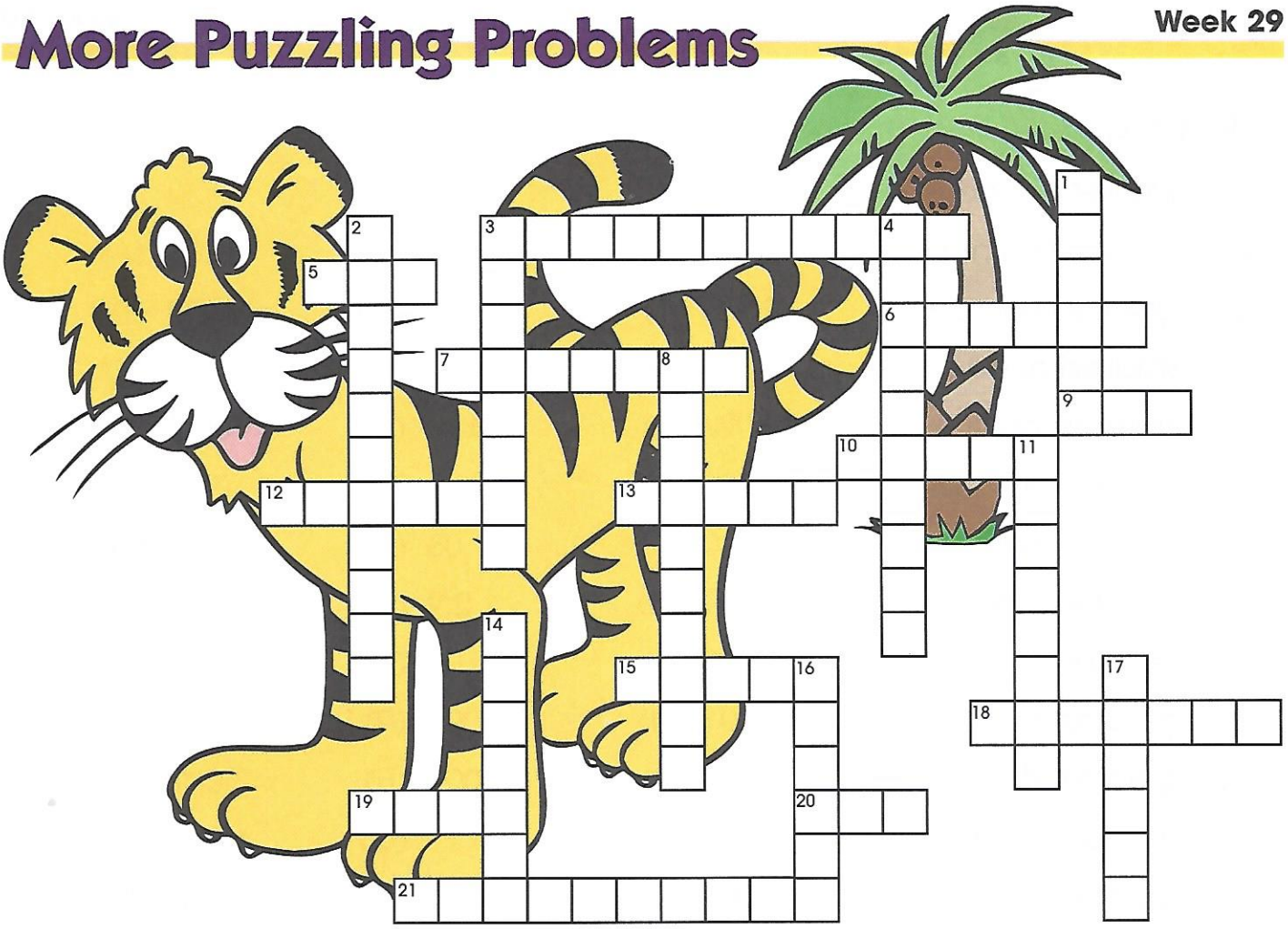
Root + ed

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

Circle the root word in each word.

1. clapping
2. canned
3. equipping
4. trimmer
5. slapped
6. beginning
7. quitter
8. dragging

More Puzzling Problems



Across

3. 7.333 = seven and three hundred thirty-three _____
5. 67.02 = sixty-seven and _____ hundredths
6. 490.1 = four hundred _____ and one tenth
7. 0.512 = five _____ twelve thousandths
9. 8.06 = eight and _____ hundredths
10. 0.007 = _____ thousandths
12. 11.3 = _____ and three tenths
13. 300.12 = _____ hundred and twelve hundredths
15. 62.08 = sixty-two and _____ hundredths
18. 70.009 = _____ and nine thousandths
19. 9.3 = _____ and three tenths
20. 10.51 = _____ and fifty-one hundredths
21. 1,000.02 = one thousand and two __

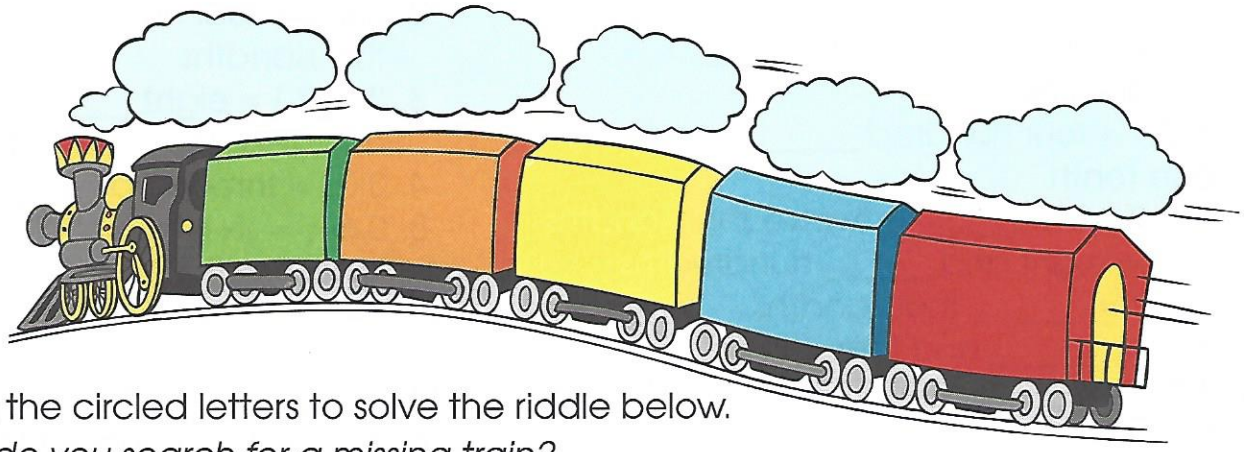
Down

1. 6.5 = six and five _____
2. 0.428 = four hundred _____ thousandths
3. 8,100.1 = eight _____ one hundred and one tenth
4. 3.02 = three and two _____
8. 0.685 = six hundred _____ thousandths
11. 50. 19 = fifty and _____ hundredths
14. 0.015 = _____ thousandths
16. 430.7 = four hundred thirty and seven _____
17. 73.4 = seventy-three and four _____

Missing Train

Circle the . . .

1.	smallest number	0.31 (A)	0.05 (F)	0.20 (R)
2.	greatest number	0.001 (R)	0.137 (O)	0.100 (A)
3.	greatest number	9.910 (L)	9.010 (C)	9.909 (T)
4.	smallest number	0.110 (A)	0.09 (L)	0.3 (R)
5.	greatest number	0.090 (S)	0.10 (P)	0.12 (O)
6.	smallest number	0.131 (H)	0.2 (T)	0.08 (W)
7.	greatest number	1.310 (E)	1.03 (H)	1.33 (T)
8.	smallest number	2.001 (H)	2.9 (F)	2.010 (A)
9.	greatest number	0.3 (E)	0.03 (A)	0.003 (R)
10.	greatest number	1.01 (U)	1.001 (R)	1.1 (T)
11.	greatest number	3.04 (R)	3.009 (U)	3.039 (N)
12.	smallest number	6.01 (A)	6.11 (C)	6.030 (O)
13.	greatest number	0.001 (T)	0.100 (C)	0.090 (N)
14.	smallest number	1.027 (K)	1.270 (R)	1.207 (P)
15.	smallest number	9.909 (N)	9.09 (G)	9.009 (S)



Fill in the circled letters to solve the riddle below.
How do you search for a missing train?

1	2	3	4	5	6		7	8	9		10	11	12	13	14	15
___	___	___	___	___	___		___	___	___		___	___	___	___	___	___

Exploring Friction

Friction is the force that keeps some things from moving or slows them down when they do move. Friction is present when surfaces touch one another. The amount of friction depends on the kinds of materials that are touching, how smooth their surfaces are and how much force presses the two surfaces together.

You will need: string, a screw eye, a block of wood and a spring balance

Experiment:
You will measure the amount of force needed to overcome the friction created by the block of wood on different surfaces. You will be measuring in Newtons (N). The greater the amount of friction created by a surface, the greater the force needed to overcome it. Screw the screw eye into the block. Attach one end of the string to the screw eye on the block of wood and the other to the hook on the spring balance. Put the block on its side on a smooth tabletop and pull evenly on your spring balance until the block moves. Keep pulling so that the block of wood moves at the same speed across the table for each surface. Your parent can take a reading from the spring balance. **Write** this quantity in the chart. Repeat the procedure for each surface listed. Hint: When using marbles, place books around the area to keep them from scattering.

Surface	Amount of Force Needed to Overcome Friction (N)
Aluminum foil	
Marbles	
Sandpaper	
Smooth tabletop	

Does sliding or rolling create more friction? _____

	Language Skills	Spelling	Reading
Monday	Help your child choose a writing topic for this week's writing assignment. Have your child follow the steps in the writing process as he/she writes independently this week. For more information on the writing process, see page 6. Have your child make a plan for writing, then begin work on the rough draft today.	Pretest your child on these spelling words: apply, boundary, canary, century, city, company, country, dairy, enemy, factory, grocery, hobby, lily, marry, memory, pity, reply, worry Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Introduce *The Trumpet of the Swan* by E. B. White. Have your child read chapters 1 and 2. Have your child start a daybook of his/her own. After reading each day, have your child write about what he/she read and formulate a question about the story.
Tuesday	Let your child continue to work independently on his/her writing project. Review writing and grammar skills as the need arises.	Review this week's spelling words. Have your child complete **Simplifying Suffixes** (p. 304).	Ask your child to consider the character of Sam. Work with your child to complete a character web for Sam Beaver. *See* Reading, Week 30, number 1. Have your child read chapters 3 and 4 of *The Trumpet of the Swan*. Then, have your child write in his/her daybook.
Wednesday	Let your child continue to work independently on his/her writing project. Have your child proofread what he/she has written so far, using proofreading symbols. *See* Reading, Week 30, number 2.	Have your child use each of this week's spelling words correctly in a sentence.	**Proofreading:** Have your child read chapters 5 and 6 of *The Trumpet of the Swan*. Then, have your child write in his/her daybook. Teach your child formal proofreading symbols. *See* Reading, Week 30, number 2.
Thursday	Let your child continue to work independently on his/her writing project.	Have your child study this week's spelling words.	Have your child read chapters 7 and 8 of *The Trumpet of the Swan*. Then, have your child write in his/her daybook. Give your child a copy of the proofreading symbol chart, as well as a copy of **Tim Burr, Tall Tale Hero** (p. 305). Have your child read the story and mark corrections using the appropriate symbols from the chart. Help your child get started by reviewing the necessary writing skills noted at the top of the page.
Friday	Have your child do a final edit and revision of his/her writing project.	Give your child the final spelling test. Have your child record pretest and final test words in his/her Word Bank.	Have your child read chapters 9 and 10 of *The Trumpet of the Swan*. Then, have your child write in his/her daybook. Ask him/her to answer the following question: *Is Louis's problem solved?*

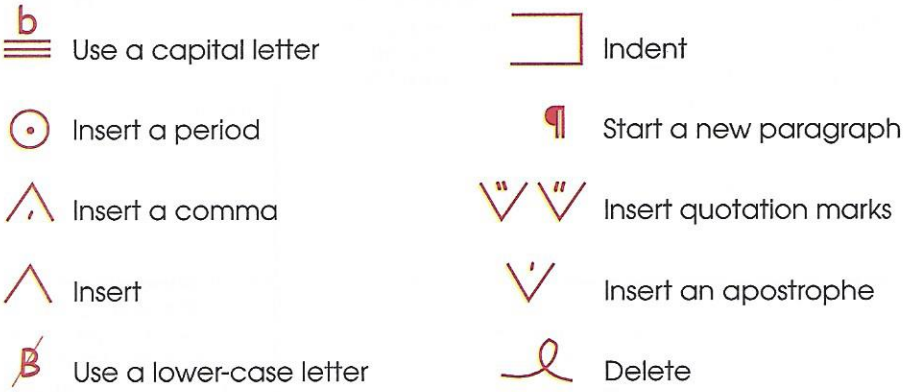
Math	Science	Social Studies
Teach your child how to convert decimals to fractions and fractions to decimals. *See* Math, Week 30, numbers 1 and 2. Have your child complete **Decimal Delight** (p. 306).	**Laws of Motion** Sir Isaac Newton formulated the laws of motion that inform modern scientific thought. Introduce and explain Newton's first law of motion: *An object at rest tends to remain at rest, and an object in motion tends to remain in motion unless acted on by a force. See* Science, Week 30, number 1. Have your child write about a time he/she experienced Newton's first law of motion first-hand.	Introduce your child to *Bartlett's Familiar Quotations*. Turn to quotations by Martin Luther King, Jr. Have your child read some of the quotations aloud. Discuss the meaning of each quotation and the context in which King was speaking. Have your child choose one of the quotations from Martin Luther King, Jr. to analyze. Have your child describe in writing King's meaning and its significance in today's world.
Review concepts related to decimals discussed so far. Give your child various problems to check his/her understanding of rounding, comparing, writing and reading decimals, as well as converting decimals to fractions.	Introduce and explain Newton's second law of motion: *The acceleration of an object depends upon the size and direction of the force acting on it and the mass of the object. See* Science, Week 30, numbers 2 and 3. Have your child define *acceleration* in his/her Science Log.	**Women Leaders:** Discuss the women's suffrage movement. *See* Social Studies, Week 30, number 1. Have your child write a paragraph explaining why women were not allowed to vote in colonial times.
Quiz your child on his/her understanding of decimals. Have your child complete **Decimals** (p. 307). Reteach any concepts if necessary.	Help your child conduct the experiment described on **Come-Back Can** (p. 309).	Brainstorm a list of famous American women with your child. *See* Social Studies, Week 30, number 2. Provide appropriate resource materials so that your child can look up each woman's name and read about her. Have your child group the women by the type of influence they (have) had on society (musical, social, political, literary, etc.).
Teach your child how to add and subtract decimals. First, line up the decimals. *This is very important!* Then, starting with the decimal place furthest to the right, add or subtract. Add, subtract and regroup just as you would any other addition or subtraction problem. The decimal point carries down into the answer. **Examples:** 23.678 + 32.356 = 56.034; 4.89 + 34.2 = 39.09; 7.0 − 4.68 = 2.32	Introduce and explain Newton's third law of motion: *For every action, there is an equal and opposite reaction. See* Science, Week 30, number 4. Help your child conduct an experiment with a balloon. *See* Science, Week 30, number 5. Have your child explain the third law of motion through a diagram of the balloon experiment.	Have your child write about the life and work of one famous American woman. Encourage your child to explain his/her reasons for choosing that particular woman.
Let your child practice adding and subtracting with decimal fractions. Have your child complete **Blast Off!** (p. 308).	Introduce and demonstrate the concept of a *pendulum*. Help your child design, then carry out, another experiment to investigate the behavior of a pendulum. *See* Science, Week 30, numbers 6 and 7.	Arrange for your child to perform some community service.

TEACHING SUGGESTIONS AND ACTIVITIES

READING (Proofreading)

1. Help your child make a character web for Sam Beaver. Have your child write Sam's name in the center of a sheet of paper. Then, have your child draw a circle around Sam's name and draw spokes radiating from the circle. At the end of each spoke, have your child write words that describe Sam. From each of those words, your child may write more details about Sam.

2. Explain that even professional writers often have other people proofread their writing to check for mistakes in grammar, capitalization, spelling and punctuation. Special types of proofreading marks are used to point out mistakes. Discuss the meaning of each symbol shown and when to use it.



MATH (Decimals and Fractions)

1. To convert a decimal to a fraction, remove the decimal point and write the decimal over a power of 10. If the decimal goes to the tenths place, place it over 10; if the decimal goes to the thousandths place, place it over 1000. Reduce the fraction to lowest terms.

   Examples: $0.45 = \frac{45}{100} = \frac{9}{20}$ $0.007 = \frac{7}{1000}$

2. To convert a fraction to a decimal, divide the numerator by the denominator. Teach your child where to place the decimal. Have your child use a calculator to convert fractions to decimals after practice.

   Examples: $\frac{45}{100} = 45 \div 100 = 0.45$ $\frac{3}{8} = 3 \div 8 = .375$

SCIENCE (Laws of Motion)

1. Have your child look around the classroom and name objects at rest (books, an aquarium, a chair, a table). Those objects will remain at rest until some force acts upon them. Have your child name some forces that could move these objects. Ask your child to recall a time riding in a car when the brakes were applied quickly. Have your child describe what happened and explain how that experience was related to Newton's first law of motion.

2. Have your child describe the motion of a car on a roller coaster. Discuss the following:

   Is the car moving when you board? (No, the engine must *push* it.)
   How fast does the car move at first? (It must *accelerate* to start moving.)
   Does the car move fast when it first climbs an incline? (The force of gravity pulls in the opposite direction and the car begins to decelerate.)
   What happens to the car when it reaches the top of the first incline? (Gravity pulls in the same direction the car is moving so the car accelerates.)
   What force finally brings the car to a stop? (Applying brakes creates friction, causing the car to stop.)

3. Have your child name and describe other examples of Newton's second law of motion, in which objects accelerate or decelerate (skiing, skating, sledding, riding a bicycle, running).

4. Whenever you apply force to an object, the object applies the same amount of force back. When you lift a weight, you are pulling on the weight. The weight is also pulling on you. You can tell it is pulling on you because it feels heavy. When a rifle expels a bullet, the recoil of the gun is the opposite force.

5. Have your child conduct an experiment outside the classroom to investigate Newton's third law of motion. You will need only a balloon.
   a. Inflate the ballon with 5 deep breaths of air.
   b. Pinch the neck of the balloon with your fingers. Hold the balloon over your head and release.
   c. Observe the motion and path of the balloon as it deflates.
   d. Repeat steps a–c, using 10 deep breaths of air to inflate the balloon.
   e. Repeat steps a–c, using 15 deep breaths of air to inflate the balloon.

   Have your child describe the differences in the motion and path of the balloon in each trial. Can he/she describe the force and the opposite force demonstrated in the experiment?

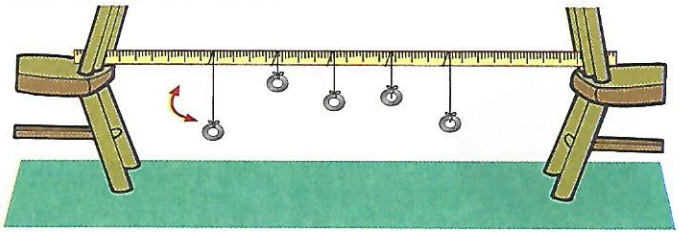
6. Tie a metal washer to a long string. Have your child observe and describe the motion that results when you grasp the string 10 cm from the washer and swing the washer back and forth. Then, have your child observe and describe the differences in the swinging pendulum as you increase the length of the string to 20 cm and 30 cm. *At what length did the pendulum swing the fastest? At what length did the pendulum swing the slowest? What affected the swing of the pendulum?*

7. *You will need:* 5 lengths of string, 5 metal washers, a stopwatch or clock with a second hand and a meterstick

   What to do:
   a. Tie a metal washer to each length of string.
   b. Tie the 5 strings to different positions on the meterstick.
   c. Suspend the meterstick between the backs of two chairs.
   d. Adjust the strings so that no washer touches the floor.
   e. Hold the first washer to one side and release. Note the time or start the stopwatch. Count the number of swings it makes before coming to rest. Record the number of swings on a chart.
   f. Stop the stopwatch or note the time. Record the time on the chart.

Pendulum	Number of swings	Time (seconds)
1		
2		
3		
4		
5		

   Repeat steps a–f with the remaining washers. Have your child record each swing count and time on the chart. Have your child write a paragraph analyzing his/her observations. *How did the length of the string affect the number of swings and the time?*



SOCIAL STUDIES (Women Leaders)

1. The women's suffrage movement began in 1848 with Elizabeth Cady Stanton and Lucretia Mott. They held a convention that adopted a *Declaration of Sentiments*. This declaration called for women to have equal rights in education, ownership of property, voting and other areas. Women were not granted the full right to vote in the United States until 1920.

2. Here is a brief list of famous American women:

Madeleine Albright	Helen Hayes	Martina Navratilova
Marian Anderson	Julia Ward Howe	Sandra Day O'Connor
Clara Barton	Billie Jean King	Frances Perkins
Mary McLeod Bethune	Ann Landers	Sally Ride
Elizabeth Blackwell	Belva Lockwood	Cokie Roberts
Mildred Ella Didrikson	Juliette Gordon Low	Eleanor Roosevelt
Amelia Earhart	Barbara McClintock	Betsy Ross

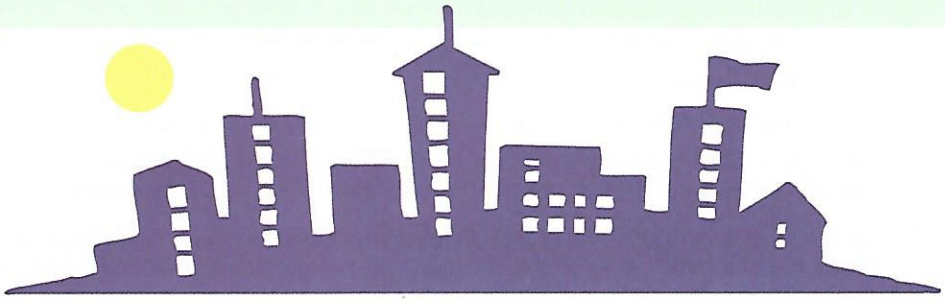
Simplifying Suffixes

When adding a suffix beginning with a vowel to a word that ends in a consonant + **y**, change the **y** to **i** before adding the suffix. An exception to this rule occurs when adding the suffix **ing**.

apply
boundary
canary
century
city
company
country
dairy
enemy
factory
grocery
hobby
lily
marry
memory
pity
reply
worry

Examples:

worry + **es** = worries
dry + **ing** = drying
copy + **ed** = copied
fry + **ing** = frying



Write the correct spelling word with an appropriate suffix on each line.

1. joined in matrimony _____
2. USA and Mexico are examples of these _____
3. felt sorry for _____
4. answering _____
5. food purchases _____
6. to be concerned _____
7. one's adversaries _____
8. places of manufacturing _____
9. petitioned _____
10. more than one period of 100 years _____
11. Easter flowers _____
12. fun things done in free time _____
13. milk processors _____
14. little yellow birds _____
15. urban areas _____
16. recollections _____
17. borders _____
18. people work for these _____

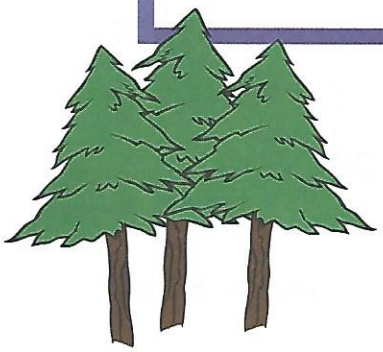
Tim Burr, Tall Tale Hero

Read the following tall tale about Tim Burr. Use proofreading marks to edit the paragraphs and correct the sentence fragments. **Write** the quotations correctly. Use proper capitalization and the appropriate homophones.

far up north, in the rugged, wooded regions of canada, their lived the famous lumberjack tim burr. his trusty sidekick, saw mills, lived there to. one day, saw and tim loaded up their axes and set off four the woods. To fell more trees. For the local mill, Log Lagoon. they took along they're pack mules, beauty and beast. they chopped so fast that the trees began falling onto each other. Creating quite a logjam. its knot my fault yelled saw. i can't see where you are cutting.

the problem grew worse. beauty, tim's beloved mule, almost got his tale sliced off. Buy a falling tree trunk. that does it yelled tim angrily when you cut down a tree. call for me. So i no where you are.

saw obeyed tim's wishes. From that day on. as each tree was felled, saw cried "TIM BURR!"



Decimal Delight

Kooky Claude Clod, the cafeteria cook, has some strange ideas about cooking. He does not understand fractions—only decimals. Help Claude convert these measurements to decimals so he can get cooking!

Kooky Soup

Mix together and sauté:

$\frac{9}{20}$ cup minced cat whiskers
$\frac{7}{8}$ cup crushed snails
$\frac{3}{5}$ cup toothpaste
$\frac{3}{4}$ tablespoon vinegar
$\frac{11}{25}$ cup pig slop

Simmer $93\frac{1}{2}$ days.

Gradually fold in:

$\frac{1}{5}$ teaspoon soot
$\frac{3}{8}$ cup motor oil
$\frac{9}{10}$ tablespoon lemon juice
$\frac{11}{20}$ cup chopped poison ivy
$6\frac{1}{4}$ rotten eggs

Brew for $1{,}500\frac{24}{25}$ years. Enjoy!

Mix together and sauté:

_____ cup minced cat whiskers
_____ cup crushed snails
_____ cup toothpaste
_____ tablespoon vinegar
_____ cup pig slop

Simmer _____ days.

Gradually fold in:

_____ teaspoon soot
_____ cup motor oil
_____ tablespoon lemon juice
_____ cup chopped poison ivy
_____ rotten eggs

Brew for _____ years. Enjoy!

Decimals

1. Write out 36.124 in words. _____

2. Write two hundred thirty-seven and twenty-six hundredths in numerals.

   _____

3. Use > or < to indicate which decimal fraction is greater.

   3.147_____3.205 3.06_____3.059

4. Round 87.658 to the nearest whole number. _____

5. Round 87.658 to the nearest tenth. _____

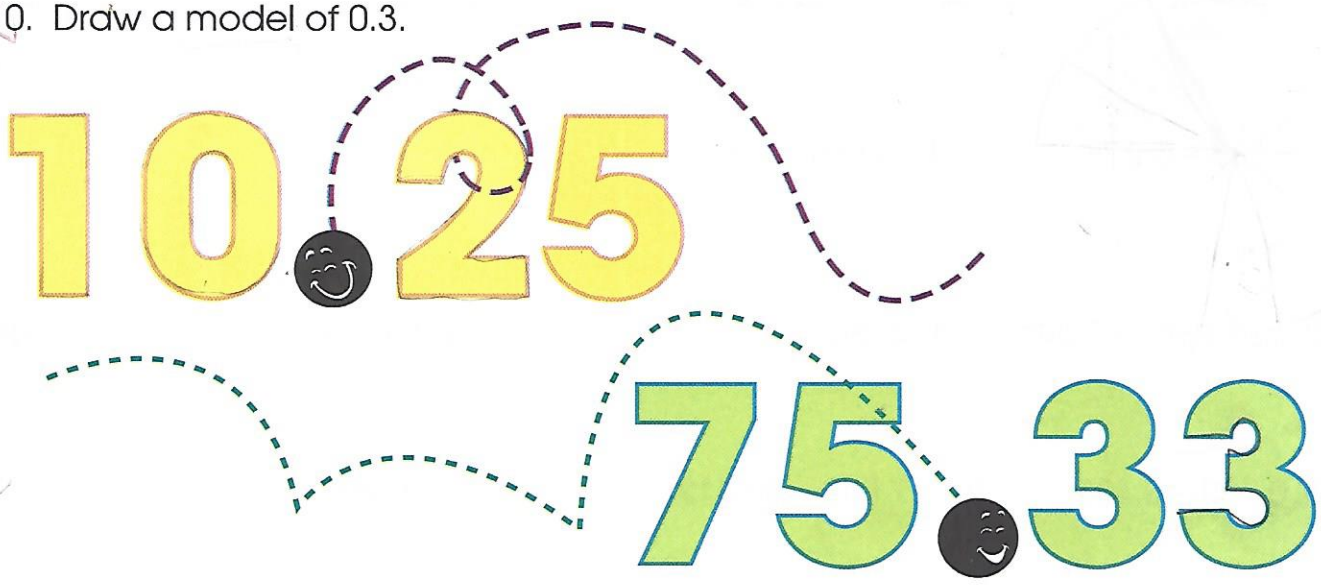
6. Round 87.658 to the nearest hundredth. _____

7. Write 0.5 as a fraction in lowest terms. _____

8. Write 0.69 as a fraction in lowest terms. _____

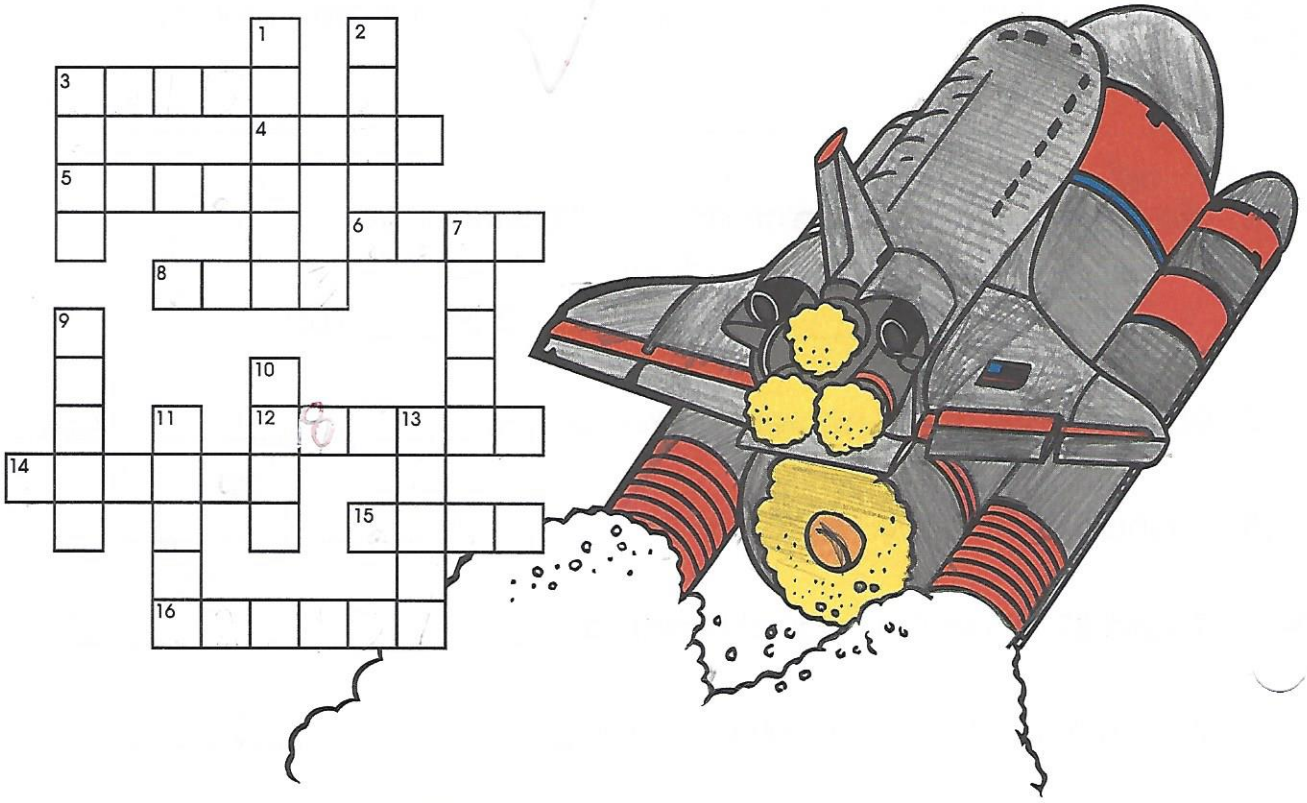
9. Write 7.85 as a fraction in lowest terms. _____

10. Draw a model of 0.3.



Blast Off!

Hint: Decimal points take up their own square. Do not use a zero before the decimal.



Across

3. $8.237 - 2.083$

4. $2.23 - 1.256$

5. $1{,}376.33 - 542.13$

6. $8.538 - 0.228$

8. $3.099 - 2.406$

12. $124.107 - 45.642$

14. $465.52 - 104.1$

15. $0.732 - 0.633$

16. $67.549 - 55.412$

Down

1. $33.333 + 0.896$

2. $2.587 + 3.191$

3. $5.78 + 1.09$

7. $22.05 + 15.91$

9. $2.057 + 0.008$

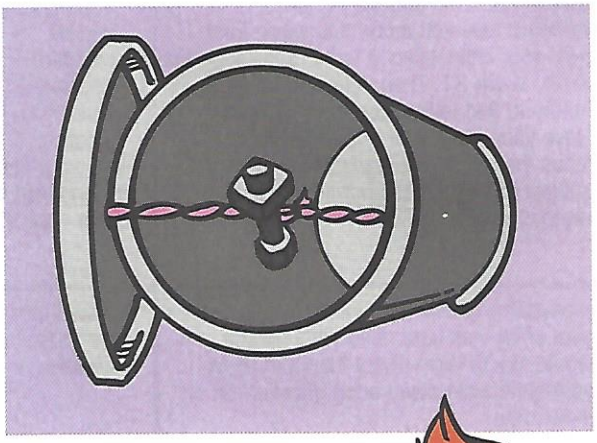
10. $0.531 + .19$

11. $7.852 + 1.489$

13. $3.012 + 1.025$

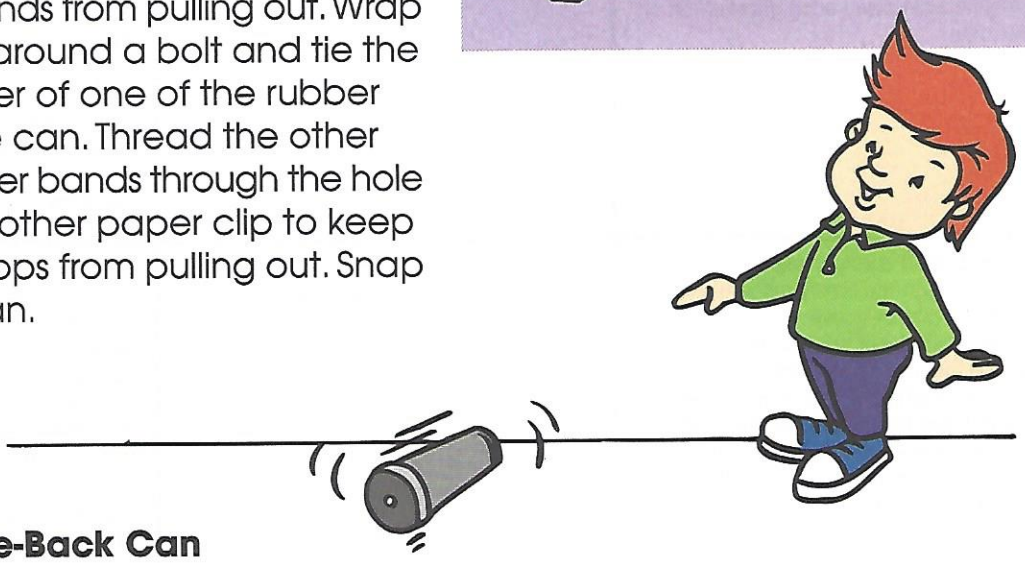
Come-Back Can

You will need: a large can with a plastic lid, a compass, 2 long rubber bands, a paper clip, a piece of wire and a bolt



Making the Come-Back Can

With a compass point, punch a hole in the center of the can bottom. Punch another hole in the center of the plastic lid. Feed two long rubber bands through the hole in the bottom of the can. Use a paper clip on the outside of the can to keep the loops of the rubber bands from pulling out. Wrap a piece of wire around a bolt and tie the wire to the center of one of the rubber bands inside the can. Thread the other ends of the rubber bands through the hole in the lid. Use another paper clip to keep these outside loops from pulling out. Snap the lid on the can.



Using the Come-Back Can

Place the can on the floor and roll it away from you. Does it come back? _____

Roll it harder. Does it come all the way back? _____

Roll the can up a ramp or sloping sidewalk.

What happens? _____

Making Hypotheses

Why do you think the can comes back? _____

_____

Can you make the can roll farther, faster or longer? _____

What can you change about the can's design? _____

_____

Try your new design. How does it work? _____

_____

	Language Skills	Spelling	Reading
Monday	**Research Report** Guide your child through the process of writing a research report this week. First, help your child select a topic. *See* Language Skills, Week 31. Then, take your child to the library to find related research materials. Have your child write a topic sentence to focus the report. The topic sentence is subject to change as your child does more research, but it makes a good place to start.	Pretest your child on these spelling words: approach, beaten, blueprint, boasted, bread, breath, disagreement, easel, eastern, feelings, flue, glued, groan, increase, leather, needless, peek, reason Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	**Abbreviations** Have your child read chapters 11 and 12 of *The Trumpet of the Swan.* Have your child write in his/her daybook. Teach your child about abbreviations this week. *See* Reading, Week 31, number 1.
Tuesday	Brainstorm questions about the topic with your child. Ask your child what he/she would like to learn about the topic. Have your child write down each question on an index card.	Review this week's spelling words. Have your child complete **Vital Vowel Digraphs** (p. 314).	Send your child searching through the reading book to find answers to these questions: *Who? What? When? Where? Why? How?* Ask your child to find a sentence that answers each question. Have your child read chapters 13 and 14 of *The Trumpet of the Swan.* Ask your child to predict what a night in a hotel will be like for Louis. Have your child write about it in his/her daybook. Continue your discussion of abbreviations. *See* Reading, Week 31, number 2.
Wednesday	Have your child conduct research by looking through the library resources for answers to his/her questions. As your child finds answers, have him/her write them down on the index cards. Remind your child to note which resource contained the answer. If two resources offer conflicting answers, have your child write down both, then look for a third source to confirm one or the other answer.	Have your child use each of this week's spelling words correctly in a sentence.	Have your child read chapters 15 and 16 of *The Trumpet of the Swan.* Have your child write in his/her daybook. Ask your child to name some abbreviations that are commonly used. Then, say a word, such as *road.* Have your child write the abbreviation on the chalkboard. Repeat with other words like *street, negative, mister, doctor, junior, apartment, adverb, corporation, limited, example, ounce, foot, inch, kilometer, teaspoon, quart.*
Thursday	Have your child organize the index cards in a meaningful way. Then, ask your child to think about how he/she will present his/her findings in an interesting report. Have your child begin to make an outline.	Have your child study this week's spelling words.	Have your child read chapters 17 and 18 of *The Trumpet of the Swan.* Have your child write in his/her daybook about the deal the swans make with the zoo. Point to a state on a map. Have your child write its traditional abbreviation and its post office abbreviation. **Example:** Colorado / Colo. / CO Repeat with other states. Can your child list all 50 states' post office abbreviations?
Friday	Following the outline, have your child write a first draft of the research report. Have your child follow the writing process over the next few days, revising, editing and rewriting the report. For more information on the writing process, see page 6.	Give your child the final spelling test. Have your child record pretest and final test words in his/her Word Bank.	Have your child read chapters 17–21 of *The Trumpet of the Swan.* Have your child draw a story map in his/her daybook. The story map should be a detailed list of events from the story. Test your child's knowledge of abbreviations. Have your child write the names of the months and their abbreviations. Then, have him/her write the days of the week and their abbreviations.

Math	Science	Social Studies
Teach your child how to round decimals to estimate answers to subtraction and addition problems. *See* Math, Week 31, number 1. Write 8–10 addition problems with decimals on the chalkboard. Have your child round each addend to the nearest whole number, then add to estimate the sum of the original problem. Have your child go back and solve the original problems. How accurate were your child's estimates?	**Work** Introduce and explain the term *work*. *See* Science, Week 31, number 1. Your child may think of work simply as a disagreeable task. Make sure your child understands the scientific meaning of work. Have your child list common examples of doing work, such as opening a door, hitting a ball, walking, running, raising a window, flying a kite or pulling a wagon.	**African-American Leaders** Brainstorm a list of famous African Americans with your child. *See* Social Studies, Week 31, number 1. Provide appropriate resource materials so that your child can look up each person's name. Have your child group these Americans by the type of influence they (have) had on society (musical, social, political, literary, religious).
The subtraction sentence 6 – 0.45 may seem confusing at first. Teach your child to add a decimal point and zeros after the whole number before subtracting a decimal number. **Example:** 6 – 0.45 6.00 – 0.45 = 5.55 Have your child complete **Historical Harry** (p. 315).	Have your child create a poster showing different examples of work by animals and people. *See* Science, Week 31, number 2.	Have your child select the famous black musicians from the list generated yesterday. Check out music by these famous Americans from the library. Have your child listen to the music of the different artists. Have your child compare the different types of music. Can he/she hear the influence of earlier musicians on later musicians?
Demonstrate how to multiply two decimal fractions and accurately place the decimal point in the solution. Give your child guided practice with multiplying a 3-digit number by another 3-digit number. *See* Math, Week 31, number 2. Have your child complete **A Multiple Design** (p. 316).	Sports may be fun, but they are also a lot of work. Have your child choose one sport and analyze the different motions involved. Remember that work happens whenever an object is moved. Have your child design a chart or diagram that breaks down the sport into its many distinct motions. *See* Science, Week 31, number 3.	Langston Hughes's poetry is highly visual. Read several of his poems aloud to your child. Ask your child to select one of Hughes's poems to illustrate. Have your child draw a picture inspired by the poem on a 12" x 18" piece of paper. Have your child copy the poem on lined paper and display the drawing with the poem. Ask your child to explain his/her artistic interpretation of the poem.
Show your child how easy it is to multiply a decimal by 10 or 100. To multiply any number by 10, simply move the decimal point one place to the right. **Examples:** 6.3 x 10 = 63, 0.29 x 10 = 2.9 To multiply any number by 100, move the decimal point two places to the right. **Examples:** 6.3 x 100 = 630 0.29 x 100 = 29 Give your child several problems to practice this concept.	Work is measured in *joules*. Force is measured in *newtons*. A newton is the unit of force needed to move one kilogram one meter per second. Have your child push a one-kilogram weight one meter across the floor in one second. your child has moved the weight one newton-meter, or one joule. *See* Science, Week 31, number 4. The *newton* and *joule* were both named after famous scientists. Have your child research these scientists and read about their work.	Obtain U.S. postage stamps that are part of the Black Heritage Series. Each February, a new face is added to the series. Discuss the honor of appearing on a stamp. *See* Social Studies, Week 31, numbers 2 and 3. Have your child design a new stamp to honor and commemorate a famous African American. Have your child write a paragraph telling why he/she chose to honor that person.
Demonstrate how to divide a decimal fraction by a whole number. *See* Math, Week 31, number 3. Have your child complete **The Perfect Sweet-Treat Solution** (p. 317).	Introduce and explain the term *machine*. *See* Science, Week 31, number 5. Have your child name several machines in your home and classroom.	Arrange for your child to perform some community service.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Research Report)

Let your child choose a topic for research. Offer your support and suggestions, but let your child decide. If your child is allowed to choose the topic, he/she will have more invested in the research process. Discuss your child's interests. Ask him/her to recall an interesting book. Go to the nonfiction section of your children's library for a wealth of books on any topic. Have fun narrowing the search. Research skills must be taught, so guide your child along the way. It is also important that your child knows who the audience for his/her work will be from the start.

READING (Abbreviations)

1. Explain that initials are a special kind of abbreviation in which letters represent names of people, businesses, athletic teams, schools, government agencies and publications. Ask your child to name some people, places or things that are often called by their initials rather than their full names. Have your child find examples of initials in books and in the newspaper.

2. Print the initials and words below on separate index cards. Have your child match each set of initials with the words it represents.

NBA	National Basketball Association
ABC	American Broadcasting Companies
VCR	videocassette recorder
FDR	Franklin Delano Roosevelt
GE	General Electric
BA	Bachelor of Arts
CPA	Certified Public Accountant
USA	United States of America
SEC	Securities Exchange Commission
BLT	bacon, lettuce and tomato
FBI	Federal Bureau of Investigation
NAFTA	North American Free Trade Alliance
PO	post office
YMCA	Young Men's Christian Association
CNN	Cable News Network
FDA	Food and Drug Administration
GM	General Motors
NAACP	National Association for the Advancement of Colored People
RSVP	répondez s'il vous plaît
VFW	Veterans of Foreign Wars
BBC	British Broadcasting Company
CD	compact disc
UN	United Nations
NFL	National Football League
FCC	Federal Communications Commission

MATH (Decimals)

1. To estimate addition and subtraction of decimal fractions, first round to the nearest whole number. Then, add or subtract as usual.

Examples:

34.256	**34**	25.68	**26**
+ 22.511	**+ 23**	− 13.22	**− 13**
	57		**13**

2. The process of multiplying decimals is the same as with multiplication of whole numbers, with the addition of one step. This additional step involves counting the number of decimal places in the problem and including the same number of decimal places in the solution. (The same number of digits follow the decimal point in the solution as follow the decimal points in the problem.)

   To help your child understand the placement of the decimal point in the solution, think about how the equation is related to fractions.

   Example: $0.\underline{1} \times 0.\underline{1} = \frac{1}{10} \times \frac{1}{10} = \frac{1}{100} = 0.\underline{01}$
   (1 place + 1 place = 2 places)

3. Decimal division is basically identical to whole number division with a few modifications. One modification is that in decimal division, you always place a decimal point in the quotient **before** you begin division. The decimal point in the quotient is placed directly above the decimal point in the divisor. Divide as usual with the decimal in place. Show your child an example on the chalkboard. **Example:** 72.6 ÷ 3.

SCIENCE (Work)

1. Ask your child to come up with an original definition of *work*. Discuss the many meanings of the term: "work of art," "musical work," one's profession, homework, waterworks, etc. Explain that the scientific definition of work is *the result of a force which moves an object through a distance*. Work happens when an object is moved. The mathematical formula for this is **Work = force x distance**.

2. Have your child create a poster depicting different examples of work done by animals or people. Provide a large sheet of poster board, glue, scissors and old magazines or catalogs. Have your child collect a variety of pictures, then categorize the pictures into themes or topics, such as animals at work on a farm, animals at work in a circus, sports activities, manual labor, working with tools or machines, working with a hobby, working on an art project, working in a laboratory, working in a medical field, working in the military and working on a television or movie set.

3. Have your child analyze the work involved in one of the following sports: football, basketball, baseball, volleyball, tennis, bowling, golf, racing, rowing, throwing a shot or javelin, high jumping, skydiving, hang gliding, ice skating, skateboarding, soccer, weightlifting or fishing. Have your child list the forces used and the objects moved through a distance in each sport.

4. **Work = force x distance.** If an object is moved 5 meters using 4 newtons of force, the amount of work done is 20 joules.

5. A *machine* is a device that changes the amount of force required to do work. A wheel is a machine—it makes moving objects easier by decreasing the amount of force necessary to move them. Have your child imagine how the wheel was first invented by someone. Have your child look around the classroom and name some devices that would be classified as machines (pencil sharpener, scissors, paper punch, tape dispenser, aquarium pump, water faucet, blind pulls, curtain pulls, vacuum cleaner, computer, printer, paper shredder, etc.). Have your child list the work done by each machine and describe how the work might be done without the help of the machine. Explain the role of electrical energy in the creation and use of many new machines (electric drill vs. manual drill).

SOCIAL STUDIES (African-American Leaders)

1. Here is a brief list of famous African-Americans:

Henry Aaron	Ralph Bunche	Langston Hughes	Sidney Poitier
Muhammad Ali	George W. Carver	Scott Joplin	Colin Powell
Louis Armstrong	Shirley Chisholm	Michael Jordan	Paul Robeson
Arthur Ashe	Bill Cosby	Coretta Scott King	Jackie Robinson
James Baldwin	Benjamin O. Davis	Spike Lee	Booker T. Washington
Benjamin Banneker	Martin Delany	Joe Louis	Phillis Wheatley
Mary McLeod Bethune	Ella Fitzgerald	James Meredith	Roy Wilkins
Thomas Bradley	Alex Haley	Jesse Owens	Oprah Winfrey

2. The Black Heritage Series of stamps is called commemorative stamps. Artists submit designs for the stamps. Their designs are carefully studied and a selection is made each year. Show your child a full page of commemorative stamps. Point out the printed information that is sometimes given on the margins or on the backs of the blocks of stamps. Ask at your local post office for the names of people represented in the Black Heritage Series. Have your child draw three stamps (like the sample to the right) and write three facts about the person in the margin.

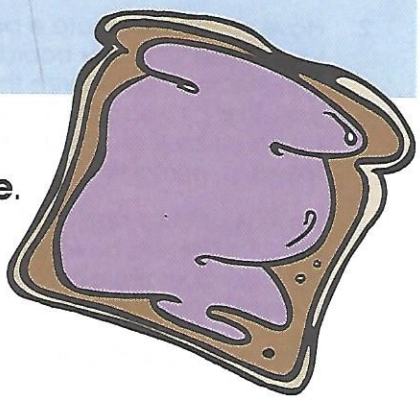
3. Have your child find out about the Spingarn Medal—who has received it and why. Have your child look up any names of these medal winners that are unfamiliar and read about their lives and work.

Vital Vowel Digraphs

Vowel Digraph are two vowels together that make only one vowel sound. Generally, the vowel digraphs below carry the following sounds:

approach
beaten
blueprint
boasted
bread
breath
disagreement
easel
eastern
feelings
flue
glued
groan
increase
leather
needless
peek
reason

ee, ea = **long e** as in **peep, flea**
ue = **oo** as in **true**
oa, oe = **long o** as in **moan**



Sometimes the vowel digraph **ea** carries the **short e** sound as in **pleasure**.

Write each spelling word in the appropriate category. **Write** the number of syllables in each word in the parentheses.

ee = ē

_____( )
_____( )
_____( )
_____( )

ea = ē

_____( )
_____( )
_____( )
_____( )
_____( )

oa = ō

_____( )
_____( )
_____( )

Elephant **ea** Words

_____( )
_____( )
_____( )

ue = o͞o

_____( )
_____( )
_____( )

Write the spelling word that is a compound.

_____

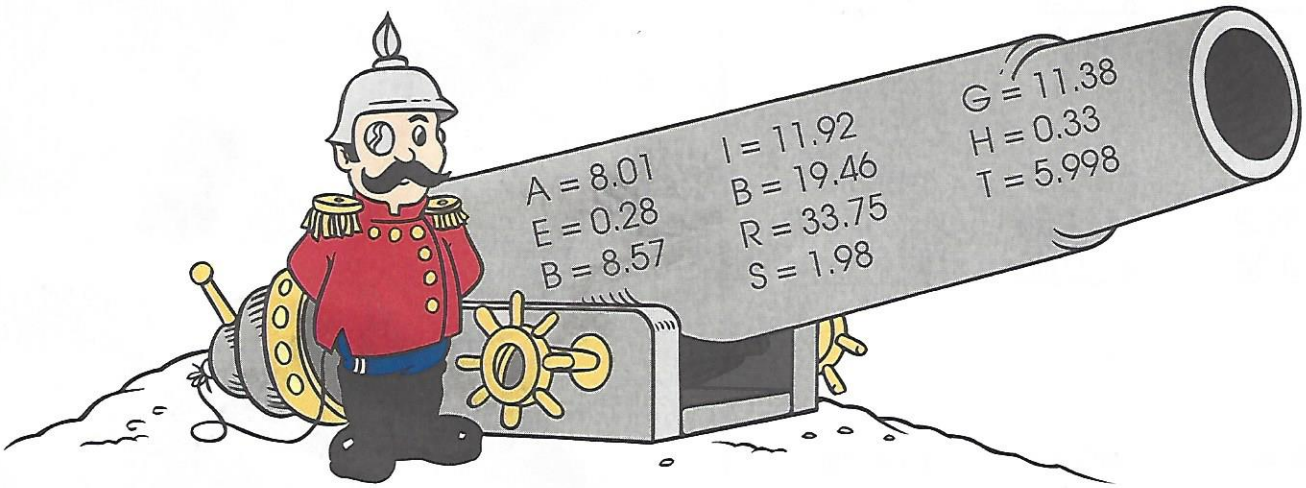
Write the eight spelling words that contain either a prefix or a suffix.

_____ _____ _____ _____

_____ _____ _____ _____

Historical Harry

What were the large cannons that were used by Germany in World War I?
Solve the following subtraction problems and find the answers in the cannon.
Write the corresponding letter above the problem's number at the bottom of the page to spell out the answer to this historical trivia question.



1. 9 – 0.43
2. 12 – 0.08
3. 15 – 3.62
4. 20 – 0.54
5. 1 – 0.72
6. 46 – 12.25
7. 6 – 0.002
8. 21 – 20.67
9. 9 – 0.99
10. 4 – 2.02

1	2	3		4	5	6	7	8	9	10

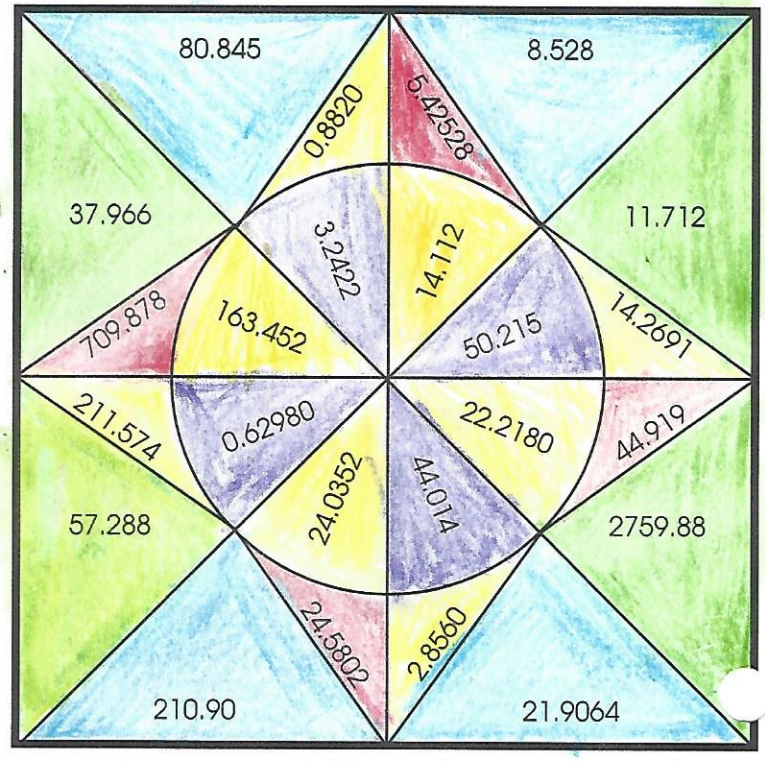
A Multiple Design

Solve the problems on a separate sheet of paper. Find the answers in the design and **color** correctly.

green	blue	red
0.463	28.5	6.51
x 82	x 7.4	x 6.9

yellow	purple	purple
39.2	7.54	0.670
x 0.36	x 0.43	x 0.94

yellow	yellow	purple
64.9	0.592	7.46
x 3.26	x 40.6	x 5.9



green	blue	blue	green	purple
92.4	32.8	85.1	7.32	6.05
x 0.62	x 0.26	x 0.95	x 1.6	x 8.3

green	blue	yellow	red	red
3.27	5.56	80.5	5.77	95.8
x 844	x 3.94	x 0.276	x 4.26	x 7.41

red	yellow	yellow	yellow	yellow
0.784	2.57	29.3	6.80	0.245
x 6.92	x 63.6	x 0.487	x 0.42	x 3.6

The Perfect Sweet-Treat Solution

Solve each division problem on a separate sheet of paper. **Draw** a line from the popcorn (problem) to the correct drink (answer).

	Language Skills	Spelling	Reading
Monday	Allow your child to continue working on the research report from last week. Once finished, have your child decide how to present the information. He/she could read the report to an audience, build a diorama, make a poster to accompany the report, perform a puppet show, create an illustrated book or even express the information through a poem or song. Let your child decide today how he/she would like to present the information.	Pretest your child on these spelling words: believe lie retrieve brief perceive shield died piece shriek eight pies siege freight receive sleigh leisure reign vein Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Introduce *Where the Red Fern Grows* by Wilson Rawls. *See* Reading, Week 32, number 1 for a short biography of the author. Have your child read chapters 1 and 2 of *Where the Red Fern Grows*. Have your child locate the Ozark Mountains in northeast Oklahoma and the Illinois River. Have your child imagine how he/she would go about raising $75 for something he/she wanted very badly.
Tuesday	Review the format for a bibliography. Have your child make a bibliography of all the resources used in writing the report. Make arrangements for your child to present his/her research tomorrow. Reserve space if your child wishes to display something or invite people over for a performance. Discuss the arrangements with your child.	Review this week's spelling words. Have your child complete **More Vowel Digraphs** (p. 323).	**Bibliography:** Have your child read chapters 3 and 4 of *Where the Red Fern Grows*. Ask your child: *Is it better to earn something than to have it given to you? Explain your answer.* Have your child read about Daniel Boone in an encyclopedia or other resource. Then, teach your child how to list the book in a bibliography. *See* Reading, Week 32, number 2.
Wednesday	Have your child present his/her research to a "real" audience. You may invite neighbors to a puppet show or display a diorama at the library. Relatives and friends make a natural audience.	Have your child use each of this week's spelling words correctly in a sentence.	Discuss the tone of the book. *How does the author establish the mood of the story?* Have your child read chapters 5 and 6 of *Where the Red Fern Grows*. Why does your child think the townspeople were so cruel to Billy?
Thursday	Have your child write text for a picture book. *See* Language Skills, Week 32. Challenge your child's critical thinking skills. Have your child complete problems 1–4 on **Logic Puzzlers** (p. 322).	Have your child study this week's spelling words.	Help your child compare Billy to a character in another book. Have your child draw a Venn diagram to map out the similarities and differences between the characters. Have your child read chapters 7 and 8 of *Where the Red Fern Grows*. Have your child do some research, then draw a diagram to show how a brace-and-bit trap works. Ask your child to document his/her sources in the form of a short bibliography.
Friday	Review the different purposes for writing. Look at each page of a magazine together with your child. Have your child identify whether the page was written to entertain, inform or persuade. Some things are written to entertain and challenge. Have your child complete problems 5–8 on **Logic Puzzlers** (p. 322).	Give your child the final spelling test. Have your child record pretest and final test words in his/her Word Bank.	Have your child read chapters 9 and 10 of *Where the Red Fern Grows*. Ask your child to read aloud an exciting part of the story. Encourage your child to read with lots of expression.

Math	Science	Social Studies
Demonstrate how to divide with a decimal divisor. Show your child how to move the decimal to the right to create a whole number. To keep the solution accurate, move the decimal in the dividend to the right the same number of spaces. *See* Math, Week 32, number 1. $1.1\overline{)12} = 11\overline{)120.}$	**Machines** Review and discuss examples of the six simple machines. *See* Science, Week 32, number 1. Ask your child to identify simple machines around the kitchen. Explain that compound machines are made up of two or more simple machines.	**American Business Leaders** Brainstorm a list of famous American businessmen and women with your child. Provide appropriate resource materials so that your child can look up each person's name. *See* Social Studies, Week 32, numbers 1–2. Have your child group the people on the list by the type of work they have done that has brought them fame.
Show your child how to divide a decimal by 10 or 100. *See* Math, Week 32, number 2. Have your child divide a decimal fraction by 10 and compare the quotient to the dividend. Ask your child what would happen if you divided a decimal by 1,000. Give your child several problems to practice dividing decimals by factors of 10.	Ask your child to explain why it is easier to use a hammer to force a nail into a wooden board than to use only one's fingers and hands. Then, have your child name some other tasks that are made easier with the help of a simple machine. **Example:** loading a heavy box onto a truck is easier with the help of a ramp. Have your child make a pattern book based on this concept. *See* Science, Week 32, number 2 for more details.	Have your child choose one person from yesterday's list. Have him/her research, then write about the life and work of that famous American.
Sports statistics, such as batting averages in baseball, are often expressed in decimals. Have your child read the sports statistics published in your local newspaper. Discuss what the statistics actually represent. *See* Math, Week 32, number 3.	Can your child recognize simple machines in common household items? Have your child complete **Simple Machines** (p. 325).	Brainstorm with your child some of the qualities that the famous Americans you have discussed have in common. Discuss the qualities that your child possesses that may bring him/her recognition in the future. Have your child make a list of things he/she is good at. Have him/her make a second list of areas in which he/she would like to improve. Have your child make a plan of action.
Review and reteach the decimal concepts taught in Weeks 28–32. Give your child a sampling of problems for practice.	**Levers:** Introduce and explain the three classes of levers. *See* Science, Week 32, number 3. Have your child draw a tool that is a lever (such as a shovel, can opener or screwdriver) in his/her Science Log. Have your child label the class of lever and its three components.	Collect newspapers over a period of several days. Have your child skim the papers for interesting stories about local or national figures who have done well. Have your child read some of the articles about these people. Then, have your child write a prediction about what those people may accomplish in the future.
Quiz your child on his/her understanding of decimals. Have him/her complete **Working With Decimals** (p. 324). Reteach any concepts your child finds difficult.	Allow your child to explore different tools that are examples of levers. For example, lead your child to discover the best place on the handle to hold a shovel to make digging easiest. Common levers include hammers, scissors, pliers, nutcrackers, car jacks, seesaws, brooms, rakes, baseball bats, tennis rackets and shovels.	Arrange for your child to perform some community service.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS

Find a book that contains only pictures and no text. Have your child look through the book several times and imagine a story line. Affix a stickie note to each page. Have your child write text for each page on the note. Encourage your child to use descriptive language and dialogue.

READING (Bibliography)

1. Wilson Rawls was born in 1913, in Oklahoma. He had little formal schooling, but his mother taught him to read and write. He and his sisters read and reread books that his grandma bought for them. Wilson Rawls's life was changed forever by Jack London's book, *The Call of the Wild*. One day while working in the fields, Wilson Rawls decided he would write a book like London's. Mr. Rawls admits that this was an ambitious dream for a boy whose family was too poor to afford paper and pencils, but he was encouraged by his father's words: "Son, a man can do anything he sets out to do, if he doesn't give up." Mr. Rawls made several attempts at writing novels. It was his wife who encouraged him to write *Where the Red Fern Grows*, because it was about his own childhood. The book has since been serialized in magazines and newpapers and made into a movie.

2. Have your child look at several different bibliographies and copy the pattern generally used. Observe the punctuation used in the bibliographies. Entries for books should include the author's name, title, place of publication, publishing company and year published. Entries for articles should include the author's name, title of the article, title of the magazine or periodical, volume number and issue number, date and page numbers.

   Book: Strunk Jr., William. *The Elements of Style*. New York: Macmillan Publishing Co., 1979.
   Article: Fraivillig, Judith. "Listen While They Work." *Creative Classroom* 13, no. 1 (August 1998): 62–64.

MATH (Decimals)

1. In decimal division, the divisor must be a whole number. The decimal point must be moved to the right until the divisor is a whole number, but you cannot make a change in the decimal divisor without making the same change to the dividend. If you moved the decimal one place to the right, you have multiplied the divisor and dividend by 10. Place the decimal point in the quotient directly above the newly placed decimal point in the dividend. Think of the division problem $3.4 \div 1.2$ as a fraction ($\frac{3.4}{1.2}$). Multiply both the numerator and the denominator by 10 to make an equivalent fraction. The new (equivalent) division problem is $34 \div 12$. Have your child work the following problems:

   $8.4 \div 2.1$ $\quad$ $1.872 \div 0.36$ $\quad$ $0.4712 \div 1.24$ $\quad$ $1.12 \div 8.1$ $\quad$ $17.7 \div 0.3$

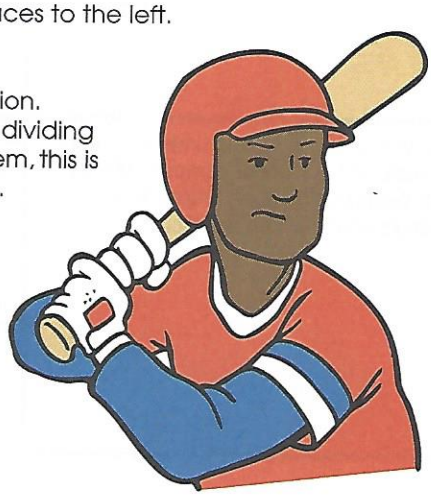
2. To divide any number by 10, simply move the decimal point one place to the left.

   Examples: $63 \div 10 = 6.3$ $\quad$ $0.29 \div 10 = 0.029$

   To divide any number by 100, simply move the decimal point two places to the left.

   Examples: $63 \div 100 = 0.63$ $\quad$ $0.29 \div 100 = 0.0029$

3. A batting average is always presented as a three-digit decimal fraction. **Examples:** 0.250, 0.333, 0.144. A player's batting average is found by dividing the number of hits by the number of times at bat. As a division problem, this is written as follows: 118 hits ÷ 463 times at bat = 0.255 batting average.



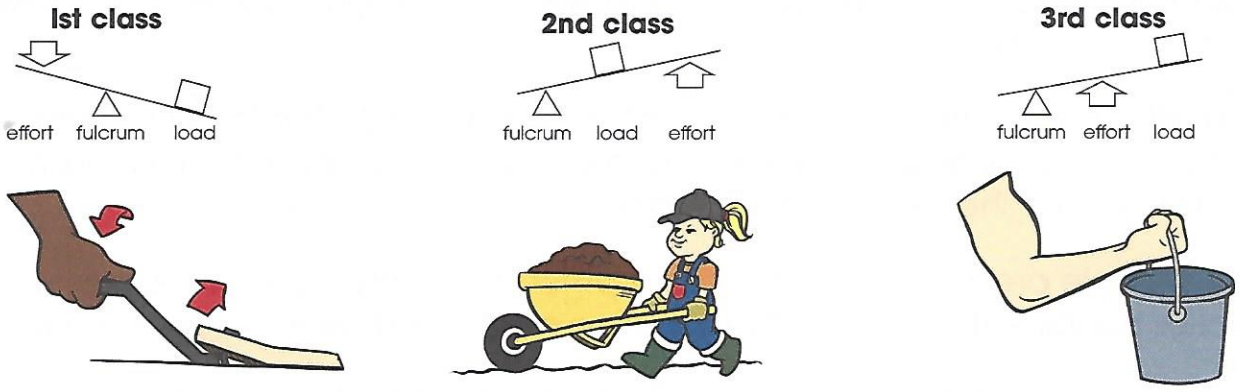
SCIENCE (Machines)

1. Review the six types of simple machines. Have your child name one or two examples of each.

lever	hammer, crowbar
wheel and axle	doorknob, wheels on a model car
wedge	chisel, doorstop
pulley	miniblind cord pull, flagpole pulley
inclined plane	ramp or slide
screw	variety of screws

2. Have your child think of tasks that are made easier with the help of a simple machine. Ask your child to imagine, then draw, how each task would get done without the aid of a simple machine. Have your child compile these drawings to create a book. Each page of the book will show someone doing work without the aid of a machine. At the bottom of each page, have your child write a line that is repeated throughout the book—something like *Wouldn't that be easier with a _____?* The book will essentially be an advertisement promoting the benefits of simple machines.

3. Introduce and explain the three classes of levers. Explain that every lever has three parts: fulcrum, effort and load (resistance force). Sketch the following illustrations on the chalkboard. Identify the three parts and describe how the lever works. Have your child name examples of each class of lever.



4. Have your child name and describe some inclined planes (ramps, steps, escalators, roller coasters, winding roads or trails up a mountain, water slides). Visit a factory or machine shop. Have your child look for inclined planes in the machinery. Have your child write a paragraph explaining the usefulness of an inclined plane.

SOCIAL STUDIES (American Business Leaders)

1. Have your child look up and define the following terms: *businessman/businesswoman, industrialist* and *philanthropist*. Discuss the differences in meaning of these terms.

2. Here is a brief list of famous American businesspeople:

Mary Kay Ash	Bill Gates	Andrew Mellon	Helena Rubenstein
John Jacob Astor	Katharine Graham	Edward R. Murrow	William H. Seward
Andrew Carnegie	Howard Hughes	H. Ross Perot	Madam C. J. Walker
Walt Disney	Marjorie Child Husted	Joseph Pulitzer	Oprah Winfrey
Debbie Fields	Estée Lauder	John D. Rockefeller	Victoria C. Woodhull
Henry Ford			

Logic Puzzlers

1. Four volumes of an encyclopedia set, Volumes A, B, C and D, are placed on a shelf out of order. Volume A is between B and C. Volume D is not next to Volume C, which is the first volume on the left. From left to right, in what order are the volumes?

2. My cat just tried to eat my telephone book. I cannot find pages 3, 4, 26, 27, 39 and 40. How many sheets of paper did my cat remove from the book?

3. Ken collects balls. Betsy collects postage stamps. Ken thinks 3 balls are as valuable as 2 stamps. If Betsy agrees to swap 14 stamps, how many balls will Ken need to give her?

4. (Do after completing #3.) Amy collects baseball cards. She thinks 5 stamps are worth the same as 1 card. If Amy decides to trade 2 cards, how many stamps should she receive? How many balls would she get?

5. Four people are introduced to one another at a party. Each of the four shakes hands with the other three. How many handshakes are there in all?

6. Four friends meet for dinner. One is a cab driver, one is a carpenter, one is an accountant and one is a fisherman. The four sit at a square table with one person on each side of the table. The carpenter is not sitting next to the cab driver, but the accountant is on the cab driver's left. Draw a square and write where each person is sitting. Put the carpenter at the bottom of your square.

7. James and Esther are brother and sister. Both are married and have children. Carolyn is James's wife. Ryan is Esther's husband. Ron and Gary are cousins in the same family. Gary is not James's son. Who is Ron's mother?

8. At Lee's next birthday he will be three times the age of his son, Robert. Robert is now two and a half times the age of his little sister, Michelle, who is 6. How old is Lee right now?

More Vowel Digraphs

The vowel digraphs **ie** and **ei** usually carry the following sounds:

ie = **long i** as in **tie**	**ie** = **long e** as in **relief**
ei = **long a** as in **weigh**	**ei** = **long e** as in **deceive**

believe
brief
died
eight
freight
leisure
lie
perceive
piece
pies
receive
reign
retrieve
shield
shriek
siege
sleigh
vein

The following rhyme may be helpful to you:

I before *E*
Except after *C*
Or when sounded like *A*
As in *neighbor* or *weigh*.
Either, neither, leisure and *seize*
Are four exceptions,
If you please!

Write each spelling word in the appropriate category.

ie = ī

1. _____
2. _____
3. _____

ie = ē

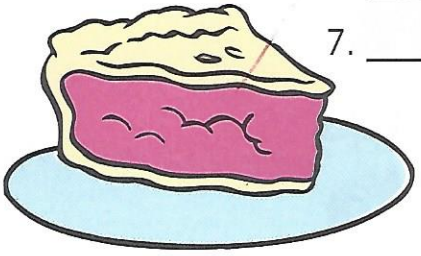
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

ei = ē

1. _____
2. _____
3. _____

ei = ā

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



Working With Decimals

1. Write 207.426 in words.

   _____

2. Write forty-seven and thirteen thousandths in numerals. _____

3. Use > or < to indicate which decimal fraction is greater.

   17.35_____17.295

Fill in the blanks.

4. Round 12.836 to the nearest whole number. _____
5. Round 12.836 to the nearest tenth. _____
6. Round 12.836 to the nearest hundredth. _____
7. Write 0.36 as a fraction in lowest terms. _____
8. Write 0.25 as a fraction in lowest terms. _____
9. Write $\frac{3}{4}$ as a decimal number. _____

Solve.

10. 36.2 + 27.325 = _____
11. 87.36 – 84.95 = _____
12. 4.6 x 1.2 = _____
13. 3.46 x 10 = _____
14. 11.55 ÷ 7 = _____
15. 39 ÷ 12 = _____
16. 367.52 ÷ 10 = _____

Simple Machines

There are six simple machines that are the basic units of all complex machines: the lever, the wheel and axle, the wedge, the pulley, the inclined plane and the screw.

Recognizing Simple Machines

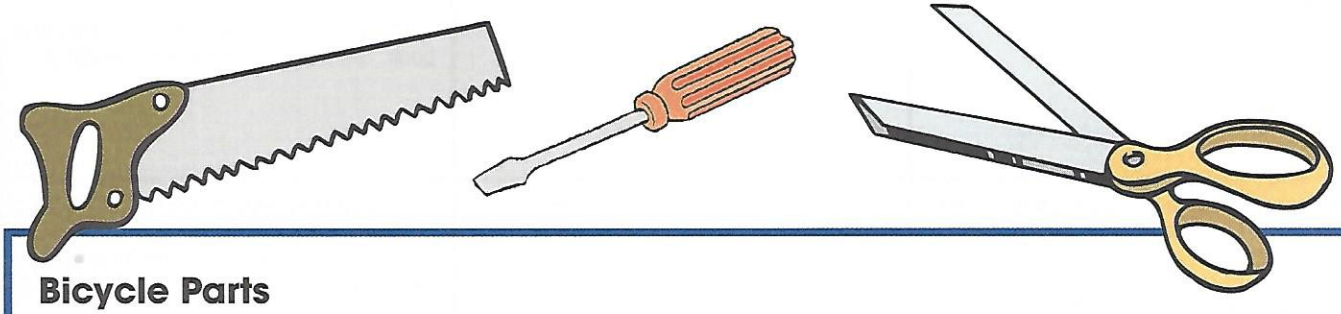
Which simple machines can you find in each of the tools listed below?

hammer _____ scissors _____

doorstop _____ drill _____

saw _____ screwdriver _____

crowbar _____ monkey wrench _____



Bicycle Parts

Study a bicycle carefully. Fill in the blanks with the simple machines you find.

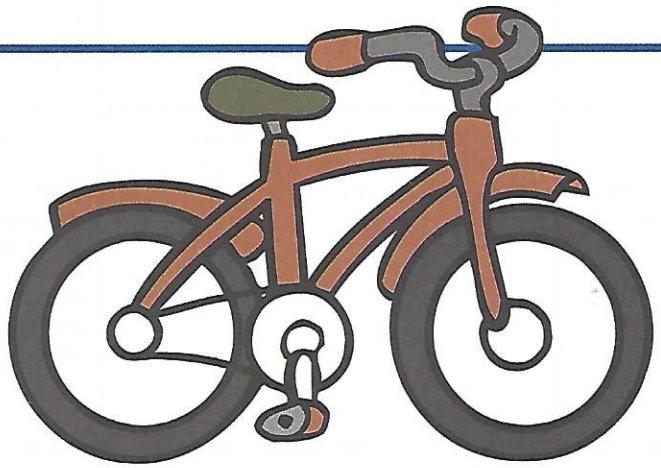
tire _____ kickstand _____

caliper brakes _____ handlebars _____

chain and sprocket _____ gearshift _____

pedal and shaft _____ fork _____

other _____



	Language Skills	Spelling	Reading
Monday	**Colons and Semicolons** Teach your child about the different uses of the colon. *See* Language Skills, Week 33, numbers 1–4. Have your child look for examples in books he/she has read. Have your child write his/her own original sentences using the colon.	Pretest your child on these spelling words: auction, audience, autumn, awkward, caught, cause, dawn, fawns, flaunt, fraud, haunt, jaw, lawful, raw, scrawl, shawl, taught, yawn Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	**Parts of a Book** Have your child read chapters 11 and 12 of *Where the Red Fern Grows.* Have your child define *determination,* then list several ways that Billy shows determination. Review the parts of a book. *See* Reading, Week 33, number 1.
Tuesday	Teach your child about the different uses of the semicolon. *See* Language Skills, Week 33, numbers 5–7. Have your child look for examples in books he/she has read. Have your child write his/her own original sentences using the semicolon.	Review this week's spelling words. Have your child complete **Very Important Digraphs** (p. 331).	Have your child read chapters 13 and 14 of *Where the Red Fern Grows.* Have your child write an imaginary interview with Billy. Encourage your child to recreate Billy's mood and personality through the dialogue. Discuss some of the less familiar parts of a book. *See* Reading, Week 33, number 2.
Wednesday	Write several sentences on the chalkboard that should contain either colons or semicolons, but omit the punctuation. Have your child fill in the correct punctuation as necessary, then explain his/her choices.	Have your child use each of this week's spelling words correctly in a sentence.	Have your child read chapters 15 and 16 of *Where the Red Fern Grows.* Have your child write two questions about tomorrow's reading to give practice with reasonable predictions. Discuss the purpose of an appendix in a book. *See* Reading, Week 33, number 3.
Thursday	Test your child's critical thinking skills. Have your child complete **Falsehood Follies** (p. 330). Your child will have to read *very* carefully in order to solve these riddles!	Have your child study this week's spelling words.	Have your child read chapters 17 and 18 of *Where the Red Fern Grows.* Have your child jot down any unfamiliar words from today's reading, along with the sentence in which each word appears. Can your child guess each word's meaning from its context? Have your child try to guess the meaning, then look up the word in a dictionary. How accurate was your child's guess? Discuss whether his/her questions from yesterday were answered.
Friday	Teach your child to use personification to create a vivid image in the reader's mind. Personification is granting human qualities or abilities to inanimate objects. *See* Language Skills, Week 33, number 8.	Give your child the final spelling test. Have your child record pretest and final test words in his/her Word Bank.	Have your child read chapters 19 and 20 of *Where the Red Fern Grows.* Have your child draw a plot profile showing the range of excitement levels throughout the story. Have your child list events from the story along the horizontal axis and excitement levels along the vertical axis. Discuss the parts of a book. *See* Reading, Week 33, number 4.

Math	Science	Social Studies
Money Introduce the study of money with a magic trick. Ask your child to put a dime in one pocket and a penny in the other. You are going to guess which coin is in each pocket. *See* Math, Week 33. Discuss with your child the basis of the trick. Challenge your child to make up a similar magic trick using the same basis.	**Inclined Planes** Help your child set up an experiment for exploring variables (height) with a ramp. *See* Science, Week 33, number 1. Have your child graph the results of the experiment. Along the side of the graph, show distance traveled. Along the bottom of the graph, show the height of the ramp. Have your child record the results of each trial. Discuss the results. Ask your child where this phenomenon may be seen in everyday life.	Have your child study a picture of Mount Rushmore. Discuss the famous Americans who are represented there and why they were chosen for the honor. Have your child design a new memorial for four famous Americans (let your child decide who will be honored). Have your child sculpt the memorial out of clay. This may take more than one day to complete.
Play a game that will challenge your child to think of several ways to express the same amount of money. Grab a small handful of change. Do not show the money to your child. Give a series of clues (becoming gradually more specific) until your child guesses exactly what coins you have. **Example:** *The coins add up to 69¢. Three of the coins have a textured edge. Two coins total 50¢. There are eight coins in all.* Repeat, then try switching roles.	Help your child set up a second experiment for exploring variables (friction) with a ramp. *See* Science, Week 33, number 2.	Have your child finish the clay sculpture begun yesterday. Have your child write about the site for this new memorial, as well as the famous Americans it represents.
One helpful problem-solving strategy is organizing data in a systematic way so that you know you have been thorough in your analysis. Ask your child to list every possible coin combination that totals 25¢. Encourage your child to organize the data in a meaningful way, such as a chart. Have your child start with the largest coins and work down to 25 pennies. There are 17 possible combinations.	An inclined plane is a plane set at an angle. It is especially helpful for raising and lowering objects with minimal effort. *See* Science, Week 33, number 3. Arrange a visit to a machine shop or a factory. Have your child look for simple machines in the shop or factory. Some of the simple machines may be found in compound machines.	*For what do (did) famous Americans want to be remembered?* Thomas Jefferson wrote the inscription for his own gravestone. He states three accomplishments, but not that he was president. *What do you know about Thomas Jefferson that might explain that?* Have your child read about the accomplishments and beliefs of one famous American. Using that information, have your child write an appropriate epitaph for the person.
Plan a field trip to the bank. Arrange to speak with a loan officer. Have your child read about our banking system and prepare a list of questions such as these to ask the loan officer: *How does the bank earn money? Where does the money come from to pay interest? How are bank employees paid? Why does the bank loan money? How does a savings account work?*	Demonstrate the similarity between an inclined plane and a screw. A screw is really an inclined plane that raises and lowers wood along its inclined threads. *See* Science, Week 33, number 4. As you turn a screw into a piece of soft wood, have your child observe the wood shavings that travel up the threads of the screw. Ask your child to compare this to an object moving up an inclined plane.	Play "Twenty Questions" with your child. Think of a famous American. Allow your child to ask 20 yes or no questions to find out who it is. Repeat several times, then switch roles.
Take your child to the bank. Have your child open a savings account and, if possible, interview a loan officer.	Help your child experiment with a variety of screws. *See* Science, Week 33, number 5.	Arrange for your child to perform some community service.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Colons and Semicolons)

1. A colon is used when writing digital time. Ask your child to tell exactly where the colon is placed. (between the hour and minutes) Dictate some times for your child to write on the chalkboard.

2. Use a colon to introduce a list of items, especially after the expression *the following*. Commas are used to separate the items in the list.
   Example: The store window displayed the following items: a sled with a bear on it, six wrapped boxes, two young children dressed for winter and snow falling.
   Do *not* use a colon if the list directly follows a verb or preposition.
   Example: For the picnic, I will bring hot dogs, chips and watermelon.

3. A colon is used after the greeting in a business letter.
   Examples: Dear Ms. Smith: To Whom It May Concern:

4. Use a colon between two independent clauses when the second clause restates or explains the first clause.
   Example: It rained very hard on Saturday: the seedlings in our garden all washed away.

5. A semicolon is used between two independent clauses that are not joined by a conjunction.
   Example: Female sperm whales can grow up to 40 feet in length; males can grow up to 60 feet in length.

6. To avoid confusion, semicolons are used to separate items in a series when the items contain commas.
   Example: Jenny invited the following people to her party: her younger sister, Darla; Laurie, her neighbor; her cousin, Tanya; and me.

7. Use a semicolon to separate two independent clauses when there are commas within the clauses.
   Example: The killer whale typically travels in pods of up to 50 members; and it eats fish, birds, dolphins, penguins, porpoises and sea turtles.

8. Ask your child to remember a time when he/she had a strong feeling about something inanimate. Was your child frightened? Happy? Excited to see something for the first time? Encourage your child to give an inanimate object a human attribute in order to make a strong impression. Personification is like a metaphor: the object in a metaphor does not literally become what the sentence states, but it helps to create a vivid image.
   Examples: *When I opened the garage door, a shiny blue bicycle got up and danced around the room and then smiled at me, saying, "I'm yours!"*

   I walked alone to the restroom in the dark campground. My eyes were wide as I looked around at every noise. The tree branches scratched menacingly at the air around me. They laughed with creaky voices at my fear.

READING (Parts of a Book)

1. Review the parts of a book. Have your child identify the following parts and describe what information each contains: spine, cover, jacket, title page, copyright page, table of contents, glossary, index and bibliography.

2. Introduce your child to some of the less familiar parts of a book: acknowledgments (recognizes sources and/or people who were helpful in making the book possible), dedication (an inscription to honor someone), preface (a statement usually written by the author that introduces the book and/or its scope, intention or background), foreword (like a preface, but usually written by a person other than the author), appendix (additional material usually at the end of a book).

3. Have your child look at the appendices in several different books to see what type of material might be included in an appendix.

4. Ask your child some questions about different parts of a book.

   Where in a book can you find the dedication?
   What is the difference between a table of contents and an index?
   What is the printing date of the book?
   Why is the information in an appendix not in the main body of the text?

MATH (Money)

Magic trick: "I am going to tell you which coin is in each pocket. Listen carefully to my instructions. I need you to multiply the value of the coin in your right pocket by 15. Add 15 to the value of the coin in your left pocket. Add the numbers together and subtract 36. Now, multiply the difference by 100. What is your answer?" (If the answer is 13,000, the dime is in the right pocket. If the answer is 400, the dime is in the left hand.) The basis of this magic trick is that a dime (10¢) is worth more than a penny (1¢). When you ask your child to multiply, the pocket with the dime produces a greater number.

SCIENCE (Inclined Planes)

1. Give your child a marble, a ruler (with a groove down the center), a meterstick and three blocks or bricks. Your child will need a bare floor in an open area to conduct this experiment.

   Question: Does the height of the ramp affect the distance a marble travels?

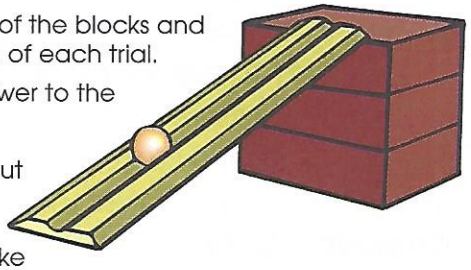
   Directions:

   a. Place one block or brick on the ground. Lean the ruler on the edge of the block (groove side up). Hold the marble at the top of the ruler and let it roll down. Measure the distance the marble traveled and record this distance in meters and centimeters. Repeat for three trials.

   b. Place two blocks on the ground. Lean the ruler on the edge of the blocks and allow the marble to roll down three times. Record the distance of each trial.

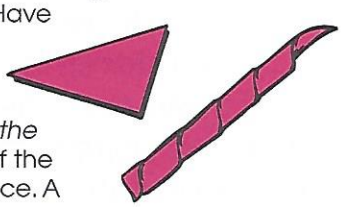
   c. Place three blocks on the ground. Lean the ruler on the edge of the blocks and allow the marble to roll down three times. Record the distance of each trial.

   Have your child analyze the results of the experiment. Discuss the answer to the question above.



2. Repeat yesterday's experiment. This time, use 3 blocks for each trial, but set up the experiment on different surfaces. For the first trial, set the ramp on concrete. For other trials, set the ramp on a thick carpet, sand and a bed sheet. Have your child record the data on a graph like the one shown here.

3. Explain and demonstrate the relationship of the screw to the inclined plane. Cut a rectangular sheet of paper diagonally. Point out how the paper resembles an inclined plane. Have your child roll the paper, beginning with the shortest side, moving toward the opposite point. After the paper is rolled, ask your child to describe the resulting shape (a screw). Then, ask your child these questions: *Would it be easier to walk straight up the side of a steep mountain or around and around the mountain like the curved paper screw? Why? Which walk would take longer?* Explain that the use of the curved inclined plane (screw) makes the work easier but requires a greater distance. A trail or road winds around a mountain rather than going straight from bottom to top. Have your child compare the use of a screw to a nail in holding an object to a board.



4. Help your child conduct an experiment with screws.

   You will need: a variety of screws, a soft wooden board, a manual screwdriver, a hammer, a pencil and a nail.

   Directions:

   a. Use the hammer and nail to make some shallow openings in the wooden board. Space the openings across the surface of the wood.
   b. Select one screw and place in one of the openings.
   c. Use the screwdriver and count the number of 360° turns needed to force the screw into the wood until the head is flush with the board.
   d. Select another screw and force it into a different opening, counting the turns.
   e. Repeat with all the screws.
   f. Sort the screws by the number of turns required.
   g. Describe the differences in the force needed for each variety of screw. Explain.

Falsehood Follies

Here are some simple statements that are guaranteed to make you think. Carefully read and solve the first set before going on to the second.

A. Only one of the following statements is true. Find it.

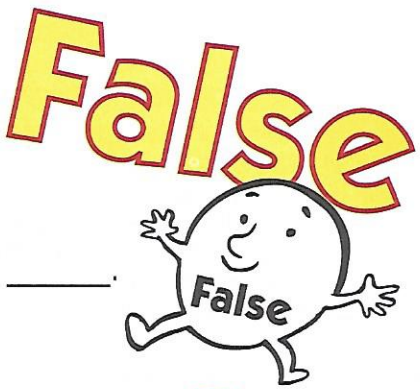
1. One of these statements is false.
2. Two of these statements are false.
3. Three of these statements are false.
4. Four of these statements are false.
5. Five of these statements are false.

Answer: The one true statement is number _____.

B. Now, here is a slightly trickier variation. This time there are *two* true statements. To find them, you will have to **fill in** the blank in sentence number five.

1. One of these statements is false.
2. Two of these statements are true.
3. Three of these statements are false.
4. Three of these statements are true.
5. Four of these statements are _____.
6. Five of these statements are false.

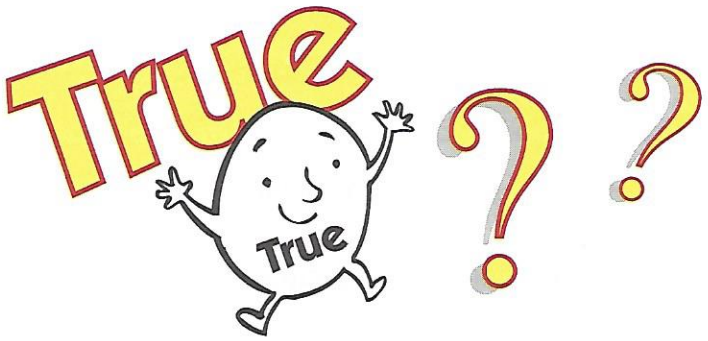
Answer: The two true statements are numbers _____ and _____.

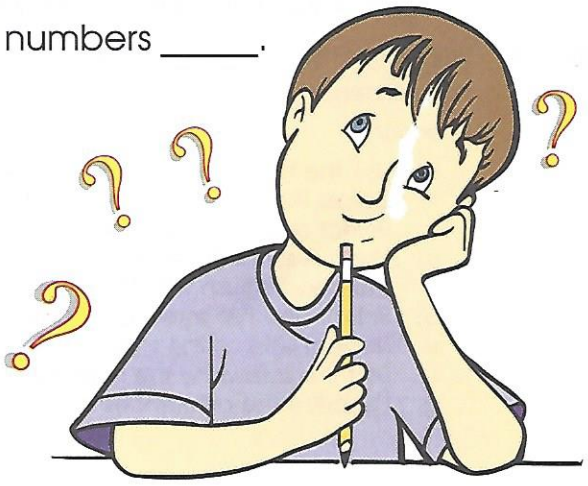


C. Now, find all statements in this set that *could* be true.

1. If one statement is true, then three are false.
2. If two statements are true, then number 1 is one of them.
3. If three statements are false, then three are also true.
4. If one statement is false, then five are true.
5. If four statements are true, then number 4 is false.
6. There are six true statements in this set.

Answer: The statements that could be true are numbers _____.





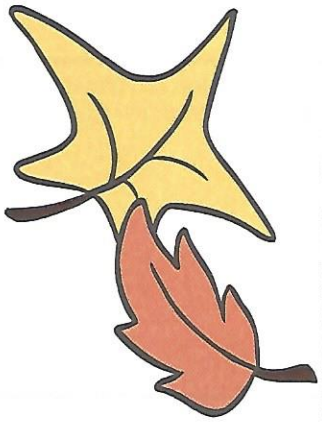
Very Important Digraphs

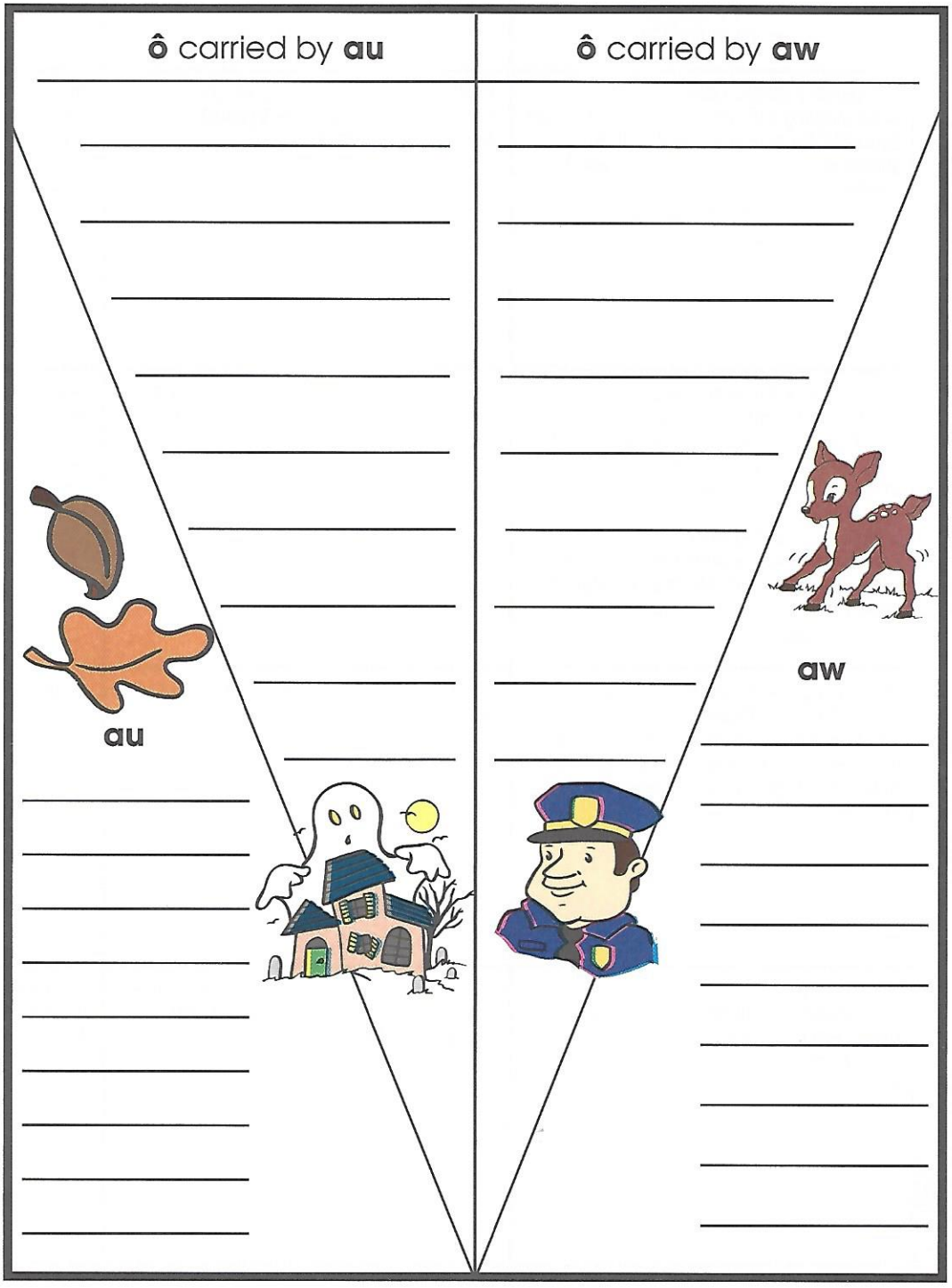
The vowel digraphs **au** and **aw** make the same **ô** sound.
Examples: f**au**lt, l**aw**n

Write each spelling word in the appropriate category in the two inner triangles. After you have written each word, **circle** the digraph.

Then **write** the spelling words in alphabetical order in the two outer triangles.

auction
audience
autumn
awkward
caught
cause
dawn
fawns
flaunt
fraud
haunt
jaw
lawful
raw
scrawl
shawl
taught
yawn





	Language Skills	Spelling	Reading
Monday	**Complex Sentences** Explain the difference between a compound sentence and a complex sentence. A *compound sentence* is made up of two independent clauses joined by a conjunction. A *complex sentence* is made up of a dependent clause and an independent clause. *See* Language Skills, Week 34, number 1. Have your child copy dependent clauses from a book he/she is reading.	Pretest your child on these spelling words: appointed, eyebrow, power boiling, fowl, shower county, joyous, spoiled destroying, mountain, stout disloyal, noises, surround employ, pronounce, thousand Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	**Nonfiction** Help your child choose a nonfiction book to read (cover to cover) this week. Have your child check out other nonfiction books on the same topic, if possible. Use these books to show your child how to scan for information. *See* Reading, Week 34, number 1. Have your child complete **Get the Facts, Max** (p. 337).
Tuesday	A dependent clause often contains a *subordinating conjunction.* This conjunction connects the phrase to the rest of the sentence. *See* Language Skills, Week 34, number 2. Have your child choose five subordinating conjunctions and use each in a sentence.	Review this week's spelling words. Have your child complete **Dynamic Diphthongs** (p. 336).	Teach your child to outline important information while reading nonfiction. *See* Reading, Week 34, number 2. Have your child read from the nonfiction book. Have your child outline the important information as he/she reads.
Wednesday	A complex sentence contains one independent clause and one or more dependent clauses. A comma is generally used between the dependent and independent clauses, especially when the dependent clause comes before or in the middle of the independent clause. **Examples:** *After I watched the movie, I went straight to bed. My mother, after she wakes up, has a cup of coffee.* *See* Language Skills, Week 34, number 3.	Have your child use each of this week's spelling words correctly in a sentence.	Have your child finish reading and outlining the nonfiction book. Then, help your child think of an interesting way to present what he/she has learned. Allow time today, Thursday and Friday for your child to complete a project related to the topic.
Thursday	Prepare a game in which your child must mix and match clauses to form sentences. You may take the clauses from sentences found in familiar books or make up your own. *See* Language Skills, Week 34, number 4.	Have your child study this week's spelling words.	Have your child scan the other nonfiction books he/she checked out from the library. Have your child use these books to gain additional information or to double-check facts for accuracy. Allow time for your child to work on the project started yesterday.
Friday	Consult a grammar book to teach your child about the different parts of speech that dependent clauses may take. Dependent clauses are also known as subordinate clauses.	Give your child the final spelling test. Have your child record pretest and final test words in his/her Word Bank.	Have your child complete and present his/her project on the nonfiction topic of the week.

Math	Science	Social Studies
Talk about the different categories of spending, such as entertainment, food, clothes, charity and savings. Help your child plan a budget. The budget should show how much money your child takes in (each week/each month/each year) and how he/she would like to spend or save that money. Keep the budget realistic so that your child can maintain the plan. (Option: Have your child make a circle graph that shows how his/her total allowance will be spent.)	**Wheels and Pulleys** Gather at least five wheels of different sizes. You may use any circular object for this activity. Identify each wheel by writing an alphabet letter on masking tape and affixing it to the wheel. Have your child measure the circumference of each wheel in centimeters and record the measurements on a chart. *See* Science, Week 34, number 1.	**Washington, D.C.** Discuss the significance of Washington D.C. *What type of business is conducted there? See* Social Studies, Week 34. Study a map of the city with your child. Ask your child to locate major buildings and landmarks, such as the White House, the Capitol Building, the Supreme Court Building, the National Mall, the Pentagon and the Lincoln Memorial.
Teach your child how to maintain a check register. Find an old register or get an extra from your bank. Show your child how to keep track of deposits and withdrawals using addition and subtraction. Remind your child to line up the decimals before adding or subtracting. Have your child complete **Big Bucks for You!** (p. 338).	Have your child study the wheel and axle of a model car. Demonstrate the function of the axle. In his/her Science Log, have your child explain why a wheel cannot operate without an axle. Ask your child to include a labeled diagram with his/her explanation.	Have your child draw pictures of the monuments dedicated to three of our nation's past presidents: Jefferson, Washington and Lincoln.
Review mathematical operations with decimals and money. Have your child complete the problems found in Math, Week 34.	Have your child use a kit of plastic gears to design an interconnected moving model. Ask your child to observe how one gear causes another gear to move. Have your child compare the movement of a larger gear with that of a smaller gear. If you do not have access to gears, you can make gears from corrugated cardboard. *See* Science, Week 34, number 2.	Have your child plan a day or week in the city of Washington, D.C. Ask him/her to make an itinerary of things to see and places to visit. Have your child describe in writing why he/she chose these particular things to do. *What is the significance of each?*
Give your child more practice with decimals and money. Have your child complete **Snails in a Pail** (p. 339).	Provide your child with a set of pulleys and a challenge. Challenge your child to design a system for raising a given object to a given height.	Our nation's capital was a well-planned city. Have your child read about the history of the city and its physical layout. Have your child write twelve facts about the layout of Washington, D.C.
Review and reteach money concepts. Have your child imagine that he/she has exactly $75 to spend. Ask your child to look through a toy catalog and write an itemized order that comes close to $75 without going over. Have your child write three different orders with different combinations of purchases, each order totaling around $75.	Have your child research some of the following inventions and their inventors: wind turbine, elevator, roller coaster, Ferris wheel, steamboat, automobile, motion picture, phonograph, compact disc, copy machine, rotary printing press, sewing machine, jet airplane, calculator, personal computer, vacuum cleaner. Have your child write a one-page report on one of these inventions. *What types of simple machines make up the invention?*	Arrange for your child to perform some community service.

TEACHING SUGGESTIONS AND ACTIVITIES

LANGUAGE SKILLS (Complex Sentences)

1. An independent clause has a subject and a predicate and can stand alone: *The dog ran after the cat.* A dependent clause has a subject and a predicate but cannot stand alone: *After the dog jumped the fence.* A dependent clause can be combined with an independent clause, however, to form a complex sentence. In this first example, the dependent clause comes before the independent clause: *After the dog jumped the fence, it ran after the cat.* The dependent clause may also come after the independent clause: *The dog ran after the cat after it jumped the fence.*

2. The following subordinating conjunctions may be used in a dependent clause to link the clause to the rest of the sentence: *after, although, as, because, before, if, in order that, since, so that, though, until, when, whenever, whether, while.*

3. Write several independent clauses and dependent clauses (in two columns) on the chalkboard. Do not use any punctuation or capitalization. Have your child join the clauses to form complex sentences. Remind your child to add periods, commas and capital letters where needed.
   Examples: though the wind blew — everyone cheered
   after the music stopped — the temperature remained high

4. Write at least ten dependent clauses and ten independent clauses on index cards (one clause per card). Mix the cards together. Put the cards in a box at the language center. Have your child match dependent clauses with independent clauses to make sentences that make sense.

READING (Nonfiction)

1. Your child will probably not have the time or the desire to read all the nonfiction titles from cover to cover. Nonfiction is often organized with headings and bold print to help you scan or skim through as you search for specific information. Teach your child how to scan for information.

2. Outlining follows a specific format of Roman numerals, capital letters, numbers and lower-case letters. Your child may not be able to fit everything into these neat categories as he/she is reading. Teach your child to take notes in sentence fragments at first, then clean up the organization later. See Reading, Week 24 for an example of the outline format.

MATH (Money)

Give your child the following pet store problems to solve.

1. Eli has 18 rabbits which he is selling for $2.99 each. How much money will he earn if he sells all 18 rabbits?
2. You bought a parrot for $2.39 and a myna bird for $8.67. What was your total cost?
3. Kim is selling 12 goldfish for $.84 total. How much does she receive for each goldfish?
4. Billie's teacher bought a ribbon snake for the classroom. It cost $4.79. How much change did the teacher receive from a $20.00 bill?
5. Pat is selling a pet python for $9.99. A kitten costs $13.45. What is the difference in their prices?
6. The school principal bought 60 guppies for the school carnival for $23.40. How much did each guppy cost?
7. Myra is selling hamsters for $1.41 each. How much will she receive for 40 hamsters?
8. Jeffrey sold 10 geckos for $2.99 each. How much did he receive for all 10?
9. Your brother loves rodents. He buys a pair of mice for $2.39 and a pair of hamsters for $3.13. How much does it cost him altogether?
10. Marty sold 19 chameleons for a total of $41.04. How much did he charge for each chameleon?

SCIENCE (Wheels and Pulleys)

1. Have your child use the information on the chart from Monday's lesson plan to solve the following problems:
   a. Compare (by subtracting) the circumference of:

Wheel A and Wheel B	Wheel B and Wheel C
Wheel C and Wheel D	Wheel D and Wheel E
Wheel A and Wheel C	Wheel A and Wheel E

   b. How many times must Wheel A rotate to cover the same distance as Wheel C? as Wheel E?
   c. How many times must Wheel B rotate to cover the same distance as Wheel D? as Wheel E?
   d. How many times must Wheel C rotate to cover the same distance as Wheel A plus wheel E?
2. The important function of gears is to use a small amount of force to generate a great amount of motion. Explain how a steering wheel works in a car. A combination of gears allows a slight turn of the steering wheel to move the tires a greater distance. If possible, remove the back from a watch or clock to show your child the gear mechanism within. If possible, show your child how a car jack uses a gear mechanism to allow many turns of the handle to raise a heavy weight a small distance.

SOCIAL STUDIES (Washington, D.C.)

BACKGROUND

Every United States president except George Washington has lived and worked in Washington, D.C., while serving his term. Washington, D.C., the nation's capital, is the headquarters of the federal government. The city contains many famous buildings, monuments and museums. For this unit, gather maps and books about Washington, D.C. If possible, take your child to visit this important city.

Use the following questions to lead a discussion about the business of Washington, D.C.

What is Washington, D.C.? Where is it? What forms its borders? Is it well located as the nation's capital? Why or why not? Was it well located when it was originally built?

What is the "main business" in Washington? How does it affect all U.S. citizens?

Name people (office holders) associated with Washington, D.C. In what buildings do they conduct the business of government?

How old is Washington, D.C.? When did it become the capital?

How old is the United States? When did it become a nation?

Dynamic Diphthongs

Diphthongs are two adjacent letters that both contribute to the vowel sound heard. The two vowel sounds are blended. **Examples: oi, oy** as in **coin, joy**; **ou, ow** as in **hound, flower**

appointed
boiling
county
destroying
disloyal
employ
eyebrow
fowl
joyous
mountain
noises
pronounce
power
shower
spoiled
stout
surround
thousand

Write each spelling word in the appropriate category.

oi

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

oy

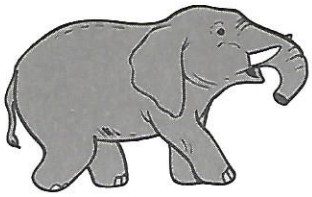
1. _____
2. _____
3. _____
4. _____

ou

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

ow

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



Here come the elephants! Remember that the letters **ow** can also be a vowel digraph carrying the **ō** sound as in **hollow**. The letters **ou** can carry the **ō** as in **although**, the **ô** as in **thought** or the **ŭ** as in **southern**.

Complete the words within each family by filling in the correct digraph.

ou as in **thought**	**ou** as in **although**	**ow** as in **hollow**	**ou** as in **southern**
f___ght	thor_____gh	swall_____	c_____ple
br___ght	b_____quet	marshmall_____	tr_____ble

Get the Facts, Max

Read the paragraphs to answer the questions below.

The islands of Aruba, Bonaire and Curaçao, sometimes known as the ABC islands, are part of the Netherlands Antilles. They lie 50 miles north off the coast of Venezuela. Three more islands, St. Eustatius, Saba and St. Martin (the northern half of which belongs to France), are approximately 500 miles northeast of the ABC islands.

Until 1949, the islands were known as the Dutch West Indies or Curaçao Territory. In 1986, Aruba separated to become a self-governing part of the Netherlands Realm.

On the island of Curaçao, most food is imported. Because it is so rocky, little farming is possible. The island is the largest and most heavily populated of the Netherlands Antilles. Its oil refineries, among the largest in the world, give its people a relatively high standard of living. Today, most people of Curaçao work in the shipping, refining or tourist industry.

Netherlands Antilles—Other Facts

Area:

Aruba	75 square miles
Bonaire	111 square miles
Curaçao	171 square miles
Saba	5 square miles
St. Eustatius	11 square miles
St. Martin	13 square miles

Capital: Willemstad

Major Languages: Dutch, Papiamento (a mixture of Spanish, Dutch, Portuguese, Carib and English), English, Spanish

1. Name the capital of the Netherlands Antilles. _____
2. What industry gives the people a high standard of living? _____
3. Name the ABC islands. _____
4. What is Papiamento? _____
5. Why must food be imported to Curaçao? _____
6. Which island is smallest? _____
7. Which two islands are the largest? _____
8. Which island belongs in part to France? _____
9. In what year did Aruba become self-governing? _____

Big Bucks for You!

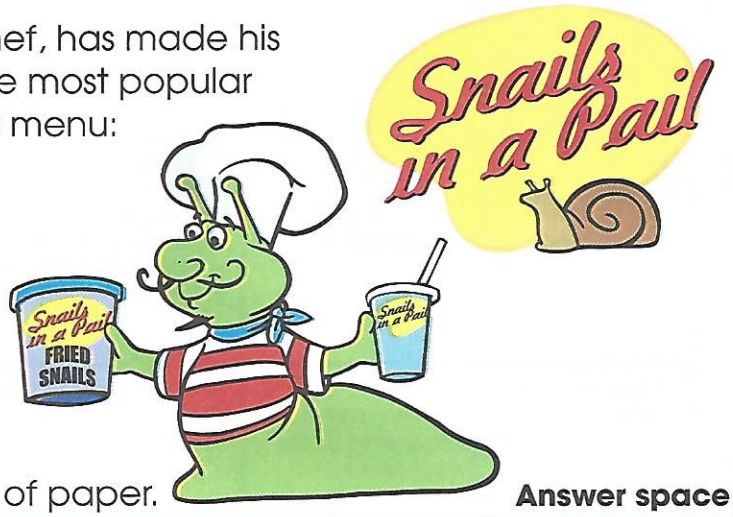
Solve the problems on another sheet of paper.

	Answer space
1. You receive your first royalty check for $1,000.00 and deposit it in your checking account. You go directly to the music store and spend $234.56 on new CDs. What is your balance?	
2. You naturally treat all your friends to pizza, which costs you $47.76. You pay with a check. What is your balance now?	
3. You decide to restock your wardrobe and buy $389.99 worth of new clothes. What is your balance?	
4. Your next royalty check arrives, and you deposit $1,712.34. You also treat yourself to a new 15-speed bicycle, which costs $667.09. What is your balance?	
5. You buy your mother some perfume for a present. You write a check for $37.89. What is your balance?	
6. You need a tennis racket and some other sports equipment. The bill comes to $203.45 What is your new balance?	
7. You treat your family to dinner at **Snails in a Pail**, where the check comes to $56.17. What is your new balance?	
8. You join a health club, and the first payment is $150.90. What is your new balance?	
9. You deposit your latest royalty check, which amounts to $4,451.01. What is your new balance?	
10. To celebrate this good fortune, you take your entire peewee football team to a professional football game. The bill comes to $4,339.98. What is your new balance?	

Snails in a Pail

Sly Me Slugg, world-famous French chef, has made his fast-food business, **Snails in a Pail**, the most popular restaurant in the whole area. This is his menu:

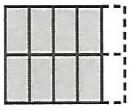
Slime Soup	$.49
Slugburger	$1.69
Chicken-Fried Snails	$2.99
Slimy Slush	$.89
Snailcream Shake	$1.49
Snailbits Salad	$1.09



Solve the problems on another sheet of paper.

	Answer space
1. Sly Me Slugg sold 60 Slimy Slushes and 40 Snailcream Shakes on Friday. How much did he make on drinks that day?	
2. A coach treated 15 of his team players to Slugburgers. How much change did he receive from $40.00?	
3. Your brother was so hungry that he ordered one of everything on the menu. How much change did he get from a $10.00 bill?	
4. Sly Me Slugg sold $43.61 in Slime Soup orders on Wednesday and $38.22 in soup orders on Thursday. How many orders of Slime Soup did he sell in those 2 days?	
5. You had a party at **Snails in a Pail** and bought 9 Slugburgers, 3 orders of Chicken-Fried Snails, 2 Snailbits Salads, 5 Snailcream Shakes and 10 Slimy Slushes. What was the total cost for the party?	
6. In one week, Sly Me Slugg sold 200 Slugburgers and 79 orders of Chicken-Fried Snails. How much money did he earn from these 2 items?	
7. You ordered 10 Slugburgers, 10 Snailcream Shakes and 10 Slimy Slushes. What was your total cost?	
8. On Friday, Sly Me earned $1,252. On Saturday, he earned $1,765. On Sunday, he earned $2,998. What was his average daily earnings for those 3 days?	

	Language Skills	Spelling	Reading
Monday	Help your child choose a writing topic for this week's writing assignment. Have your child follow the steps in the writing process as he/she writes independently this week. For more information on the writing process, see page 6. Have your child make a plan for writing, then begin work on the rough draft today.	Pretest your child on these spelling words: answer false question broad freeze reward combine narrow separate council pause thaw cymbal plain true downstairs punish upstairs Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	Have your child read about Theodor Seuss Geisel in a nonfiction book or encyclopedia. Introduce *The 500 Hats of Bartholomew Cubbins* by Dr. Seuss. Have your child read the book aloud. If you cannot read the entire book in one sitting, return to it quickly to maintain the feeling of the story.
Tuesday	Let your child continue to work independently on his/her writing project. Review writing and grammar skills as the need arises.	Review this week's spelling words. Have your child complete **The "Nym" Family** (p. 344).	Finish reading *The 500 Hats of Bartholomew Cubbins*. Have your child retell the story from the point of view of one of the minor characters, such as Sir Alaric.
Wednesday	Let your child continue to work independently on his/her writing project. Have your child proofread what he/she has written so far, using the proofreading symbols discussed in Reading, Week 30, number 2.	Have your child use each of this week's spelling words correctly in a sentence.	Obtain another book by Dr. Seuss. Compare and contrast it with *The 500 Hats of Bartholomew Cubbins*.
Thursday	Let your child continue to work independently on his/her writing project.	Have your child study this week's spelling words.	Have your child imagine what happened when Bartholomew got home that night. Have your child write about that night's events in an epilogue to the story.
Friday	Have your child do a final edit and revision of his/her writing project.	Give your child the final spelling test. Have your child record pretest and final test words in his/her Word Bank.	Have your child choose another book by Dr. Seuss to read for enjoyment. Discuss different reasons for reading. Discuss how we adopt different reading styles when reading different types of books. Have your child compare how he/she would read poetry versus an instruction manual. Have your child complete **Delivery Dilemma** (p. 345). Your child must read the text carefully to gain information to solve the puzzle.

Math	Science	Social Studies
Percents Introduce your child to the concept of percent. *See* Math, Week 35. Teach your child how to write a fraction as a percentage. If the denominator is 100, the numerator can be written as a percent. If the denominator is not 100, find an equivalent fraction before making the percent. *See* Math, Week 35, number 1. Have your child complete **Percents and Fractions** (p. 346).	**Making Work Easier** Discuss some of the inventions that have made your child's life easier. Then, have your child read *Shoes for Everyone* by Barbara Mitchell. *See* Science, Week 35, number 1.	**Washington, D.C.** Washington, D.C. is not part of any state. Many local residents think it should be considered a state of its own. Have your child read about the local government of Washington, D.C. *See* Social Studies, Week 35, number 1.
Use models to demonstrate the relationships among fractions, percents and decimals. *See* Math, Week 35, number 2. Have your child complete **Models** (p. 347).	Inventions arise out of needs. Brainstorm with your child things that he/she needs. Discuss how a new invention could fill that need. Have your child design on paper an invention to fill one of those needs. Have your child include simple machines in his/her design. *Alternative:* Have your child invent a machine that turns something very simple into a very complicated process. (Think of the game "Mousetrap.")	When the president is elected, he/she chooses a group of advisors, called the Cabinet. Have your child read about the presidential cabinet and list the different departments. Have your child make a list of current cabinet members. *What department does each member represent?*
Have your child present the following information using a circle graph: *Phillippe bought 100 flowers for his garden: 40 petunias, 20 pansies, 10 marigolds, 15 sunflowers and 15 violets.* Have your child label the graph with the percentage of the garden represented by each type of flower.	Have your child read about the work of Rube Goldberg, a cartoonist and sculptor who drew silly inventions. *See* Science, Week 35, number 2.	Read about some of the highlights of Washington, D.C., such as museums, monuments and other buildings. Have your child use a map of the city to locate these places. *See* Social Studies, Week 35, number 2.
Have your child make a circle graph to show how he/she would spend $100. First, have your child divide a circle into 10 equal parts. Each part represents $10 or 10% of the $100. Then, have your child decide how much he/she would spend on different things, rounding each amount to the nearest $10. **Example:** *Shade two sections if you will spend $20 on tapes or CDs.* Have your child shade each section of the graph a different color and label with the correct percentage. The graph should include a key.	Have your child construct a tower that can support a heavy weight. *See* Science, Week 35, number 3. Have your child write a paragraph describing what he/she learned from this experiment. Ask your child to consider the construction of tall buildings. *What issues must engineers who build skyscrapers consider in their designs?*	Have your child write five math word problems related to our nation's capital and the federal government.
Provide practical percent problems for your child to solve. Encourage your child to draw models to help solve the problems. **Example:** *If this square is 80%, draw a shape that could be 100%.* (Think as you did with fractions. Divide the square into eighths. Add two eighths to make the new shape.) *See* Math, Week 35, number 3. 	Have your child design a maze for rolling a marble a given distance from a given height. *See* Science, Week 35, number 4.	Arrange for your child to perform some community service.

TEACHING SUGGESTIONS AND ACTIVITIES

MATH (Percents)

BACKGROUND
You have already taught your child that decimals and fractions are two different ways of writing the same number. Now, introduce percents. A percentage is simply another way of expressing hundredths. In a bag of 100 marbles, for example, 25 red marbles represent 25% of the marbles. To demonstrate percents, use the same hundredth models used with fractions and decimals.

1. The fraction $\frac{35}{100}$ is easily rewritten as a percent: 35%.

   The fraction $\frac{4}{25}$ must first be rewritten as an equivalent fraction before it can be written as a percent.
   Example: $\frac{4}{25} = \frac{16}{100} = 16\%$

2. Since percents are fractions of 100, they can be written as decimal fractions to the hundredths place.
   Example: $36\% = \frac{36}{100} = 0.36$

3. Here are some examples of practical percent problems:
   a. The company invited its 240 employees to a picnic. If 75% came to the picnic, how many employees showed up? (180 employees)
   b. Rob's little league team won 25% of the 16 games they played this year. How many games did they win? (4 games)
   c. Of the children enrolled in the summer reading program, 90% reached their reading goals. If 135 children reached their reading goals, how many were enrolled? (150 children)
   d. Selena bought a computer at a 30% discount. If the computer originally cost $1200, how much did she pay for it? ($840)
   e. If Fiona has read 60% of her 300-page book, how many pages does she have left? (120 pages)

SCIENCE (Making Work Easier)

1. Locate a copy of Barbara Mitchell's book, *Shoes for Everyone.* The book is about Jan Matzeliger, who invented a shoe-lasting machine in the late nineteenth century. This invention revolutionized the shoe industry. After your child has read the book, ask the following questions:

   Where did Jan live as a small boy?
   What was his father's occupation?
   Why did Jan think that shoes were so special?
   When Jan left home at age 19, where did he go and what did he do?
   Why did he have trouble finding a job?
   Jan moved to which city in 1877?
   Which shoe manufacturer hired Jan?
   What was the shoe process of lasting?
   What machine did Jan invent from cigar boxes and scraps of metal?
   Why did he leave his job for a new job at Beal Brothers?
   Who provided the money for Jan to build his lasting machine?
   When did he finally get his patent?
   What effect did his lasting machine have on the shoe industry?
   What was the "shoemaker's disease" that killed Jan in 1889, when he was only 37 years old?

2. Have your child read about the cartoonist Rube Goldberg and his amusing, absurdly complicated devices for accomplishing simple tasks, such as scratching one's back or blowing out a candle. Try to locate some of Goldberg's cartoons in books or magazine articles. Have your child describe each element of the machines he drew and what happens in each step to make the next part work.

3. *You will need:* 30 drinking straws, masking tape, scissors, metal washers and a metric ruler.

   Directions:

   a. Using only 15 straws and masking tape, design and construct a strong, sturdy tower that stands at least 25 centimeters tall and has a flat surface on top.
   b. Predict how many washers can be placed on the top surface before the tower collapses.
   c. Carefully place the metal washers, one at a time, on the flat surface on top of the tower.
   d. Continue to add metal washers until the tower collapses.

   Have your child consider what he/she learned from the first tower. Then, have him/her construct a second tower, using the same materials, and repeat steps a–d. *Was the second tower an improvement over the first?*

4. Have your child design a device for rolling a marble through a complicated maze of tubes.

   You will need: a variety of cardboard tubes, string, tape, a marble and a timer.

   Directions:

   a. Tape or suspend one of the tubes to a high place in the room, such as the top of a door or cabinet.
   b. Continue to add tubes by attaching them to each other with tape.
   c. Create turns and dips as you add more tubes to the maze. Use tape or string to help support the maze.
   d. When the tube maze reaches the floor or a table, roll a marble through the maze.
   e. Measure the time that it takes the marble to complete its journey.
   f. Repeat steps d and e.

   Was the time the same in each trial? What similar devices, such as a water slide or a museum maze, have you seen? Would a different size marble have a different travel time? Find one and see what happens.

SOCIAL STUDIES (Washington, D.C.)

1. Use some of the questions below to guide a discussion about the local government of Washington, D.C.

   Who is the head of the city of Washington, D.C.?
   How does that person get to hold that office?
   What other positions are elected city offices?
   What powers do the mayor and commissioners have?
   Where does the city get its "spending money"?
   What power does Congress have over the city?
   Have the citizens of the city always been allowed to vote for local offices?
   Have they been able to vote for national officials?
   What have been some of the different voting laws for residents of Washington, D.C.? What are they now?
   What are the restrictions on their one delegate to Congress?
   Do you think Washington, D.C. should become a state? Give reasons for your answer.

2. Here is a partial list of the highlights of Washington, D.C.

   a. The Smithsonian Institution is made up of several museums, each with a different focus. All are free.
   b. The U.S. Holocaust Memorial Museum and the Vietnam Veterans Memorial Wall serve as reminders of two very important moments in history.
   c. The Bureau of Engraving and Printing makes money. Find out whose pictures are on the different denominations of bills and what is on the opposite side.
   d. The Capitol Building houses the Senate and House of Representatives. Visit the offices of your representatives or observe the House or Senate in session.
   e. The Supreme Court Building houses the third branch of the U.S. government. Find out the names of the current justices.
   f. The Library of Congress is the largest library in the world. Find out what books and other important items are housed there.
   g. The National Archives houses important documents in our nation's history. These documents are protected in special fireproof cases.

The "Nym" Family

answer
broad
combine
council
cymbal
downstairs
false
freeze
narrow
pause
plain
punish
question
reward
separate
thaw
true
upstairs

Words that have similar meanings are called **synonyms**.
Examples: trip, journey

Words that have opposite meanings are called **antonyms**.
Examples: hot, cold

Words that sound the same but have different spellings and meanings are called **homonyms**. **Examples:** blue, blew

Use the word list to unscramble the spelling words below. Then, **draw** a line to connect each pair of antonyms.

etusniqo _____ zrefee _____

draiswtson _____ wersan _____

waht _____ woranr _____

nieocbm _____ treapsea _____

odarb _____ riusptas _____

Write a synonym for each of the following.

to chastise _____ faithful _____

a prize _____ erroneous _____

Write the homonym that will complete each pair.

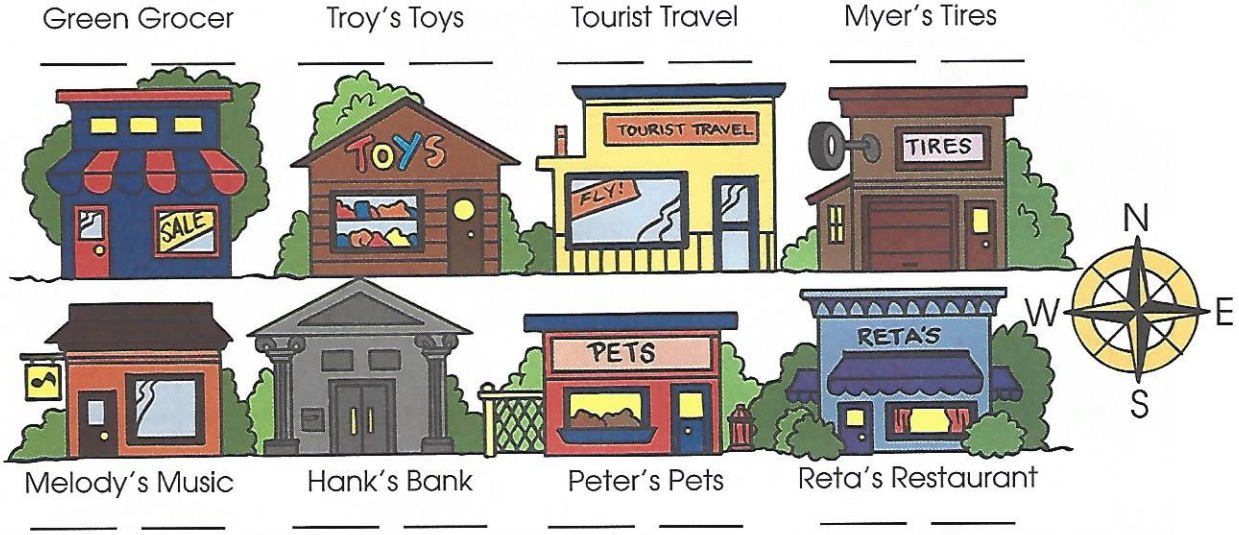
1. plane _____ 3. paws _____
2. symbol _____ 4. counsel _____

Write twelve sets of homonyms.

1. _____ _____ 5. _____ _____ 9. _____ _____
2. _____ _____ 6. _____ _____ 10. _____ _____
3. _____ _____ 7. _____ _____ 11. _____ _____
4. _____ _____ 8. _____ _____ 12. _____ _____

Delivery Dilemma

Dilly's Deliveries is under new management, and the new boss just instructed his top driver to follow a most peculiar route. The driver is to deliver packages to each of the eight businesses shown below, but she is not necessarily meant to visit them in a logical order.



Help the confused driver plan her route. Number the businesses above in the order in which they should be visited in the first blank. **Write** the number of packages to be delivered in the second blank.

1. The second delivery is directly north of the first delivery and has one fewer package than the first.
2. Melody's Music needs all five packages delivered before 11:00 A.M.
3. By the time the paperwork is completed, the packages are verified and greetings are exchanged between the driver and the recipient, each delivery takes fifteen minutes.
4. The bank is never the last delivery. It always receives four packages.
5. Troy's Toys has the most packages of all. His delivery will contain as many packages as all the others combined.
6. Pete's deliveries are live animals, which need to be unloaded first when the store opens at 9:30 A.M.
7. The fourth delivery is directly east of the first delivery and contains twice the number of packages.
8. The travel agency and the pet store combined are to receive the same number of packages as the music store.
9. The fifth delivery contains three boxes.
10. The third delivery is two stores west of the second.
11. The tire store, the grocery store and the pet store will all receive the same number of packages. They are the only ones to receive this exact amount.

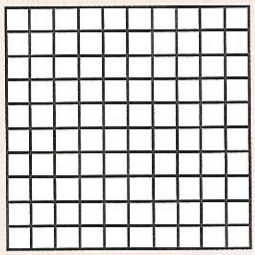
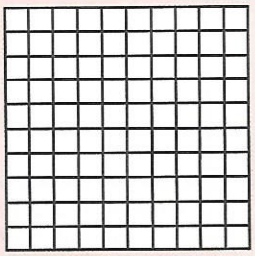
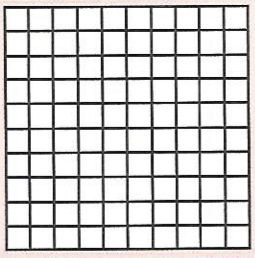
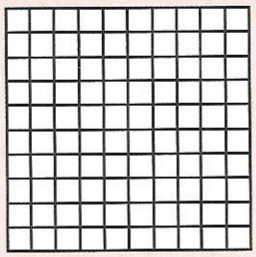
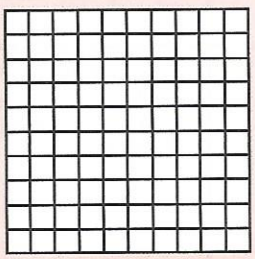
Percents and Fractions

Write the fraction and percent represented in each situation.

Situation	Fraction	Percent
30 marbles out of 100 marbles are red	$\frac{30}{100}$	30%
29 people out of 100 people voted.		
10 fish out of 100 fish are tropical.		
7 cats out of 100 cats live indoors.		
4 turtles out of 100 turtles laid eggs.		
7 out of 10 puppies had spots.	$\frac{7}{10} = \frac{\quad}{100}$	
5 out of 10 baskets were made.		
6 out of 25 rocks in my yard are igneous.	$\frac{6}{25} = \frac{\quad}{100}$	
17 out of 25 rulers are metric.		
18 out of 20 goldfish are orange.		
The dress was reduced $5 from $20.		

Models

Draw the model and **fill in** the missing fraction, percent or decimal.

Draw	Fraction	Percent	Decimal
			0.25
	$\frac{37}{100}$		
		18%	
	$\frac{7}{10}$		
		4%	

	Language Skills	Spelling	Reading
Monday	**Review** Review parts of speech. Give your child a paragraph from a book. Ask your child to circle the nouns, underline the verbs once, underline the pronouns twice, draw stars above the adjectives and draw boxes around the adverbs. Finally, ask your child to go back and highlight all the conjunctions, prepositions and interjections. Reteach the parts of speech that your child cannot readily identify.	**Review** Select words from the past eight weeks for this week's pretest. Have your child correct the pretest. Add personalized words and make two copies of this week's study list.	**Review** Have your child select the reading book for this week. Ask your child to write a prediction of what he/she expects to learn from the book. Use this book to review the language skills listed each day this week. Discuss new vocabulary from the book.
Tuesday	Review punctuation: commas, periods, colons, semicolons, exclamation marks, question marks and quotation marks. Copy a paragraph from a book, omitting all punctuation. Have your child fill in the correct punctuation. Reteach any punctuation that your child has difficulty using correctly.	Have your child sort the spelling words from the past eight weeks by number of syllables. *Which group (one-syllable words, two-syllable words, etc.) contains the greatest number of words? Which contains the least? What percentage of the words studied have three syllables?*	Have your child write a sentence or two describing the main idea of each chapter as he/she reads.
Wednesday	Review sentence structure. Have your child write a paragraph on a topic related to this week's reading book. Ask your child to include a variety of sentences (simple, compound and complex). Check your child's work for subject/verb agreement and complete sentences. Reteach, if necessary.	Have your child sort the spelling words from the past eight weeks again, this time by parts of speech (nouns, verbs, adjectives, etc.). *In which category does the majority of the words belong? What is the ratio of nouns to verbs?*	Ask your child to identify the problem in the story. Have him/her predict how the problem will be solved.
Thursday	Review the four different kinds of paragraphs. Give your child a newspaper. Have your child locate examples of each type of paragraph: narrative, expository, descriptive and persuasive.	Help your child make a crossword puzzle with spelling words from the past eight weeks. your child should use definitions as clues. Once the puzzle is completed, let your child give it to a friend to solve.	Have your child list phrases from the book that express opinions. Then, have your child list phrases from the book that express facts.
Friday	Have your child write about what he/she has learned this year and what he/she hopes to learn next year.	Give your child the final spelling test.	Have your child analyze his/her predictions about the book. How accurate were they? Have your child write a summary and review of the book.

Math	Science	Social Studies
Ratios Ratios, like fractions, compare numbers. Fractions are ratios that compare parts to the whole. Ratios may also compare parts to parts, time to distance, rates and probabilities. *See* Math, Week 36, number 1. Have your child find examples of ratios in the newspaper or in comparisons that you use regularly.	If possible, plan a trip to visit an amusement park. Have your child observe and record (with diagrams) the types of simple machines found on the rides.	**Washington, D.C.** Have your child write twelve sentences related to Washington, D.C.—six about the capital and six about the Capitol.
A ratio of 1:1 means there is the same number of each object. There is a 1:1 ratio of feet to shoes when there are two shoes and two feet. There may be a 1:1 ratio of cars to drivers on the road if all the cars have one driver. Teach your child to simplify ratios. To name equivalent ratios, multiply or divide both numbers by the same number. **Example:** 4:8 = 2:4 = 1:2 Have your child simplify given ratios. *See* Math, Week 36, number 2.	Have your child interview an inventor or read a biography of an inventor.	Washington, D.C. is considered to be a national symbol. Have your child explain why this is so. Then, have your child design a souvenir that might be sold to tourists who visit the capital city.
Review: Review and reteach concepts taught this year. Repeat activities that your child found especially difficult or challenging.	Have your child write "What-Am-I?" riddles about simple and compound machines. Provide your child with a list of machines, or let him/her choose others. The riddle should be made up of clues about the work the machine does and how it is built. The clues should start out broad, then become more specific. *See* Science, Week 36.	Have your child study the interior of the White House. Discuss the purpose of the different rooms. Discuss the influence of different presidents and their spouses. Pose the following question: *If you could live in the White House, which room would you choose to be your own? Explain.*
Give your child a final test on math concepts. Have your child complete **Final Exam** (p. 352).	Review the concept map maintained over the course of this unit. Ask your child to recall information outlined in the concept map. Review pertinent vocabulary.	Have your child compare Washington, D.C. with another city he/she knows. *See* Social Studies, Week 36, number 1.
Reteach any concepts missed on the exam. Then, celebrate the learning that took place this year.	Help your child use tools to construct something out of wood. Discuss the simple machines that make up the tools and other building supplies.	Assess your child's community service experience. Ask your child to choose the services he/she liked best. Have your child write an honest evaluation of his/her performance. Play a game with clues about sights in Washington, D.C. You will need a copy of **See the U.S.A.** (p. 353). *See* Social Studies, Week 36, number 2.

TEACHING SUGGESTIONS AND ACTIVITIES

MATH (Ratios)

1. In the last few lessons, your child has been working with forms of ratios. *Ratios* are basically comparisons of different units. Percents compare the number of parts to 100. Miles per hour compares miles to hours. Batting averages compare hits to the number of times at bat. Challenge your child to locate ratios encountered in his/her everyday life. Help your child learn to recognize ratios and write them down in two ways.

   Examples: children in the family—**3 girls to 2 boys** or **3:2**
   red cars to blue cars—**14 red to 23 blue** or **14:23**

   Have your child practice this format by naming ratios he/she sees in your home. Have your child compare seats to people, books to boxes, wheels to bicycles, hands to fingers, pounds to ounces and so on.

2. Write the following ratios on the chalkboard. Have your child simplify each one.

4:6	6:21	2:12	5:25	4:18	7:14	100:1000	90:100
5:15	3:9	12:42	5:100	8:88	34:170	24:36	14:21

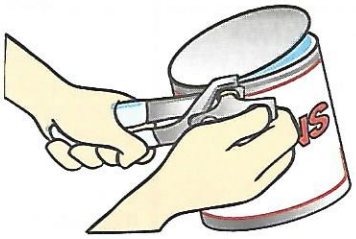
SCIENCE (Machines)

Have your child compose a series of riddles about simple or compound machines. Read the riddle below to your child, as an example.

What Machine Am I?

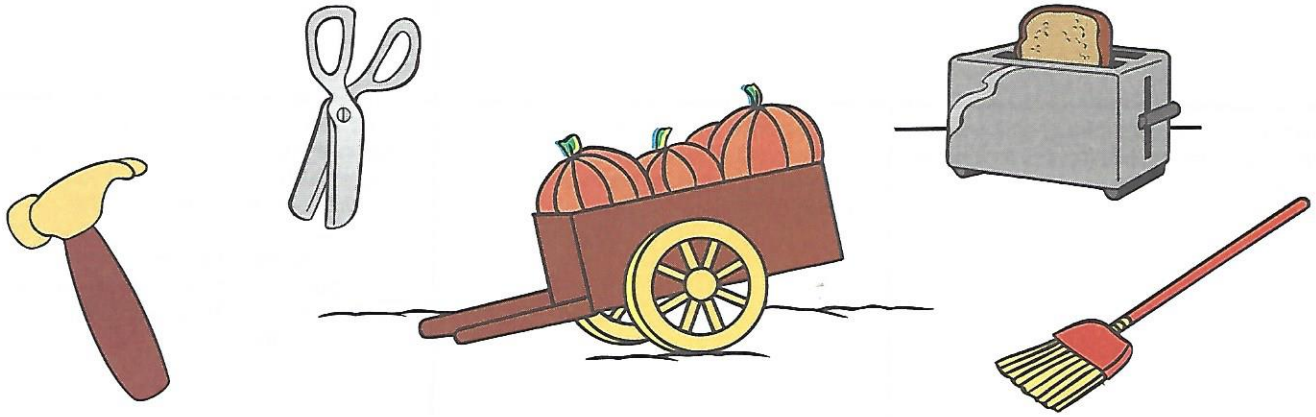
You may use me every day.
I am made up of several simple machines.
I have a wedge that pierces metal.
I have two levers that come together.
I have some gears that turn around.
If you want soup, I should be found.

What Am I? (Answer: *a can opener*)



Write the following machines on separate index cards. Have your child choose a card, then write a riddle about the device. Repeat with other cards. Write a few riddles for your child to solve as well.

lawn mower	scissors	stapler	fingernail clipper
weed cutter	toaster	spatula	salad spinner
wheelbarrow	car jack	hammer	cookie cutter
pencil sharpener	ramp	broom	lawn sprinkler



SOCIAL STUDIES (Washington, D.C.)

1. Have your child use the following questions as guidelines when comparing Washington, D.C. to another city.

   What social problems do the cities have?
   What are their public transportation systems like?
   Do the people participate in the same type of recreational activities?
   What kind of work do many of the people do?
   What are the downtown areas (shopping areas) like in each city?
   What are the backgrounds of the citizens in each community?
   What are the major local industries?
   Which city has a greater population density?

2. Play a simple game using the game board pictured on **See the U.S.A.** (p. 353), the clues below and a die. Copy the game board and laminate for durability. Write each of the clues below onto a separate index card. (You may also want to add additional clues on other social studies topics covered this year—historical events and people, geographic regions, etc.) Include the answer at the bottom of each card. Stack the cards facedown next to the board. Roll the die to see who goes first. Player 1 then rolls the die again. His/her opponent draws a card and reads the clue aloud. If Player 1 answers correctly, he/she moves the number shown on the die and rolls again. If Player 1 does not answer correctly, Player 2 takes a turn. The first player to reach "Finish" wins the game.

   Clues for the game cards:

   It has 897 steps to the top. (Washington Monument)
   The constitutionality of laws and government practices are discussed here. (Supreme Court)
   An Englishman who had never come to America gave it as a gift. (Smithsonian)
   President Madison lived here when the White House was destroyed by fire. (Octagon House)
   The nation's documents are preserved here. (National Archives)
   The names of over 58,000 men and women are inscribed on its black walls. (Vietnam Veterans Memorial)
   It's green and lies between the Capitol and the Lincoln Memorial. (The Mall)
   She is on top of the Capitol's dome. (Liberty)
   The use of alcohol, tobacco and firearms is controlled by this cabinet department. (Treasury)
   U.S. foreign policy originates and is carried out here. (State Department)
   It makes our paper money. (Bureau of Engraving and Printing)
   John Wilkes Booth fatally wounded President Lincoln here. (Ford's Theater)
   It is home to the National Symphony Orchestra. (Kennedy Center for the Performing Arts)
   Thirty-six columns around this structure represented the states in the Union at the time. (Lincoln Memorial)
   National Parks and Monuments are under this department's jurisdiction. (Department of Interior)
   Its circular dome honors the man who stands inside. (Jefferson Memorial)
   It is guarded twenty-four hours a day, but it is not in Washington. (Tomb of the Unknown Soldier)
   The history of flight is displayed here. (National Air and Space Museum)
   It is authorized to investigate federal crimes. (Federal Bureau of Investigation)
   It has exactly 100 members. (U.S. Senate)
   Its three buildings contain approximately 100 million items written in 470 languages. (Library of Congress)

Final Exam

1. Write out 2,645,782.06 in words. _____

_____

Solve.

2. 65 + _____ = 83

3. 13,692 + 78 + 313 = *a*

a = _____

4. 37 x 30 = *y*

y = _____

Estimate.

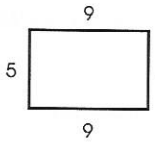
5. 856,311 − 21,400

6. 33 ⟌ 5,827

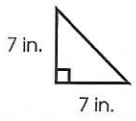
7. Find the average of these numbers: 7, 12, 29, 15, 18, 15. _____

8. Identify each polygon.  _____  _____  _____

9. Find the perimeter and area.



perimeter _____



area _____

10. Write this fraction in lowest terms.  _____

11. Use < or > to indicate which fraction is greater. $\frac{7}{9}$ $\frac{4}{9}$ $\frac{5}{12}$ $\frac{5}{9}$

Solve.

12. $\frac{3}{11} + \frac{5}{11}$ = _____

13. $\frac{3}{4} + \frac{1}{8}$ = _____

14. $3\frac{1}{3} + 2\frac{1}{2}$ = _____

15. $12\frac{5}{6} - 1\frac{1}{4}$ = _____

16. $\frac{7}{8} \times \frac{1}{4}$ = _____

17. $\frac{4}{5} \div \frac{2}{3}$ = _____

18. Change $\frac{18}{5}$ into a mixed number. _____

19. Write 3.4 as a mixed number in lowest terms. _____

Add, **subtract**, **multiply** or **divide**.

20. 37.3 + 265.25 = _____

21. 4.8 x 1.3 = _____

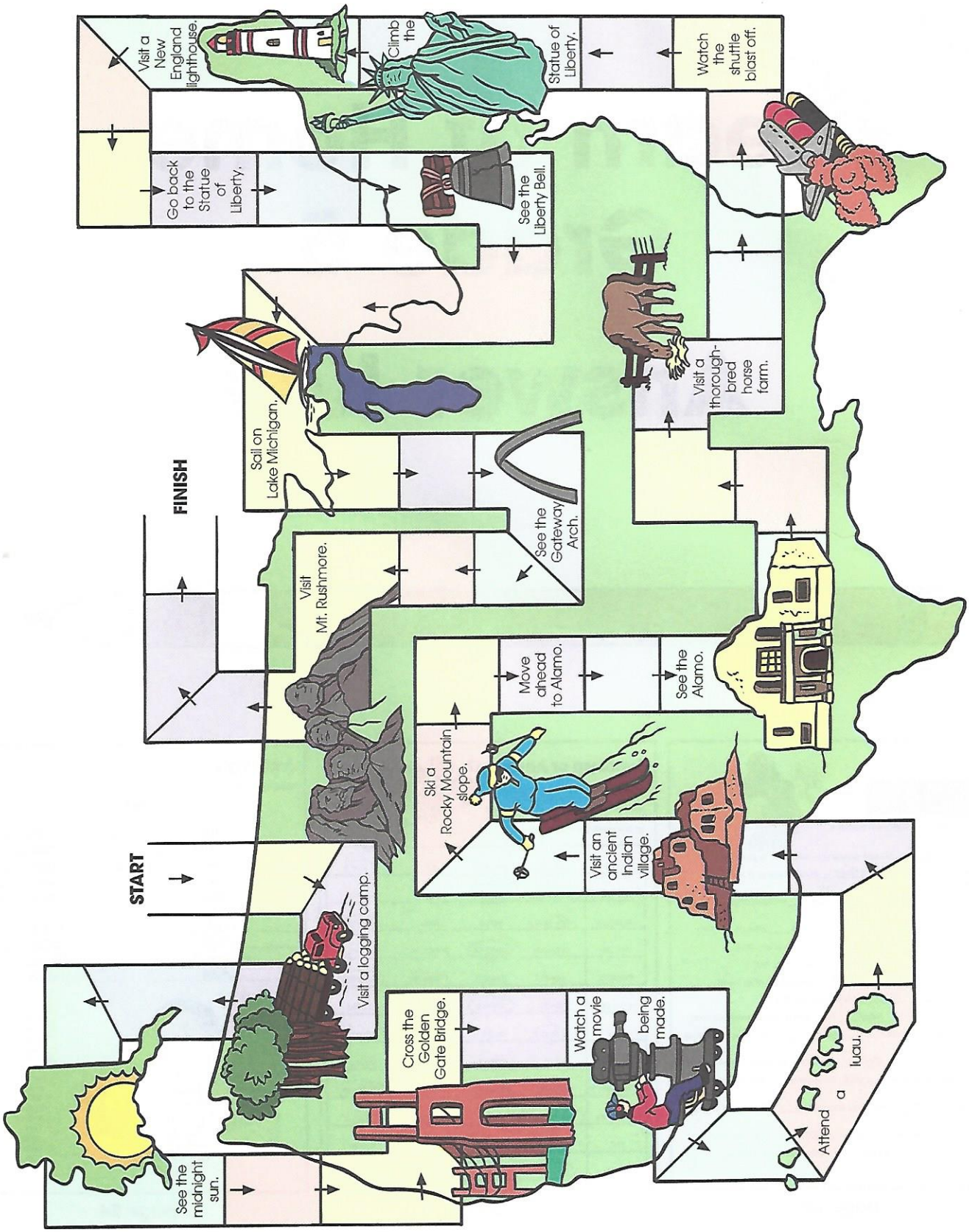
22. 3.654 − 1.7 = _____

23. 37.75 ÷ 100 = _____

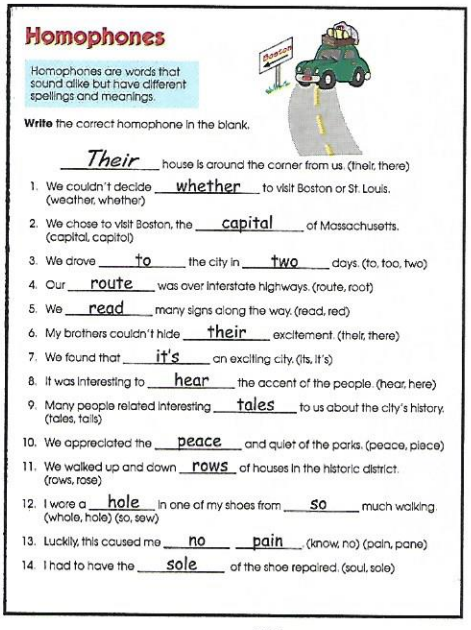
24. Write 35% as a fraction. _____

25. 17.2 ÷ 8 = _____

See the U.S.A.



Learn at Home
Grade 5
Answer Key



Homophones

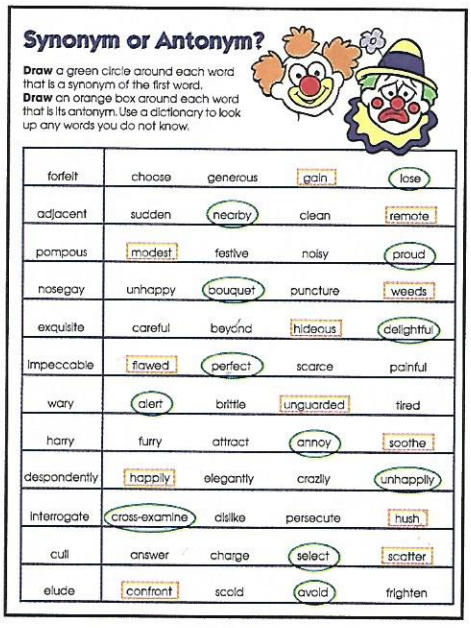
Homophones are words that sound alike but have different spellings and meanings.

Write the correct homophone in the blank.

Their house is around the corner from us. (their, there)

1. We couldn't decide **whether** to visit Boston or St. Louis. (weather, whether)
2. We chose to visit Boston, the **capital** of Massachusetts. (capital, capitol)
3. We drove **to** the city in **two** days. (to, too, two)
4. Our **route** was over interstate highways. (route, root)
5. We **read** many signs along the way. (read, red)
6. My brothers couldn't hide **their** excitement. (their, there)
7. We found that **it's** an exciting city. (its, it's)
8. It was interesting to **hear** the accent of the people. (hear, here)
9. Many people related interesting **tales** to us about the city's history. (tales, tails)
10. We appreciated the **peace** and quiet of the parks. (peace, piece)
11. We walked up and down **rows** of houses in the historic district. (rows, rose)
12. I wore a **hole** in one of my shoes from **so** much walking. (whole, hole) (so, sew)
13. Luckily, this caused me **no** **pain**. (know, no) (pain, pane)
14. I had to have the **sole** of the shoe repaired. (soul, sole)

page 22



Synonym or Antonym?

Draw a green circle around each word that is a synonym of the first word.
Draw an orange box around each word that is its antonym. Use a dictionary to look up any words you do not know.

forfeit	choose	generous	gain	lose
adjacent	sudden	nearby	clean	remote
pompous	modest	festive	noisy	proud
nosegay	unhappy	bouquet	puncture	weeds
exquisite	careful	beyond	hideous	delightful
impeccable	flawed	perfect	scarce	painful
wary	alert	brittle	unguarded	tired
harry	furry	attract	annoy	soothe
despondently	happily	elegantly	crazily	unhappily
interrogate	cross-examine	dislike	persecute	hush
cull	answer	charge	select	scatter
elude	confront	scald	avoid	frighten

page 23

Amazing a

Write each spelling word in the appropriate spelling pattern category.

Long a

ay	a-e
anyway	amaze
daydream	brace
delay	place
essay	rate
dismay	wage

a	ai
basic	braid
hasten	daisy
matriarch	faint
nature	raisin

amaze
anyway
basic
brace
braid
daisy
daydream
delay
dismay
essay
faint
hasten
matriarch
nature
place
raisin
rate
wage

page 24

Checks

Fill in each check completely. Invent who you will write it to and why.

Name _____ Date _____ 6389A
Address _____
_____

Pay to the Order of _____ $ _____
_____ Dollars

School Bank
5555 Fifth Street
Fifthville, GA 32132

For _____ _____ Signature

Name _____ Date _____ 6390A
Address _____
_____

Pay to the Order of _____ $ _____
_____ Dollars

School Bank
5555 Fifth Street
Fifthville, GA 32132

For _____ _____ Signature

Name _____ Date _____ 6391A
Address _____
_____

Pay to the Order of _____ $ _____
_____ Dollars

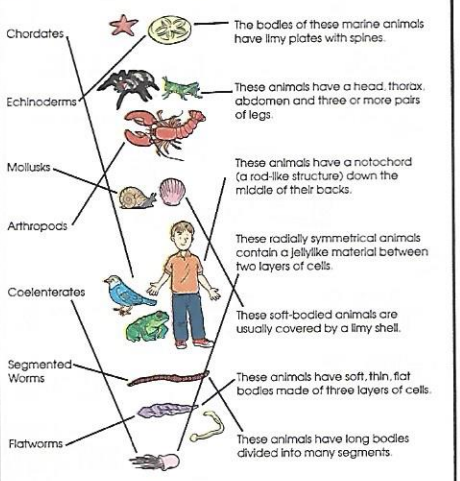
School Bank
5555 Fifth Street
Fifthville, GA 32132

For _____ _____ Signature

page 25

Phyla Match

Scientists separate animals according to their differences and group them according to their likenesses.
Draw a line from the phylum in the first column to the correct picture and then to the related characteristics. The first one is done for you.



page 27

Breezing Through e

On the flags, **write** the spelling words according to the **long e** spelling patterns. Indicate the spelling pattern to the right of each flag.

breathe
breeze
crease
delight
donkey
eager
hockey
kidney
lease
plead
queen
recent
respond
screech
sleeve
squeak
steam
zebra

Spelling Pattern

1. donkey
2. hockey
3. kidney

ey

1. breeze
2. queen
3. screech
4. sleeve

ee

1. breathe
2. crease
3. eager
4. lease
5. plead
6. squeak
7. steam

ea

1. delight
2. recent
3. respond
4. zebra

e

W *Answers may include:* ords with the **long e** sound.

1. When two e's are together you have a long e sound
2. When there is an ey combination you have a long e sound
3. The combination ea produces a long e sound
4. E alone may produce a long sound, try it out

page 32

Story Organizer

Date _____ Title _____

Vocabulary **Definitions**

Setting: _____

Characters: _____

Problem: _____

Events: _____

Answers will vary.

Solution: _____

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

page 33

Dog's Best Friend

Bob the butcher is popular with the dogs in town. He was making a delivery this morning when he noticed he was being followed by two dogs. Bob tried to climb a ladder to escape from the dogs. Solve the following addition problems and shade in the answers on the ladder. If all the numbers are shaded when the problems have been solved, Bob made it up the ladder. Some answers may not be on the ladder.

1. 986,145 + 621,332 + 200,008 = 1,807,485	2. 1,873,402 + 925,666 + 4,689 = 2,803,757	3. 506,328 + 886,510 + 342,225 = 1,735,063
4. 43,015 + 2,811,604 + 987,053 = 3,841,672	5. 18,443 + 300,604 + 999,999 = 1,319,046	6. 8,075 + 14,608 + 33,914 = 56,597
7. 9,162 + 7,804 + 755,122 = 772,088	8. 88,714 + 213,653 + 5,441,298 = 5,743,665	9. 3,244,662 + 1,986,114 + 521,387 = 5,752,163
10. 4,581 + 22,983 + 5,618,775 = 5,646,339	11. 818,623 + 926 + 3,260,004 = 4,079,553	12. 80,436 + 9,159 + 3,028,761 = 3,118,356
13. 25,004 + 862,010 + 9,302 = 896,316	14. 5,043,666 + 4,589,771 + 8,711,229 = 18,344,666	15. 432,188 + 900,000 + 611,042 = 1,943,230

1,319,046
2,803,757
5,743,665
3,118,356
56,597
4,079,553
1,807,485
2,943,230
18,344,666
1,735,063
5,752,163
896,316
3,841,672
5,646,339

Does Bob make it? No

page 34

Rounding

Follow these steps to round numbers to a given place.

Example: Round 35,634 to the nearest thousand.

34,000 35,000 36,000 37,000
35,634

a. Locate and highlight the place to which the number is to be rounded. ► Highlight the digit in the thousands place: **3**5,634

b. Look at the digit to the right of the designated place. If the number is 5 or greater, round the highlighted number up. If the number is 4 or less, round the highlighted number down by keeping the digit the same. ► Six is greater than 5, so round the highlighted number up.

c. Rewrite the original number with the amended digit in the highlighted place and change all of the digits to the right to zeros. ► The rounded number is 36,000.

Example: Round 782 to the nearest 10.

770 780 790 800
782

► Highlight the digit in the tens place: 7**8**2
► Two is four or less, so round down by keeping the tens digit the same. 782
► The rounded number is 780.

Round each number to the given place.

nearest 10:	1. 855	860	2. 333	330
nearest 100:	3. 725	700	4. 2,348	2,300
nearest 1,000:	5. 4,317	4,000	6. 8,650	9,000
nearest 10,000:	7. 25,199	30,000	8. 529,740	530,000
nearest 100,000:	9. 496,225	500,000	10. 97,008	100,000

page 35

Number-Line Rounding

Label the endpoints. **Plot** the given number. **Circle** the closer endpoint. The first three have been done for you.

1. 60 87 90
   Round 87 to the nearest ten.
2. 1,300 1,322 1,400
   Round 1,322 to the nearest hundred.
3. 1,470 1,475 1,480
   Round 1,475 to the nearest ten.
4. 8,270 8,274 8,280
   Round 8,274 to the nearest ten.
5. 8,200 8,274 8,300
   Round 8,274 to the nearest hundred.
6. 1,000 1,452 2,000
   Round 1,452 to the nearest thousand.
7. 1,400 1,452 1,500
   Round 1,452 to the nearest ten.
8. 6,000 6,937 7,000
   Round 6,937 to the nearest thousand.
9. 8,000 8,485 9,000
   Round 8,485 to the nearest thousand.
10. 20,000 25,683 30,000
    Round 25,683 to the nearest ten thousand.

page 36

Estimating Sums

Estimate by rounding before you add.

Nearest Ten	Nearest Hundred	Nearest Thousand
88 → 90 + 51 → + 50 139 → 140	244 → 200 + 776 → + 800 1,020 → 1,000	4,566 → 5,000 + 3,320 → + 3,000 7,886 → 8,000
Actual = 139 Estimated = 140 Difference = 1	Actual = 1,020 Estimated = 1,000 Difference = 20	Actual = 7,886 Estimated = 8,000 Difference = 114

When you do not have to be exact, estimating can be easy and close to the actual sum.

Estimate the sums. Round numbers to the highest place value of the smaller number.

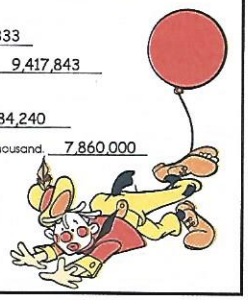
1. 52 → 50
+ 66 → + 70
118 → 120
2. 618 → 600
+ 384 → + 400
1,002 → 1,000
3. 3,477 → 3,000
+ 8,611 → + 9,000
12,088 → 12,000
4. 44 → 40
+ 91 → + 90
135 → 130
5. 222 → 200
+ 479 → + 500
701 → 700
6. 1,190 → 1,000
+ 7,625 → + 8,000
8,815 → 9,000
7. 36 → 30
+ 19 → + 20
55 → 50
8. 566 → 600
+ 818 → + 800
1,384 → 1,400
9. 4,533 → 5,000
+ 7,498 → + 7,000
12,031 → 12,000

page 37

Place Value

Read and solve.

1. Write the number 2,058,763 in words. two million, fifty-eight thousand, seven hundred sixty-three
2. Write the following in numerals: eight billion, two hundred thirty-seven million, eighty-five thousand, three hundred four. 8,237,085,304
3. In the number 9,876,543,210 . . .
   which digit is in the hundred thousands place? 5
   which digit is in the ones place? 0
   In what place is the 9? billions
4. Add.
   3,259 + 32,769 + 305 = 36,333
   8,759,233 + 3,410 + 655,200 = 9,417,843
5. Round . . .
   84,239 to the nearest ten. 84,240
   7,857,355 to the nearest ten thousand. 7,860,000
6. Estimate the sum.
   34,396 → 30,000
+ 5,875 → + 6,000
36,000

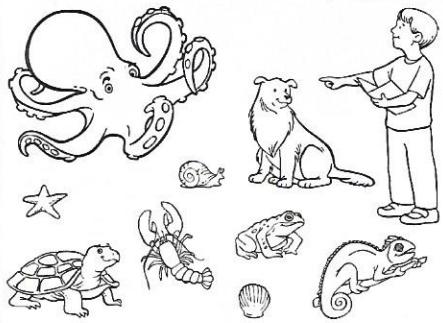


page 38

Sort 'Em Out

Vertebrates are animals with backbones. Animals without backbones are called **invertebrates**. At the bottom of the page are pictures of both kinds of animals. **Write** the name of each animal under the correct heading below.

Vertebrates	Invertebrates
1. dog	1. octopus
2. boy	2. snail
3. turtle	3. starfish
4. frog	4. lobster
5. lizard	5. oyster



Color and **cut out** all the vertebrates. On a separate sheet of paper, make a background using felt-tip markers for your vertebrate animals and **glue** them on it. Label your drawing: **Vertebrates**.

page 39

Good, Bad; Well, Badly

Good and **bad** are adjectives that modify nouns or pronouns. **Well** and **badly** are adverbs that modify verbs.

Examples:
A guitar is a **good** instrument to play on a hayride.
Bringing a piano along would be a **bad** choice.
It's hard to play the accordion **well** while you're dancing.
I played **badly** because my arm was sore.

Complete each sentence below with the correct adjective or adverb found in parentheses. In the blank at the end of the sentence, **write** whether an adjective or adverb has been used.

1. Michele used to play the clarinet badly (bad, badly) when she first started. adverb
2. I felt Mark's choice to learn how to play the piano was a good (good, well) one. adjective
3. Curt sang very well (good, well) at the graduation ceremony last night. adverb
4. Alan made a bad (bad, badly) choice when he quit music class before the session ended. adjective
5. Debra made a good (good, well) decision when she brought the music home to practice over vacation. adjective
6. Mr. Sutton said that I display good (good, well) rhythm. adjective
7. Leaving an expensive instrument out where it can get damaged is a bad (bad, badly) thing to do. adjective
8. Gwen performed the trumpet solo well (good, well) because she practiced every day. adverb

page 44

Mile-High i

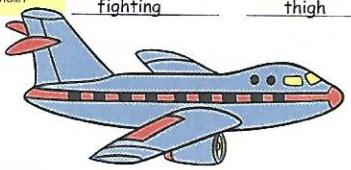
arrive
childhood
chime
climate
delight
digest
fighting
grind
ideal
prize
sight
silence
spying
style
thigh
timing
title
violin

These planes have sighted four spelling patterns for the **long i** sound. **Write** each spelling word in the correct category.

y
spying
style

i-e
arrive
chime
prize

igh
delight
fighting
sight
thigh



i

childhood	digest	timing
climate	ideal	title
grind	silence	violin

page 45

page 39

page 44

page 45

Commutative Property of Addition

An easy way to add a column of single-digit numbers is to find all those that equal ten first. Show how you would group these numbers, then add them to find the sums.

Example:

3, 6, 5, 5, 3, 7, 3 → 10, 10, 10 + 26

1. 7, 3, 4, 5, 10, 10 + 6 = 25
2. 2, 5, 4, 5, 10, 10 + 6 = 22
3. 7, 5, 6, 3, 10 + 4 = 25
4. 1, 5, 10 + 9 = 15

When a number shows up several times, add those digits first.

Example: 2, 2, 5, 2, 3 (four 2's = 8), 8 + 5 = 13

5. 4, 2, 2, 2, + 2 = 12
6. 3, 7, 7, + 7 = 24
7. 5, 4, 5, 4, + 4 = 22

8. As Jean walked through the woods, she turned over 6 rocks and counted the number of insects under each. She found 4, 6, 6, 4, 8 and 2 insects under the rocks. How many insects did she count?

30 insects

9. The number of Atlanta Braves batters in the nine innings were 3, 3, 4, 5, 5, 3, 3, 3 and 6. How many Braves batters were there in the game?

35 batters

page 46

Opposite Operations

5 + 4 = 9; 5 = 9 − 4

10 + 3 = 13; 10 = 13 − 3

10 + 3 = 13; 13 − 10 = 3

Complete the addition and subtraction sentences.

1. 8 + 6 = 14; 14 − 8 = 6
2. 7 + 4 = 11; 11 − 7 = 4
3. 12 + 8 = 20; 20 − 8 = 12
4. 12 + 6 = 18; 18 − 6 = 12
5. 92 + 108 = 200; 200 − 92 = 108
6. 213 + 13 = 226; 226 − 213 = 13
7. 22 − 10 = 12; 12 + 10 = 22
8. 144 − 76 = 68; 76 + 68 = 144
9. 25 − 8 = 17; 17 + 8 = 25
10. 14 = 21 − 7; 21 − 7 = 14
11. 39 = 51 − 12; 51 − 39 = 12
12. 11 = 20 − 9; 20 − 11 = 9

13. After 6 more people walked into the museum, there were 14 people inside. How many people were inside before the 6 entered?

6 + 8 = 14

14. When I added 11 more rocks to my collection, I had 37 rocks. How many rocks did I have before?

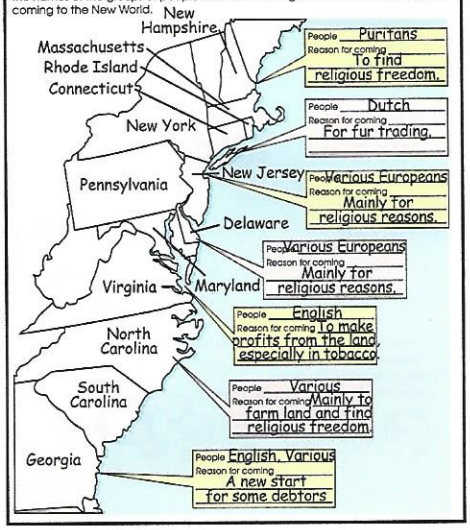
26 + 11 = 37

15. On a Sunday afternoon, we drove to the lake to view the fall colors. We drove a total of 58 miles. If the return trip was 29 miles, how far was the trip ther 29 + 29 = 58

page 47

The New World

Label and **color** the first American colonies on the map below. In the blocks, **write** the names of the groups of people who were settling there and their reason(s) for coming to the New World.



page 49

Proper Adjectives

Adjectives are words that describe nouns. **Proper adjectives** are formed from proper nouns, and they must be capitalized. Other adjectives are called **common nouns**.

Examples:
proper adjectives: ***French*** *toast,* ***American*** *flag*
common adjectives: ***cold*** *toast,* ***waving*** *flag*

Circle all the adjectives in the sentences below.

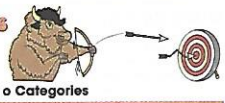
1. Camels have carried loads across (desert) sands for centuries.
2. They were once the (only) means of transporting goods across the (Sahara) Desert and (Middle Eastern) deserts.
3. The (Sahara) Desert is in the (North African) (desert) region.
4. The (Arabian) camel has (one) hump, while the (Bactrian) camel has (two) humps.
5. The (Bactrian) camel got its name long ago from a (Central Asian) country known as Bactria.
6. Both types of camels are used in (some) (Asian) regions.
7. In wars (fighting) men have ridden the (faithful) camel.
8. The camel Napoleon rode during his (Egyptian) campaign was later put in an exhibit.

Write each circled adjective under the proper heading.

Proper Adjectives	Common Adjectives
1. Sahara	1. desert
2. Middle Eastern	2. only
3. Sahara	3. desert
4. North African	4. one
5. Arabian	5. two
6. Bactrian	6. some
7. Bactrian	7. fighting
8. Central Asian	8. faithful
9. Asian	
10. Egyptian	

page 54

Honing Long o Skills



Write each **long o** word in the appropriate category.

Answers may vary.

Long o Categories

o	oa	o-e	ow
buffalo	cloak	chose	arrow
burro	foam	chrome	grown
gopher	loan	compose	knowing
solo	loaves	cove	rows
	roast		
	soak		

arrow, buffalo, burro, chose, chrome, cloak, compose, cove, foam, gopher, grown, knowing, loan, loaves, roast, rows, soak, solo

Answers may vary

1. buffalo (N)
2. burro (N)
3. gopher (N)
4. solo (N)
5. cloak (N)
6. foam (N)
7. loan (N)
8. loaves (N)
9. roast (V)
10. soak (V)
11. chose (V)
12. chrome (A)
13. compose (V)
14. cove (N)
15. arrow (N)
16. grown (V)
17. knowing (A)
18. rows (N)

page 55

Adding Inches and Feet

When adding inches, regroup 1 foot for every 12 inches.

Example:

a. 1 ft. 8 in. + 1 ft. 8 in. = 16 in.

b. 1 ft. 8 in. + 1 ft. 8 in. = 4 in.

c. 1 ft. 8 in. + 1 ft. 8 in. = 3 ft. 4 in.

16 in. = 1 ft. 4 in.

1. 2 ft. 4 in. + 1 ft. 9 in. = 4 ft. 1 in.
2. 12 ft. 10 in. + 1 ft. 5 in. = 14 ft. 3 in.
3. 12 ft. 7 in. + 8 ft. 8 in. = 21 ft. 3 in.
4. 1 ft. 5 in. + 3 ft. 6 in. = 4 ft. 11 in.
5. 1 ft. 6 in. + 1 ft. 6 in. = 3 ft. 0 in.
6. 7 ft. 4 in. + 5 ft. 5 in. = 12 ft. 9 in.

7. 28 ft. 8 in. + 4 ft. 9 in. = 33 ft. 5 in.
8. 8 ft. 9 in. + 7 in. = 9 ft. 4 in.
9. 3 ft. 3 in. + 6 ft. 7 in. = 9 ft. 10 in.

page 56

Adding Ounces and Pounds

When adding ounces, regroup 1 pound for every 16 ounces.

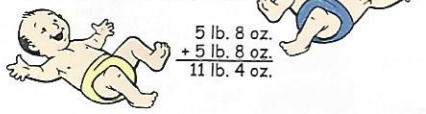
Example:

a. 8 lb. 12 oz. + 1 lb. 8 oz. = 20 oz. (20 oz. = 1 lb. 4 oz.) → 10 lb. 4 oz.

b. 8 lb. 12 oz. + 1 lb. 8 oz. = 4 oz.

c. 8 lb. 12 oz. + 1 lb. 8 oz. = 10 lb. 4 oz.

1. 2 lb. 7 oz. + 1 lb. 11 oz. = 4 lb. 2 oz.
2. 3 lb. 11 oz. + 1 lb. 11 oz. = 5 lb. 6 oz.
3. 27 lb. 12 oz. + 9 lb. 12 oz. = 37 lb. 8 oz.
4. 114 lb. 8 oz. + 59 lb. 10 oz. = 174 lb. 2 oz.
5. 1 lb. 8 oz. + 1 lb. 8 oz. = 3 lb. 0 oz.
6. 1 lb. 2 oz. + 1 lb. 14 oz. = 3 lb. 0 oz.
7. 7 lb. 12 oz. + 13 oz. = 8 lb. 9 oz.
8. 15 oz. + 3 lb. 5 oz. = 4 lb. 4 oz.
9. 15 lb. 6 oz. + 17 lb. 9 oz. = 32 lb. 15 oz.
10. Twins were born at St. Vincent Hospital today.
One weighs 5 lb. 8 oz.
The other weighs 5 lb. 12 oz.
How much do the babies weigh together?



5 lb. 8 oz. + 5 lb. 8 oz. = 11 lb. 4 oz.

page 57

Adding Minutes and Hours

When adding hours and minutes, regroup 1 hour for every 60 minutes. The first one has been done for you.

1. 2 hr. 34 min. + 3 hr. 31 min. = 6 hr. 5 min.
2. 5 hr. 24 min. + 7 hr. 19 min. = 12 hr. 43 min.
3. 2 hr. 39 min. + 5 hr. 41 min. = 8 hr. 20 min.
4. 16 hr. 51 min. + 4 hr. 8 min. = 20 hr. 59 min.
5. 3 hr. 43 min. + 2 hr. 51 min. = 6 hr. 34 min.
6. 3 hr. 14 min. + 6 hr. 72 min. = 10 hr. 26 min.

7.  + 50 minutes. Time: 1:05
8.  + 1 hour 5 minutes. Time: 7:30
9.  + 30 minutes. Time: 9:35
10.  + 4 hours 35 minutes. Time: 6:00

11. Geneva worked on her sculpture this week.

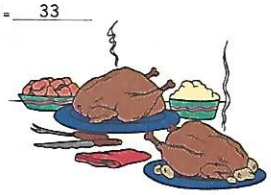
Monday:	2 hr. 14 min.
Tuesday:	30 min.
Wednesday:	1 hr. 16 min.
Thursday:	3 hr. 25 min.
Friday:	1 hr. 45 min.
Sum total:	9 hr. 10 min.

page 58

Addition

Solve.

1. 3,256,289 + 17 + 2,569 = 3,258,875
2. 3 + 7 + 5 + 4 + 6 + 5 + 3 = 33
3. 15 + 12 = 27
4. 4 + 19 = 23
5. 209 + 327 = 536



6. 8 ft. 11 in. + 2 ft. 5 in. = 11 ft. 4 in.
7. 16 lb. 14 oz. + 5 lb. 12 oz. = 22 lb. 10 oz.
8. 4 hr. 44 min. + 5 hr. 33 min. = 10 hr. 17 min.
9.  + 2 hours 20 minutes. Time: 10:15
10. The Grant family is having a large crowd for Thanksgiving dinner. They bought two turkeys for dinner. One turkey weighs 15 lbs. 8 oz. The second turkey weighs 19 lbs. 10 oz. How much turkey do they have?

35 lbs. 2 oz.

page 59

Linking Verbs

Linking verbs link the subject to a word in the predicate. The linking verbs most often used are **am**, **is**, **are**, **was** and **were**.

Example:
*We **were** happy about the outcome.*

A linking verb may be followed by a **predicate noun**, which renames the subject, or a **predicate adjective**, which describes the subject.

Examples:
*Harry is a **teacher**.* (predicate noun)
*The weather is **sunny**.* (predicate adjective)

Answers may include: verb

Complete each sentence with a predicate noun.

1. Sarah is a skater.
2. Her best friend is a swimmer.

Circle each predicate noun. **Underline** the noun or pronoun in the subject that is renamed.

1. The children were (actors).
2. The setting of the play was a (garden).
3. Butterflies are (main characters) in the play.
4. Ralph is the (star).

Complete each sentence with a predicate adjective.

1. Today's weather is sunny.
2. Tom will be funny.

Circle each predicate adjective. **Underline** the noun or pronoun in the subject that is described.

1. The trap-door spider is (clever).
2. Its building skills are (amazing).
3. The webs covering the walls were (soft and silky).
4. The trap was (invisible).

page 64

Forms of Be, Do and Have

Some forms of the verb **be** can be used as linking or helping verbs. Three forms of **be** cannot be used alone as verbs: **be**, **being** and **been**. These must always be used with helping verbs.

Examples:
*Polar bears **are** carnivores. (**be** as linking verb)*
*The polar bear **is** hunting the seal. (**be** as helping verb)*
*A polar bear **has been** seen near here. (**be** with helping verb)*
Forms of **be**: ***am, is, are, was, were, be, being, been***

Complete each sentence below with the correct form of the verb **be** found in parentheses. Add helping verbs where needed.

1. Polar bears are excellent swimmers. (is, are)
2. The polar bear was seen running at a speed of 35 miles per hour. (was, being)
3. I am sure I saw a polar bear swimming in the water. (am, are)
4. Polar bears have been seen swimming many miles from shore. (been, have been)

The verbs **do** and **have** can be used as main verbs or as helping verbs.

Examples:
*I **have** traveled to Canada to see polar bears. (helping verb)*
*I **did** my report on polar bears yesterday. (main verb)*
Forms of **do**: ***do, did, done*** Forms of **have**: ***have, has, had***

Complete the story below using the correct forms of the verbs **do** and **have**.

I do believe polar bears are very beautiful. I have seen them along the coast of Alaska. I did see one come up to our tour bus. By the age of 10 years, a male polar bear has grown to its full size. Countries around the Arctic have done a very good job of trying to save the polar bear from extinction. Polar bears have beautiful coats which have attracted hunters. Now the bears have protection from hunters by law.

page 65

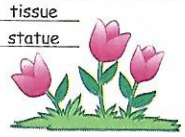
The Truth About u

argue, blue, confuse, due, duke, dune, excuse, include, issue, museum, plume, ruby, rude, statue, tissue, truth, tube, tulip

The words in the list have the oo or yoo sound. **Write** each word in the appropriate category.

Classy oo Categories

u-e	ue	u
confuse	argue	ruby
duke	blue	truth
dune	due	tulip
excuse	issue	museum
include	tissue	
plume	statue	
rude		
tube		



Oops! We have elephant words. Just like elephants, we must remember that a few words make the oo or yoo sound spelled with **iew**, as in **review**, **o-e**, as in **lose**, or **eau** as in **beauty**. **Write** the five elephant words in alphabetical order. Note the number of syllables each word contains in the parentheses ( ).

Elephant Words

review, whose, beautiful, preview, lose

1. beautiful (3)
2. lose (1)
3. preview (2)
4. review (2)
5. whose (1)

page 66

Estimating Differences

To estimate differences, round the numbers and then subtract. This skill can be used daily. An example of this would be when you travel by car. If you have a distance of 862 miles to travel and you've gone 381, you can round and subtract in your head—900 – 400 leaves approximately 500 more miles to go.

Nearest Ten	Nearest Hundred	Nearest Thousand
48 → 50 – 13 → – 10 35 → 40	841 → 800 – 289 → – 300 552 → 500	6,780 → 7,000 – 1,912 → – 2,000 4,868 → 5,000
Actual = 35 Estimated = 40 Difference = 5	Actual = 552 Estimated = 500 Difference = 52	Actual = 4,868 Estimated = 5,000 Difference = 132

Keep in mind that these answers are approximate, so this method should not be used if you want an exact answer.

Subtract by estimating.

1. 93 → 90
– 68 → 70
20
2. 571 → 600
– 139 → 100
500
3. 4,899 → 5,000
– 1,916 → 2,000
3,000
4. 88 → 90
– 19 → 20
70
5. 912 → 900
– 778 → 800
100
6. 8,211 → 8,000
– 5,928 → 6,000
2,000
7. 71 → 70
– 28 → 30
40
8. 622 → 600
– 266 → 300
300
9. 6,935 → 7,000
– 2,899 → 3,000
4,000

page 67

Opposite Operation of Subtraction

Write the missing number in each subtraction sentence. Check your answer with addition. The first one shows you how.

1. 15 – 10 = 5
5 + 10 = 15
2. 36 – 12 = 24
3. 48 – 8 = 40
4. 17 – 8 = 9
5. 32 – 12 = 20
6. 47 – 10 = 37

Two subtraction problems can be made from the same model. **Complete** the subtraction sentences below. **Write** a second subtraction sentence for each based on the same model.

11 – 4 = 7 11 – 7 = 4

7. 12 – 5 = 7
12 – 7 = 5
8. 33 – 22 = 11
33 – 11 = 22
9. 87 – 31 = 56
87 – 56 = 31
10. 20 – 8 = 12
20 – 12 = 8
11. 85 – 60 = 25
85 – 25 = 60
12. 187 – 65 = 122
187 – 122 = 65

13. After I gave my friend 12 rocks from my collection, I still had 15 rocks. How many rocks were in my collection before I gave some away?
27 rocks
14. The bag of cookies had 20 cookies in it. Joe took some out for his lunch and left 12 in the bag. How many cookies did Joe take for lunch?
8 cookies

page 68

Variables in Subtraction

A **variable** is a letter in an equation that stands for what is not known. **Solve** for the missing number. The first one has been done for you.

1. 25 – 13 = x
x = 12
2. 17 – 13 = p
p = 4
3. 85 – 50 = y
y = 35
4. 27 – 13 = z
z = 14
5. 109 – 88 = n
n = 21
6. 69 – 54 = h
h = 15
7. 356 – 89 = r
r = 267
8. 2,859 – 1,765 = k
k = 1,094
9. 26,251 – 287 = c
c = 25,964
10. 5,222 – 133 = a
a = 5,089
11. 22,041 – 1,850 = s
s = 20,191
12. 23,001 – 1,243 = w
w = 21,758
13. 57,005 – 36,996 = f
f = 20,009
14. 11,221 – 11,221 = m
m = 0
15. 865,397 – 356,286 = b
b = 509,111
16. 5,322 – 1,451 = e
e = 3,871

page 69

Irregular Verbs

Verbs that do not add **ed** to show the past tense are called **irregular verbs**. Irregular verbs change in spelling in the past tense.

Examples:

Present	Past	Past with helpers
begin	*began*	*(has, have) begun*
see	*saw*	*(has, have) seen*
drive	*drove*	*(has, have) driven*

Fill in the blanks on the chart. You may refer to a dictionary.

Present	Past	Past with helpers
speak	spoke	spoken
take	took	taken
ride	rode	ridden
choose	chose	chosen
ring	rang	rung
go	went	gone
drink	drank	drunk
drive	drove	driven
draw	drew	drawn
know	knew	known
eat	ate	eaten
do	did	done

Underline the correct verb in each sentence below.

1. Martha has (began, begun) her research project.
2. First, she (chose, chosen) the topic.
3. She (drove, driven) many places to locate information.
4. Martha made a list of the interviews she had (did, done).
5. She (spoke, spoken) to people of many ages.
6. Many (knew, known) a great deal about the subject.
7. While interviewing people, Martha had (took, taken) notes.
8. Diagrams were (drew, drawn) for the project.

page 74

Adverbs Modify

You have learned that adverbs modify verbs. An **adverb** can also modify **adjectives** and **other adverbs**. These adverbs usually tell **how much** or **to what degree**.

Examples:

*The eagle's descent was **very** steep.*
(modifies "steep," an adjective)
*The eagle attacked the fish **quite** suddenly.*
(modifies "suddenly," an adverb)

Underline only the adverbs in the sentences below that modify an adjective or another adverb. **Draw** an arrow to the word that each modifies. In the blank, **write** if the modified word is an adjective or an adverb.

1. The eagle spread its wings very wide. adverb
2. It had to fly quite far to the lake. adverb
3. The eagle is an extremely graceful bird. adjective
4. It is much larger than most birds. adjective
5. Its hooked beak is rather sharp. adjective
6. The eagle watched the lake very carefully. adverb
7. A large trout is really tasty food for the eagle. adjective
8. A beautiful rainbow trout jumped quite suddenly out of the water adverb
9. The eagle has extremely sharp eyesight. adverb
10. It swooped almost instantly toward the fish. adverb

Answers may include:

1. The eagle flew extremely low over the water's surface.
2. Then, it flew quite high into the blue summer sky.
3. It landed in its nest very gently.
4. The eagle is a truly majestic bird.
5. It has to be very patient as it hunts for food.

page 75

Conquering Compounds

barnyard
blastoff
brand-new
chairperson
cupboard
hide-and-seek
homesick
ice skate
jack-o'-lantern
peanut butter
polar bear
post office
seagull
snowstorm
topsy-turvy
town crier
yardstick
zip code

There are three types of compound words: (1) **closed compound**—two separate words joined together, that create a new meaning and written as one word; (2) **open compound**—two separate words create a new meaning, but the two words are not joined together; (3) **hyphenated compound**—two or more words, written separately but connected by a hyphen, create a new meaning.

Add a word or words to each word below to form a compound word from the spelling list.

1. cup cupboard
2. snow snowstorm
3. home homesick
4. barn barnyard
5. chair chairperson
6. yard yardstick
7. sea seagull
8. hide- hide-and-seek
9. brand- brand-new
10. polar polar bear
11. ice ice skate
12. peal peanut butter
13. blast blastoff
14. post post office
15. topsy- topsy-turvy
16. town town crier
17. zip zip code
18. jack- jack-o'-lantern

page 76

Subtracting Different Units

Subtract the units. Regroup the feet and inches.

Example:

3 ft. 5 in. − 1 ft. 8 in.

Cannot take 8 from 5, so regroup 1 foot.

2 +12 in. 3 ft. 5 in. − 1 ft. 8 in.

2 3 ft. 17 in. − 1 ft. 8 in. 1 ft. 9 in.

1. 5 ft. 8 in. − 3 ft. 9 in. = 1 ft. 11 in.
2. 17 ft. 3 in. − 5 in. = 16 ft. 10 in.
3. 11 ft. 5 in. − 8 ft. 6 in. = 2 ft. 11 in.
4. 20 ft. 4 in. − 6 ft. 8 in. = 13 ft. 8 in.
5. 17 ft. 0 in. − 1 ft. 6 in. = 15 ft. 6 in.
6. 115 ft. − 7 ft. 8 in. = 107 ft. 4 in.
7. The carpenter's board was 8 ft. 8 in. long. She cut off 1 ft. 10 in. to use on a bench. How much of the board was left? 6 ft. 10 in.

Subtract the units. Regroup the days and weeks.

Example:

3 weeks 1 day − 1 week 5 days

2 +7 days 3 weeks 1 day − 1 week 5 days

Cannot take 5 from 1, so regroup 1 week.

2 3 weeks 8 days − 1 week 5 days 1 week 3 days

8. 4 weeks 2 days − 2 weeks 5 days = 1 week 4 days
9. 3 weeks 5 days − 1 week 2 days = 2 weeks 3 days
10. 11 weeks 4 days − 7 weeks 4 days = 4 weeks 0 days

page 77

Subtracting in Different Bases

Subtract the units. Regroup the pounds and ounces.

Example:

17 lb. 3 oz. − 12 lb. 5 oz.

16 +16 oz. 17 lb. 3 oz. − 12 lb. 5 oz.

16 17 lb. 19 oz. − 12 lb. 5 oz. 4 lb. 14 oz.

1. 5 lb. 8 oz. − 3 lb. 8 oz. = 2 lb. 0 oz.
2. 17 lb. 3 oz. − 12 lb. 11 oz. = 4 lb. 8 oz.
3. 9 lb. 11 oz. − 3 lb. 14 oz. = 5 lb. 13 oz.
4. 2 lb. 5 oz. − 8 oz. = 1 lb. 13 oz.
5. 1 lb. 8 oz. − 9 oz. = 15 oz.
6. 7 lb. − 1 lb. 9 oz. = 5 lb. 7 oz.

Subtract the units. Regroup the minutes and seconds.

Example:

3 min. 25 sec. − 1 min. 45 sec.

2 +60 sec. 3 min. 25 sec. − 1 min. 45 sec.

2 3 min. 85 sec. − 1 min. 45 sec. 1 min. 40 sec.

7. 7 min. 46 sec. − 3 min. 29 sec. = 4 min. 17 sec.
8. 4 min. 47 sec. − 3 min. 28 sec. = 1 min. 19 sec.
9. 9 min. 23 sec. − 8 min. 51 sec. = 32 sec.
10. 4 min. 21 sec. − 2 min. 53 sec. = 1 min. 28 sec.
11. 12 min. 19 sec. − 8 min. 42 sec. = 3 min. 37 sec.
12. 16 min. 42 sec. − 8 min. 25 sec. = 8 min. 17 sec.

page 78

Prepositional Phrases

A **prepositional phrase** is a group of words that begins with a preposition and ends with the object of the preposition.

Example: *Water makes up about 65 percent* ***of the human body.***

Circle the prepositional phrases in the sentences.

1. An adult skeleton consists (of about 200 bones).
2. The body (of a 160-pound man) contains about 5 quarts (of blood).
3. People who live (in high altitudes) may have more blood flowing (in their veins).
4. Our skin helps protect our inner tissues (from the outside world).

If a prepositional phrase modifies a noun or pronoun, it acts as an **adjective**. If a prepositional phrase modifies a verb, it acts as an **adverb**.

Examples: *Fluids* ***in the inner ear*** *help us maintain our balance.* (adjective)
The doctors talked ***in loud voices.*** (adverb)

Circle the prepositional phrase in each sentence. Then, identify it as an **adjective** or **adverb** on the line.

1. The muscles (in the human body) number 600. adjective
2. All adults should brush their 32 teeth (with great care). adverb
3. Our skin might burn (in the hot sun). adverb
4. Every person (on the earth) is warm-blooded. adjective
5. The man went (through the hospital doors). adverb
6. The temperature (inside the body) is about 98.6°. adjective
7. The dentist looked (inside my mouth). adverb

page 84

Puzzling Compounds

baseball	basketball	breakfast	classroom	driftwood	firefly
flagpole	harmless	knickknack	lifetime	motorcycle	paperback
playhouse	railway	switchboard	taxicab	textbook	tiptoe

Write a spelling word that matches each clue. Then, read down the boxed letters to solve the riddle.

1. a place to learn — classroom
2. the morning meal — breakfast
3. not capable of hurting — harmless
4. game played with a bat and a ball — baseball
5. to walk softly — tiptoe
6. sometimes called a lightning bug — firefly
7. one's entire period of existence — lifetime
8. It supports Old Glory — flagpole

Riddle: *Which tree is the most difficult to get along with?*

Answer: crabtree

Write a spelling word that belongs in each group.

1. hoop, whistle, basketball
2. tracks, railroad, railway
3. school, subjects, textbook
4. toys, games, playhouse
5. wood, ashore, driftwood
6. circuit, panel, switchboard
7. read, novel, paperback
8. 2-wheeled, helmet, motorcycle
9. fare, driver, taxicab
10. trinket, decoration, knickknack

page 85

Timed Multiplication

1	9	4	8	2	5	7	12
x 1	x 3	x 10	x 3	x 10	x 7	x 4	x 3
1	27	40	24	20	35	28	36
10	12	10	4	7	11	6	3
x 3	x 9	x 5	x 9	x 5	x 2	x 6	x 2
30	108	50	36	35	22	36	6
5	10	9	3	5	9	8	6
x 8	x 4	x 4	x 3	x 9	x 6	x 5	x 7
40	40	36	9	45	54	40	42
4	11	12	1	7	10	2	4
x 8	x 3	x 5	x 4	x 7	x 6	x 7	x 7
32	33	60	4	49	60	14	28
3	6	9	5	11	3	10	1
x 4	x 8	x 5	x 10	x 9	x 5	x 7	x 5
12	48	45	50	99	15	70	5
2	8	9	4	9	8	7	4
x 6	x 7	x 2	x 6	x 8	x 8	x 9	x 5
12	56	18	24	72	64	63	20
10	3	6	11	9	2	12	7
x 8	x 6	x 10	x 6	x 7	x 5	x 10	x 10
80	18	60	66	63	10	120	70

page 86

Multiplication (One-Digit Multiplier)

Example A (no regrouping)

234 × 2 = 468

Step 1 Multiply ones. 2 x 4 = 8
Step 2 Multiply tens. 2 x 3 = 6
Step 3 Multiply hundreds. 2 x 2 = 4

Example B (regrouping)

21 563 × 4 = 2,252

Step 1 Multiply ones. 4 x 3 = 12 ones = 1 ten 2 ones. Carry the 1.
Step 2 Multiply tens. 4 x 6 + 1 = 25 tens = 2 hundreds 5 tens. Carry the 2.
Step 3 Multiply hundreds. 4 x 5 + 2 = 22 hundreds = 2 thousands 2 hundreds.

Example C (regrouping and zeros)

75 7,086 × 9 = 63,774

Step 1 Multiply ones. 9 x 6 = 54 ones = 5 tens 4 ones. Carry the 5.
Step 2 Multiply tens. 9 x 8 + 5 = 77 tens = 7 hundreds 7 tens. Carry the 7.
Step 3 Multiply hundreds. 9 x 0 + 7 = 7 hundreds.
Step 4 Multiply thousands. 9 x 7 = 63 thousands = 6 ten-thousands 3 thousands.

Multiply.

1. 323 × 8 = 2,584
2. 1,132 × 2 = 2,264
3. 789 × 5 = 3,945
4. 4,008 × 7 = 28,056
5. 2,580 × 3 = 7,740
6. 888 × 6 = 5,328
7. 4,234 × 4 = 16,936
8. 589 × 9 = 5,301
9. 3,211 × 3 = 9,633

page 87

Conjunctions

A conjunction joins words, groups of words or entire sentences. The most common conjunctions are **and**, **or**, **but**.

Examples:
Christian Huygens ***and*** *Jean Cassini made discoveries about Saturn.* (joins subjects)

The Italian astronomer Galileo first saw Saturn's rings through a telescope, ***but*** *the rings weren't very clear.* (joins sentences)

He discovered the rings in the early 1600s ***and*** *thought they were large satellites.* (joins predicates)

Add a conjunction to each sentence below.

1. Did you know that Saturn takes about 29½ Earth-years to orbit the Sun, ___or___ are you still looking up that fact?
2. Saturn ___and___ Earth have very different day lengths.
3. Earth's day is about 24 hours, ___but___ Saturn's is only about 10½ hours.
4. Saturn has 23 satellites that have been discovered, ___and___ Earth has only one.
5. Saturn's natural satellites all have different names, ___but___ Earth's satellite is just called "the Moon."
6. Saturn has many rings that surround it, ___but___ Earth has none.

Add a conjunction to each phrase below that describes Saturn.

1. beautiful ___and___ majestic
2. far away, ___but___ gigantic
3. larger than Earth, ___but___ lighter in comparison
4. shorter days than Earth ___and___ faster rotation
5. atmosphere of mostly hydrogen ___and___ helium
6. beautiful rings ___but___ not the only planet with them

page 92

Interjections and Direct Address

Strong interjections, which show great feeling, are followed by exclamation points.

Mild interjections, such as **now**, **well** and **yes**, are set apart by commas.

A comma or commas are used to set apart the name of a person being directly spoken to, or addressed, in a sentence. This is called **direct address**.

Examples:
Ugh! *That soup is horrible.* (strong interjection)
No. *I haven't finished my homework yet.* (mild interjection)
Sue, *please hand me the pencil.* (direct address)
Thank you, ***Jean,*** *for your contribution.* (direct address)

Add commas and exclamation points where they are needed in the following sentences.

1. Yes, we will finish the science project soon.
2. Wow! I forgot that it must be completed by Friday.
3. Oh! I forgot that the materials for the experiment are at home.
4. Jim, bring the microscope to the science lab.
5. Now, Leonard, it's your turn to work on the experiment.
6. Will the research for the project be completed soon, Amy?
7. No, Mrs. Clarke, it will take at least another week.
8. Yikes! That was a scary experiment you did, Mark.

Add commas and exclamation points where they are needed in the following sentences. In the blank, **write** the letter of the reason each punctuation mark is used. Some have two answers.

A. Interjection **B.** Direct Address

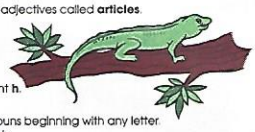
1. ___B___ Lewis, will you attempt this experiment on air pressure?
2. ___A___ No! I need to work on my electricity project Sam.
3. ___B___ I need some help, Mr. Johnson, with my electrical circuit.
4. ___B___ The science lab is too crowded to set up the project, Ms. Chang.
5. ___A___ Cool! I would love to use the other lab.
6. ___A/B___ Yes, I'll try to set up the project in that room, Sarah.
7. ___A___ Well, that solved my problem.

page 93

Articles

A, **an** and **the** are special kinds of adjectives called **articles**.

Use **a** before singular nouns that begin with a consonant sound.
Example: ***a*** *lizard*



Use **an** before singular nouns that begin with a vowel sound or a silent **h**.
Examples: ***an*** *insect* ***an*** *hour*

Use **the** before singular or plural nouns beginning with any letter.
Examples: ***the*** *lizards* ***the*** *branch*

Write a, an or the in the blanks to complete the paragraph.

There are nearly 3,000 different kinds of lizards. ___The___ lizard may have ___a___ tail that is much longer than its body. ___A___ lizard may even leave its tail behind when escaping from ___an___ enemy. ___The___ lizard then grows ___a___ new tail. *Dinosaur* is ___a___ word that means "terrible lizard." But ___the___ dinosaur and ___the___ lizard are not in ___the___ same family. Most lizards hatch from ___a___ leathery egg. ___A___ chameleon is ___a___ type of lizard that actually changes color for many different reasons. ___The___ chameleon may change color if it is frightened. It also changes color in response to ___a___ change in temperature or light. ___The___ chameleon gets close enough to shoot out its tongue to capture ___an___ insect to eat. ___A___ chameleon's tongue may be as long as its body. Lizards are truly ___an___ interesting type of animal!

Complete each sentence below using **a**, **an** or **the**.

1. ___An___ insect would not taste as good to me as it does to lizards!
2. ___A___ lizard could lose its tail while escaping from its enemies.
3. ___The___ chameleon's eyes can move in two different directions at once.
4. Some geckos make ___a___ loud sound.
5. ___The___ claws of some gecko lizards can be drawn in like a cat's.

page 94

Contraction Action

you are	you're	should not	shouldn't
would not	wouldn't	did not	didn't
I had	I'd	could not	couldn't
let us	let's	was not	wasn't
we have	we've	are not	aren't
you had	you'd	is not	isn't
has not	hasn't	they have	they've
he is	he's	can not	can't
they are	they're	were not	weren't

aren't, can't, couldn't, didn't, hasn't, he's, I'd, isn't, let's, shouldn't, they're, they've, wasn't, weren't, we've, wouldn't, you'd, you're

Now, put the contractions into word families.

(n't) not family		('s) is family
wouldn't	wasn't	he's
hasn't	aren't	
shouldn't	isn't	('s) us family
didn't	can't	let's
couldn't	weren't	

('re) are family	('d) would/had family	('ve) have family
they're	I'd	we've
you're	you'd	they've

page 95

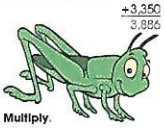
Multiplication (Two-Digit Multiplier)

Example A (no regrouping)

```
  21
x 44
  84
+840
 924
```

Step 1 Multiply by ones.
4 x 1 = 4
4 x 2 = 8
Step 2 Multiply by tens.
Add zero in the ones column.
4 x 1 = 4
4 x 2 = 8
Step 3 Add.
84 + 840 = 924

Example B (regrouping)



```
  67
x 58
 536
+3,350
 3,886
```

Step 1 Multiply by ones.
8 x 7 = 56 (Carry the 5.)
8 x 6 + 5 = 53
Step 2 Multiply by tens.
Add zero in the ones column.
5 x 7 = 35 (Carry the 3.)
5 x 6 + 3 = 33
Step 3 Add.
536 + 3,350 = 3,886

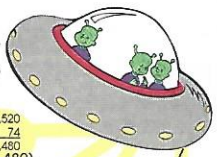
Multiply.

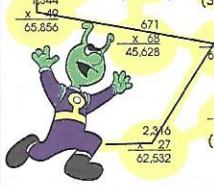
1. 43 x 33 = 1,419	2. 55 x 46 = 2,530	3. 78 x 68 = 5,304
4. 39 x 27 = 1,053	5. 21 x 87 = 1,827	6. 77 x 24 = 1,848
7. 44 x 16 = 704	8. 80 x 71 = 5,680	9. 65 x 49 = 3,185

page 96

Multiplication Maze

These multiplication problems have already been done, but some of them are wrong. Check each problem. **Connect** the problems with correct answers to make a path for Zerpo to get back to his ship. Then, **correct** each wrong answer.

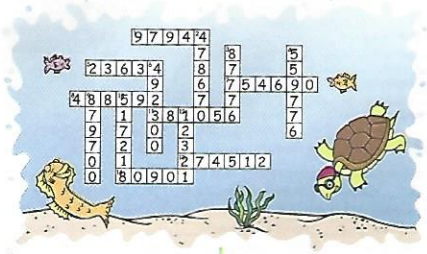




page 97

Puzzling Cross Number

Solve the multiplication problems below. **Write** the answers in the puzzle.



Across

1. 462 x 212 = 97,944
5. 234 x 101 = 23,634
7. 926 x 815 = 754,690
8. 624 x 783 = 488,592
11. 832 x 458 = 381,056
13. 336 x 817 = 274,512
14. 801 x 101 = 80,901

Down

2. 634 x 755 = 478,670
3. 208 x 422 = 87,776
4. 672 x 833 = 559,776
6. 547 x 900 = 492,300
9. 926 x 950 = 879,700
10. 698 x 741 = 517,218
12. 111 x 111 = 12,321

page 98

Bird-Watcher's List

Almost every bird-watcher keeps a list of the birds that he/she sees. Use the chart below to record the species of birds that you see, as well as the date, time and place that you see them. Accurate identification may also be made by identifying the sound of a bird. If a species is only heard and not seen, place an "**H**" after its name.

Observer: Student's Name
Date: 3-27-99

SPECIES	DATE	TIME	LOCALITY
Cardinal	3-27	10am	Toledo Metro Park

Answers will vary.

What bird did you see?
Look at the following.

1. Size
Is it bigger or smaller than a sparrow? robin? crow?

2. Shape
of head
of wings
of tail

3. Color and Marks
on body
on tail
on head
on wings

4. Habitat and Behaviors
What was it doing?
Where was it?
How does it fly?

page 99

Review of Verbs

Underline the complete verb in the following sentences. Be sure to include any helping verbs. **Write** if the verb is an **action** verb or **being** verb and whether the main verb is **regular** or **irregular**.

action	*regular*	**He stepped onto the plane.**
being	irregular	1. Black soot and brilliant diamonds are both carbon.
being	irregular	2. Diamonds are crystals of carbon.
action	regular	3. The carbon must be pressed very hard.
action	regular	4. It must be heated very hot at the same time.
action	irregular	5. Miners usually find diamonds deep in the ground.
being	irregular	6. For centuries, most diamond mines were in India.
action	irregular	7. Now the biggest diamond mines are found in Africa.
action	irregular	8. One day in 1866, some children saw a pretty pebble in a river near Hopetown, South Africa.
action	regular	9. It looked like frosted glass.
action	irregular	10. The children brought it home with them.
action	regular	11. One day a neighbor offered money for it.
action	irregular	12. The children gave it to him for nothing.
action	irregular	13. The children did not know the value of the stone.
being	irregular	14. It was a diamond.
action	irregular	15. Word about this discovery spread quickly.
action	regular	16. Other people hunted for diamonds nearby.
action	regular	17. Many of them were disappointed.
action	irregular	18. However, some people found diamonds in the area.
action	regular	19. They were blessed with good fortune.
action	regular	20. Diamonds were discovered in other parts of Africa as well.

page 104

Multiplication's Opposite

Use the multiplication problem to help solve the division problems.

Example:
6 x 7 = 42
42 ÷ 7 = 6
42 ÷ 6 = 7

1. 4 x 8 = 32
32 ÷ 8 = 4
32 ÷ 4 = 8

2. 9 x 9 = 81
81 ÷ 9 = 9

3. 7 x 8 = 56
56 ÷ 8 = 7
56 ÷ 7 = 8

4. 22 x 12 = 264
264 ÷ 12 = 22
264 ÷ 22 = 12

5. 37 x 19 = 703
703 ÷ 37 = 19
703 ÷ 19 = 37

Solve the following problems and **write** two related division problems for each.

Sample Answers

6. 22 x 17 = 374
374 ÷ 17 = 22
374 ÷ 22 = 17

7. 45 x 29 = 1,305
1,305 ÷ 45 = 29
1,305 ÷ 29 = 45

8. 19 x 82 = 1,558
1,558 ÷ 82 = 19
1,558 ÷ 19 = 82

9. 671 x 63 = 42,273
42,273 ÷ 63 = 671
42,273 ÷ 671 = 63

10. 663 x 54 = 35,802
35,802 ÷ 663 = 54
35,802 ÷ 54 = 663

11. 719 x 73 = 52,487
52,487 ÷ 73 = 719
52,487 ÷ 719 = 73

page 105

First Quarter Test

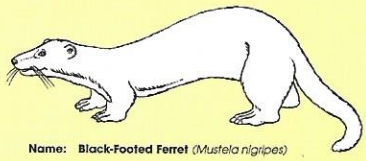
1. Write 4,507,039,005 in words. four billion, five hundred seven million, thirty-nine thousand, five
2. Write in numerals: sixty-nine million, one hundred twelve thousand, two hundred seven. 69,112,207
3. Round 3,760 to the nearest hundred. 3,800 Round 28,343 to the nearest ten. 28,340
4. 3 + 7 + 4 + 5 + 5 = *a* ; *a* = 24
5. 26,309 + 811 = *x* ; *x* = 27,120
6. 59 + 19 = 78
7. 22 ft. 7 in. + 3 ft. 6 in. = 26 ft. 1 in.
8. 7 lbs. 10 oz. + 3 lbs. 10 oz. = 11 lbs. 4 oz.
9. 8,345,246 − 45,239 = 8,299,007
10. 81 − 42 = 39
11. 87 − 34 = 53
12. 17 min. 12 sec. − 5 min. 20 sec. = 11 min. 52 sec.
13. Provide change from $5.00 for a $2.59 purchase. $2.41
14. 37 x 85 = 85 x 37
15. (8 x 7) x 6 = 336
16. 75 x 7 = *x* ; *x* = 525
17. Multiply: 126 x 100 = *y* ; *y* = 12,600
18. Estimate: 79 x 9 = *c* ; *c* = 800
19. Solve: 39 x 48 = 1,872
1,872 ÷ 48 = 39

page 106

Endangered

Many of the animals in the grassland community are very rare, and some are in danger of becoming extinct. The American buffalo was once one of those animals. In 1889, only 551 of them remained. Today, after laws were established to protect them, there are about 15,000 buffalo in the U.S.

The black-footed ferret, which lives in the western Great Plains of North America, is an endangered species. Complete the chart below and color the picture. You will need to find information from an encyclopedia or other source to help you.



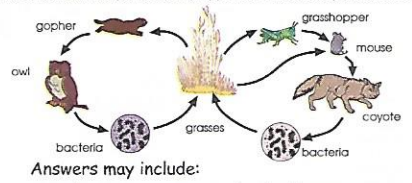
Name: **Black-Footed Ferret** *(Mustela nigripes)*

Size: 50-65 cm (20"-26") long
Color: dull yellow coat, brown head
Habitat: prairies of North America
Diet: prairie dogs
Conditions leading to its endangered status: drastically reduced number of prairie dogs (main food source)

page 107

The Prairie Food Web

In complex grassland communities like the prairie, the flow of food and energy cannot be described by a simple food chain. Instead, it is represented by a series of interconnected food chains called a **food web**. The many kinds of producers and consumers in the prairie community provide a wide variety of food sources.



Answers may include:

1. coyote → mouse
2. owl → gopher
3. bacteria → grass
4. mouse → grasshopper

2. If there were no coyotes left in the prairie community, what would happen to the mouse population? Why? The mouse population would increase because its main predator would not be around to eat it.
3. If there was a decrease in the owl population, what would happen to the gopher population? Why? The gopher population would increase because fewer gophers would be eaten.
4. If the prairie grasses were destroyed by fire, what would happen to the coyote population? Why? The coyote population would probably decrease because its food source would be threatened.
5. What does it mean when we say, "The death of one species in a food web upsets the rest of the web"? It means that the food source of each species in the web will be threatened. Some species may have too much food, while others suffer from lack of food.

page 109

Kinds of Sentences

There are four kinds of sentences.
A **declarative** sentence makes a statement.
Tuesday was a chilly day.
An **interrogative** sentence asks a question.
Was Tuesday a chilly day?
An **imperative** sentence gives a command or makes a request.
Be at my house at 11 o'clock.
An **exclamatory** sentence expresses excitement or strong feeling.
What a terrible storm!

Identify each type of sentence.

1. The Hawaiian Islands are really mountaintops. declarative
2. Were those mountains once active volcanoes? interrogative
3. Read the article in the magazine that Sid brought. imperative
4. What beautiful pictures that article has! exclamatory
5. Hawaii is made up of a chain of 132 islands in the Pacific Ocean. declarative
6. Bring your lei to school tomorrow. imperative
7. Which island has the most people living on it? interrogative
8. I just can't believe that the small island of Oahu does! exclamatory
9. I'm astonished that the average temperature is 75° F! exclamatory

Rewrite each sentence as the type suggested in parentheses.

10. Were the Polynesians the first people on Hawaii? (declarative) The Polynesians were the first people on Hawaii.
11. An English explorer, Captain Cook, named the islands the "Sandwich Islands." (interrogative) Did the English explorer, Captain Cook, name the "Sandwich Islands"?
12. Will you bring me a present from Hawaii? (imperative) Bring me a present from Hawaii.

page 114

Managing Short a

Say each word. Listen for the **short a** sound(s) and the number of syllables. Then, complete the graphic organizer.

additive, badge, chapter, daffodil, dragon, fraction, gathering, kangaroo, magazine, pasture, patches, rapid, sassafras, standard, tacks, thankful, transplant, traveler

Short a words

One syllable: badge, tacks

Two syllables: chapter, dragon, fraction, pasture, patches, rapid, standard, thankful, transplant

Three syllables: additive, daffodil, gathering, sassafras, traveler, kangaroo, magazine

Words containing two **short a** sounds: kangaroo, transplant

Word Expansion: We can expand the use and meaning of a root word by adding various suffixes and endings or by changing the tense. Expand the words below.

Answers may include:

thank	add	pack	patch
thanks	adds	packs	patches
thanked	added	packed	patched
thankful	adding	packing	patching
thankless	addition	packer	patcher

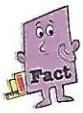
page 115

To Know and Understand

A **fact** is something that is proven to be true. An **opinion** is what someone believes. People hold differing opinions, some of which are unfair or untrue.
Use the code to **label** each statement below.

F = Fact **PO** = Phillip's opinion **MO** = Phillip's mother's opinion **TO** = Timothy's opinion

1. Black people were odd because they ate raw fish. PO
2. Timothy's nose was flat and his face was broad. F
3. Timothy should have let Phillip stay in the water. MO
4. Phillip was nearly twelve years old. F
5. The cat brought bad luck. TO
6. Timothy was saving all the water for himself. PO
7. It was safer to leave Curacao than stay. TO
8. In Virginia, blacks and whites lived in different parts of town. F
9. Timothy was strange because he didn't know his parents. PO
10. White children should not play near black workers. MO
11. Timothy could be a very stubborn person. PO



Discussion: In your neighborhood, what are some opinions people hold that are unfair? Is it fair to tease or ignore people who are different from you? Talk about how the following types of people are treated in your neighborhood.

- physically handicapped people
- people who speak other languages
- awkward people
- poor/rich people
- popular/unpopular people
- younger/older people
- people of other cultures
- mentally impaired people
- attractive/unattractive people
- girls/boys

page 116

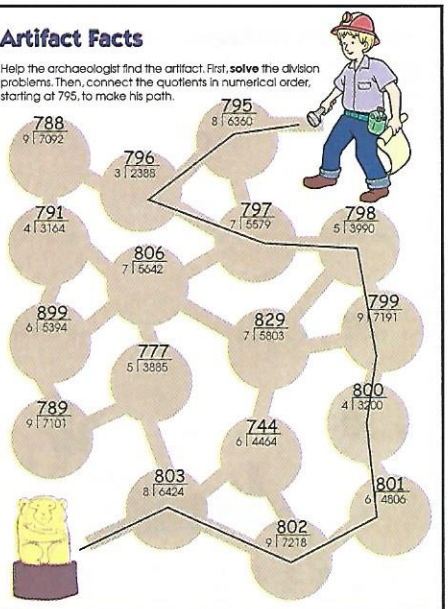
Division Facts

8 / 3|24	9 / 9|81	5 / 8|40	1 / 4|4	10 / 9|90	7 / 8|56	4 / 6|24
2 / 7|14	7 / 7|49	4 / 5|20	6 / 6|36	8 / 9|72	4 / 4|16	9 / 3|27
8 / 8|64	4 / 9|36	5 / 5|25	5 / 9|45	9 / 2|18	6 / 4|24	1 / 8|8
3 / 3|9	7 / 2|14	9 / 6|54	3 / 7|21	4 / 8|32	6 / 5|30	6 / 1|6
2 / 2|4	9 / 9|81	5 / 6|30	2 / 4|8	10 / 5|50	3 / 5|15	10 / 2|20
10 / 1|10	1 / 7|7	8 / 2|16	5 / 3|15	7 / 7|49	4 / 1|4	7 / 9|63
2 / 8|16	6 / 2|12	9 / 8|72	10 / 3|30	7 / 9|63	6 / 3|18	8 / 7|56
1 / 9|9	9 / 7|63	4 / 2|8	10 / 8|80	4 / 7|28	2 / 6|12	2 / 3|6
6 / 7|42	4 / 3|12	5 / 7|35	3 / 9|27	7 / 6|42	2 / 5|10	9 / 5|45
5 / 2|10	6 / 9|54	5 / 4|20	6 / 8|48	2 / 9|18	1 / 6|6	3 / 2|6

page 117

Artifact Facts

Help the archaeologist find the artifact. First, **solve** the division problems. Then, connect the quotients in numerical order, starting at 795, to make his path.



page 118

Zeros in the Quotient

Zero holds a place in the quotient.

Example:

$$5\overline{)545}\quad -5\ (04)\quad -5\ (45)\quad -45\ (0)$$

Five goes into 4 zero times. Five goes into 45 nine times.

1. $4\overline{)420}$ = 105
2. $6\overline{)636}$ = 106
3. $9\overline{)963}$ = 107
4. $9\overline{)945}$ = 105
5. $9\overline{)963}$ = 107
6. $8\overline{)816}$ = 102
7. $3\overline{)312}$ = 104
8. $3\overline{)9,021}$ = 3,007
9. $7\overline{)1,386}$ = 198

page 119

Photosynthesis

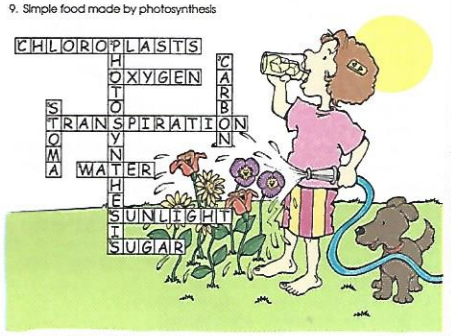
Photosynthesis is a food-making process that occurs in green plants. It is the main function of the leaves. With the help of page 131, a science book or other source, **complete** the puzzle below.

Across

1. Small green bodies that contain the green pigment chlorophyll
4. Gas that is released into the air as a by-product of photosynthesis
6. The escaping of water vapor from a leaf
7. Liquid obtained through the roots
8. Source of energy to power photosynthesis
9. Simple food made by photosynthesis

Down

2. The process by which green plants make food
3. One of the raw materials for photosynthesis is _____ dioxide.
5. Opening in the underside of a leaf



page 121

Effective Short e

Use the code to decipher some of the words from the spelling list.

ancestor
attempt
central
definition
enforce
festival
generally
genuine
legend
medicine
necessary
pedal
reference
residence
section
sentence
temperature
tennis

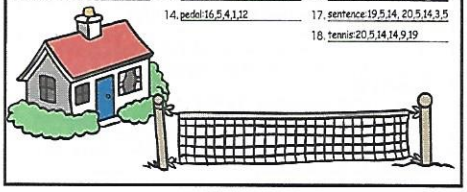
Code

A = 1	E = 5	I = 9	M = 13	Q = 17	U = 21	X = 24
B = 2	F = 6	J = 10	N = 14	R = 18	V = 22	Y = 25
C = 3	G = 7	K = 11	O = 15	S = 19	W = 23	Z = 26
D = 4	H = 8	L = 12	P = 16	T = 20		

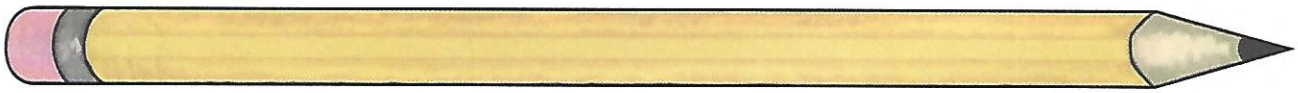
1. 12-5-7-5-14-4 legend
2. 18-5-19-9-4-5-14-3-5 residence
3. 1-14-3-5-19-20-15-18 ancestor
4. 14-5-3-5-19-19-1-18-25 necessary
5. 3-5-14-20-18-1-12 central
6. 20-5-13-16-5-18-1-20-21-18-5 temperature
7. 4-5-6-9-14-9-20-9-15-14 definition
8. 5-14-6-15-18-3-5 enforce
9. 6-5-19-20-9-22-1-12 festival

Write the nine remaining words using the code.

10. attempt: 1,20,20,5,13,16,20
11. generally: 7,5,14,5,18,1,12,12,25
12. genuine: 7,5,14,21,9,14,5
13. medicine: 13,5,4,9,3,9,14,5
14. pedal: 16,5,4,1,12
15. reference: 18,5,6,5,18,5,14,3,5
16. section: 19,5,3,20,9,15,14
17. sentence: 19,5,14,20,5,14,3,5
18. tennis: 20,5,14,14,9,19



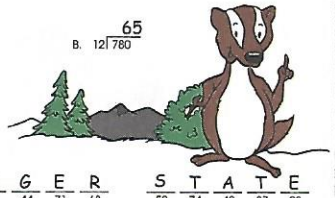
page 126



Wisconsin's Nickname

What is Wisconsin known as? To find out, **solve** the division problems below. Then, find the answers at the bottom of the page and **write** the corresponding letter on the line above the answer.

T. $14\overline{)1218}$ = 87
E. $23\overline{)1633}$ = 71
S. $53\overline{)2756}$ = 52
A. $38\overline{)1596}$ = 42
A. $61\overline{)5185}$ = 85
E. $18\overline{)1764}$ = 98
T. $22\overline{)1628}$ = 74
R. $40\overline{)2520}$ = 63
D. $55\overline{)4400}$ = 80
G. $31\overline{)1364}$ = 44
B. $12\overline{)780}$ = 65

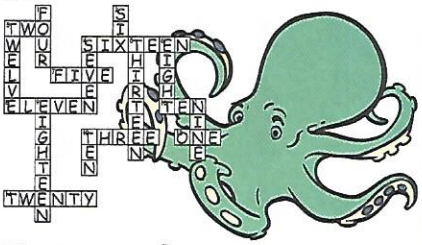


B	A	D	G	E	R		S	T	A	T	E
65	85	80	44	71	63		52	74	42	87	98

page 127

Octopus Crossword

Solve the division problems. **Write** the remainders in word form to complete the puzzle.



Across

3. $23\overline{)1313}$ = 57 R2
4. $41\overline{)3501}$ = 85 R16
7. $18\overline{)1733}$ = 96 R5
8. $35\overline{)2706}$ = 77 R11
10. $64\overline{)4618}$ = 72 R10
12. $51\overline{)4746}$ = 93 R3
13. $70\overline{)5881}$ = 79 R1
14. $32\overline{)2132}$ = 66 R20

Down

1. $45\overline{)2389}$ = 53 R4
2. $60\overline{)3786}$ = 63 R6
3. $28\overline{)1076}$ = 38 R12
4. $33\overline{)1360}$ = 41 R7
5. $55\overline{)3533}$ = 64 R13
6. $72\overline{)6128}$ = 85 R8
9. $84\overline{)7494}$ = 89 R18
11. $16\overline{)1497}$ = 93 R9
12. $22\overline{)1088}$ = 49 R10

page 128

Biomes of the Earth

Samples include:

Using a world map, a globe, an atlas, an encyclopedia and other resources, **complete** the chart below to get a better understanding of some biomes and their characteristics.

Biome	Continents and Countries	Animals	Plants
Coniferous Forest	Western US and Canada North America	moose wolves bears birds	needleleaf evergreen trees Aspen trees
Deciduous Forest	Midwestern United States North America	wolves, deer, bears, many small mammals and birds	maple trees oak trees
Grassland	Central North America	prairie dogs foxes grouse reptiles	low-growing flowers grasses
Tropical Rain forest	Brazil South America	reptiles birds monkeys insects	flowers trees
Desert	North Africa Africa	lizards, snakes, rodents, African fennec fox and owls	cacti Joshua trees bunchgrass small scrubs
Tundra	Northern Russia Asia	arctic foxes snowy owls musk-ox insects	reindeer moss grasses sedges
Marine	Atlantic Ocean Pacific Ocean Indian Ocean	whales fish seals	seaweed coral

page 129

A Study of the Forest Floor

A forest habitat is generally cool, damp and shady. At first glance, it might seem that plant life is less abundant than in a pond or grassland area, but as you look more closely, you will see many kinds of species that love shade, such as horsetails, mosses, ferns and fungi. The soil of a forest floor is rich in decaying matter. Its acidity will depend upon whether it contains fallen evergreen needles (which increase the acidity) or leaves from deciduous trees. This rich soil is home to many kinds of animals, including earthworms, centipedes, snails and beetles.

You are going to study a forest floor, either on your own or on a field trip. You will need a wire hanger. Bend it into a circle and toss it onto the ground in a forest. Answer these questions and complete the activities as you examine the living things in your own tiny forest plot.

What is the temperature inside your plot? _____ Is it dry or moist? _____
Identify and describe all the plants that are in your plot. _____

Sketch the ones you cannot identify in the boxes below.

Research will vary.

Look for animals. Look under any leaves, evergreen needles or twigs. Identify and describe the different animals that you find. _____

Sketch the ones you cannot identify in the boxes below.

Pick up the hanger and toss it on your lawn or in a field near your home. Compare that habitat to the forest habitat.

page 130

Proofreading for Punctuation

Anna is running for class president. She has written her last campaign speech before the election but has not done a very good job of punctuating it. Read her speech. Write in capital letters where needed and add correct punctuation.

Tomorrow you will choose one of five candidates as your class president. I want to be the one you choose. Why should you vote for me? As class president, I will collect twenty-five cents a month from every class member. The money will be used for a party at the end of the school year. I will listen to your suggestions and try to do something about them. As president of our class, I will go to teachers' meetings. I will try to have homework assignments over weekends reduced. Vote for me. I know I will make the next year the best one for you and our class. It will be a year to remember. Thank you for your support.

Anna did not win the election, but she was a good sport. She wrote a message to Kim, the winner, in the school newspaper. The editor did not proofread Anna's message, and it got published just as she wrote it. Correct Anna's work once more.

I want to congratulate Kim. I know she will make a fine class president. I am sorry I did not win, but I want Kim and everyone else to know I support her. Now that the election is over and the class showed their preference, let's all join together and support Kim. Congratulations, Kim!

page 138

Using Commas

Use commas to set off an **appositive**, a noun or phrase that explains or identifies the noun it follows.
Example: *Jack, the janitor, walked down the hall.*

Use commas to separate words or phrases in a **series**.
Example: *He ate the apple, the peach and the plum.*

Use commas after **introductory** words or phrases.
Examples: *Yes, I'm going to the fair.*
By the way, did you bring a camera?

Use commas to set off a **noun of address**, the name of the person being addressed or spoken to.
Example: *Caroline, will you come with me?*

Use commas to set off **interrupting** words or phrases.
Example: *He was, as you know, an actor before he was elected.*

Add commas to the sentences where they are needed. On each line, explain why you added the comma by writing **appositive**, **series**, **introductory**, **noun of address** or **interrupting**.

1. Maryanne, the new girl in school, is a very good cook. appositive
2. My favorite snacks are red apples, pretzels and popcorn. series
3. My skills, however, do not include cooking. interrupting
4. I know, Sally, that you love to cook. noun of address
5. That was, in my opinion, the best meal ever served. interrupting
6. After they finished the books, Tom and Larry wrote the re introductory
7. Thomas Edison, an inventor, had failures before each succe appositive
8. Pete, our best soccer player, won't be here for the big gam appositive
9. No, I won't be seeing the movie. introductory
10. The coating on the pecans was sweet, sugary and crisp. series
11. That is, if I'm not mistaken, my yellow and green pencil interrupting
12. Sam, would you please pass me my pen? noun of address

page 139

Itty-Bitty i

activities
citizen
difference
difficulties
exit
fiction
hippopotamus
individual
instrument
interesting
kitchen
listening
miniature
miserable
officer
principal
prisoner
shipment

Write the spelling word that best completes each sentence.

1. We received a shipment of new books for our library.
2. Our family usually eats dinner in the kitchen.
3. When we subtract one number from another, we find the difference.
4. A story which is not true is fiction.
5. We all have special talents and gifts because we are individual people.
6. Pay close attention by listening carefully to the directions.
7. The prisoner was released on parole.
8. A violin is considered a stringed instrument.
9. My sister collects miniature teapots.
10. Friends can be especially helpful when one is experiencing difficulties.
11. What kinds of activities do you do after school?
12. Find the exit sign so we can leave the building.
13. That movie had a very interesting plot.
14. The principal is a friend to both teachers and students.
15. As a citizen of the U.S., I respect the American flag.
16. The police officer spoke kindly to the little child.
17. The head cold made my brother feel miserable.
18. It would be difficult to have a hippopotamus for a pet.

Each word below is hidden in a list word. **Write** that spelling word on the blank.

1. on fiction/prisoner
2. son prisoner
3. act activities
4. kit kitchen
5. pal principal
6. pot hippopotamus
7. inst instrument/shipment
8. miser miserable
9. tles difficulties

page 140

Mr. Popper's Penguins

Answers may include:

1. Where do penguins live? Southern Hemisphere (Antarctic)
2. How many species of penguins are there? 18
   Name two types: Emperor penguin and Rockhopper
3. Describe the general appearance of penguins, including body covering, height and weight ranges. white breast, black back and head, short legs, upright posture, wings like flippers, up to 4 feet in height.
4. How do peng walk awkwardly on land, swim fast in water
5. What do peng fish, cuttlefish, crustaceans, small sea animals
6. Describe penguins' breeding habits. They lay eggs in rookeries.
7. Describe a newly hatched penguin. little balls of sooty, gray down

Draw an emperor penguin in the space below.

page 141

Division in Three Ways

The equation $12 \div 3$ can also be written as $3\overline{)12}$ or $\frac{12}{3}$

Write each equation in the three forms. The first one has been done for you.

1. $12 \div 3 = 3\overline{)12} = \frac{12}{3}$
2. $24 \div 8 = 8\overline{)24} = \frac{24}{8}$
3. $56 \div 8 = 8\overline{)56} = \frac{56}{8}$
4. $63 \div 9 = 9\overline{)63} = \frac{63}{9}$
5. $42 \div 6 = 6\overline{)42} = \frac{42}{6}$
6. $15 \div 5 = 5\overline{)15} = \frac{15}{5}$
7. $42 \div 7 = 7\overline{)42} = \frac{42}{7}$
8. $72 \div 9 = 9\overline{)72} = \frac{72}{9}$

Solve.

9. $20\overline{)440}$ 22
10. $440 \div 20 = 22$
11. $\frac{440}{20} = 22$
12. $12\overline{)780}$ 65
13. $650 \div 13 = 50$
14. $\frac{720}{15} = 48$

page 142

Decimal Dividends

Bring the decimal to the quotient. **Solve.**

1. $8\overline{)13.84}$ = 1.73
2. $12\overline{)27.96}$ = 2.33
3. $\frac{36.63}{11}$ = 3.33
4. 71.4 ÷ 51 = 1.40
5. 93.09 ÷ 87 = 1.07
6. $\frac{99.52}{32}$ = 3.11

7. Mandy wants to buy one bottle of soda pop. The advertised price is 3 bottles for $2.58. How much is one bottle? $.86

8. Youngen and her 5 friends went to a movie together. Youngen paid $31.50 for all of the tickets. How much did each ticket cost? $6.30

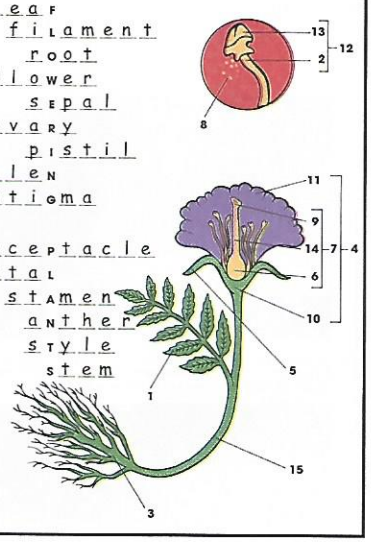
9. Sang and Jon ate lunch for $12.58. They each had a turkey sandwich, fries and milk. How much did each boy pay? $6.29

page 143

Flower Fun

Fill in the label for each plant part.

1. leaf
2. filament
3. root
4. flower
5. sepal
6. ovary
7. pistil
8. pollen
9. stigma
10. receptacle
11. petal
12. stamen
13. anther
14. style
15. stem

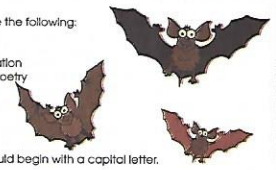


page 145

Capitals

Always remember to capitalize the following:

- first word in a sentence
- first word in a direct quotation
- first word in every line of poetry
- pronoun **I**
- initials
- proper nouns
- proper adjectives



Underline each word that should begin with a capital letter.

one summer night, seth and tony noticed a bat flying overhead. "did you know that bats help control insects?" remarked tony. seth replied, "somehow i always think of dracula when i see a bat." "long ago, people of slavic countries believed in vampires, but a bat isn't really scary," laughed tony. "a brown bat weighs only about half an ounce." "i haven't seen one up close," admitted seth. "a good place to see bats is carlsbad caverns in new mexico. a colony of mexican free-tailed bats lives in one of the caves. at dusk, hundreds of thousands of bats fly out to hunt. many american tourists visit there to see this amazing sight."

edwin gould studied the eating habits of bats in cape cod, massachusetts. donald r. griffin photographed bats eating. one tiny bat caught 175 mosquitoes in fifteen minutes of hunting! fredric a. webster discovered that bats catch insects with their tail membranes.

most north american bats hibernate during december, january and february. when early insects come out in march or april, the bats awaken.

Bats

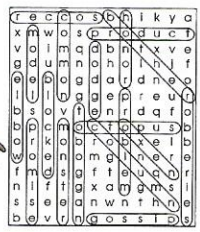
Bats come out at night.
Catching insects in their flight.
Furry little mammal brown.
Found in country, village and town.

page 150

Hidden o's

blocked
bother
column
common
dodge
gossip
honor
model
monster
octopus
oxen
problem
product
promise
robberies
soccer
toboggan
wobble

Circle the spelling words in the word search. Look horizontally, vertically and diagonally. **Write** each word below when you find it.



Write the number of syllables in the parentheses ( ).

1. product (2)
2. common (2)
3. gossip (2)
4. oxen (2)
5. octopus (3)
6. soccer (2)
7. robberies (3)
8. problem (2)
9. wobble (2)
10. promise (2)
11. monster (2)
12. dodge (1)
13. toboggan (3)
14. column (2)
15. bother (2)
16. blocked (1)
17. honor (2)
18. model (2)

page 151

Multiplication Table

X	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

page 152

Division

Solve.

1. $9\overline{)3,654}$ = 406
2. $8\overline{)835}$ = 104 R3
3. $6\overline{)618}$ = 103

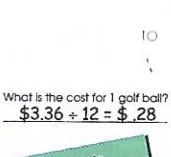
Estimate.

4. $36\overline{)660}$ = 18
5. $23\overline{)4,280}$ = 200
6. 158 + 21 = 10

Solve.

7. $24\overline{)228}$ = 9 R12
8. 1298 + 37 = 35 R3
9. $\frac{703}{41}$ = 17 R6

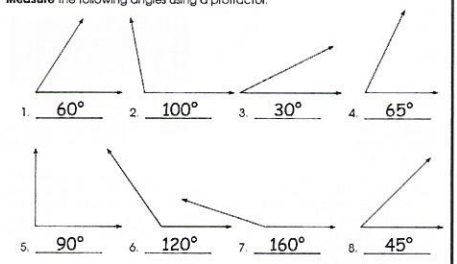
10. What is the cost for 1 golf ball?
$3.36 ÷ 12 = $.28



page 153

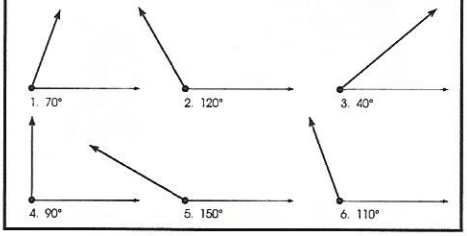
Angle Measurement

The **degree** is the unit used to measure angles.
Measure the following angles using a protractor.



1. 60° 2. 100° 3. 30° 4. 65°
5. 90° 6. 120° 7. 160° 8. 45°

Draw the angles given using a protractor.



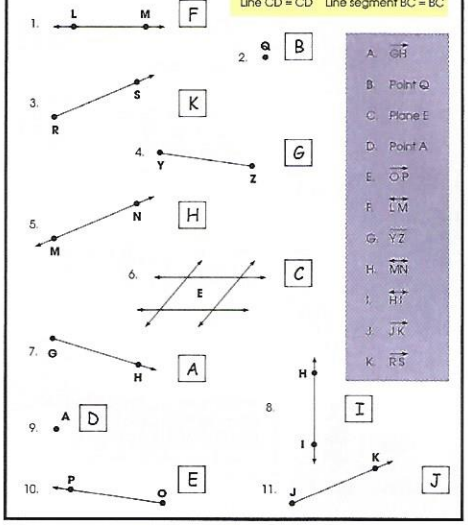
1. 70° 2. 120° 3. 40°
4. 90° 5. 150° 6. 110°

page 154

Geometric Figures

Write the correct letter in the box next to each figure.

Point S = •S Ray XY = $\overrightarrow{XY}$
Line CD = $\overleftrightarrow{CD}$ Line segment BC = $\overline{BC}$



page 155

Utterly Upbeat u

bucket
button
crunchy
dusk
guppies
judges
lucky
public
refund
ruffle
skunk
spun
struck
subject
thunder
trust
ugly
umbrella

Complete each phrase with a spelling word.

1. chewing sometimes makes a crunchy sound
2. books from the public library
3. from dawn to dusk
4. return it for a refund
5. trust your instincts
6. my lucky number
7. lightning struck the pole
8. math is my favorite subject
9. the ugly duckling
10. the top spun rapidly
11. the guppies in my aquarium
12. water poured from the bucket
13. thunder and lightning
14. open the umbrella
15. sew on the button
16. annoying skunk spray
17. nine judges on the court
18. added a ruffle to the curtain

Fill in the missing letters to complete the spelling words.

j u dges	sk unk	um br ella
gu pp ies	re fund	th under
u gly	bu tt on	du sk
bu ck et	ru ff le	str uck
tr u st	c ru nchy	pub l ic
sp u n	su bj ect	lu ck y

page 160

Double Trouble

Fill in the blanks with the correct definition number for each underlined word.

Example: 3 I was covered with pitch after climbing the pine tree.

winding	1. having bends or curves 2. the act of turning something around a central core
wolf	1. to gulp down 2. a large carnivorous member of the dog family
pitch	1. to sell or persuade 2. to throw a ball from the mound to the batter 3. a resin that comes from the sap of pine trees

1 1. Do girls' clubs pitch cookies?
2 2. We are winding the top's string tightly.
2 3. The adult wolf returned to her lair.
2 4. Red didn't pitch after the fourth inning.
1 5. The Mather family had a winding driveway.
1 6. The young ball player wolfed down his lunch and left.

choke	1. to strangle 2. to bring the hands up on the bat
hitch	1. obstacle 2. to fasten or tie temporarily
windup	1. the swing of the pitcher's arm just before the pitch 2. a concluding part

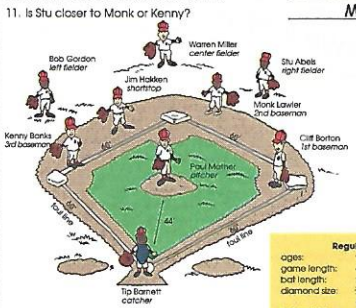
2 1. We hitched the mule to the cart.
2 2. Tip would not choke up on his bat.
1 3. Paul wished to play, but there was just one hitch.
2 4. The program's windup was filled with more of Joe's record hits.
1 5. Mom was afraid the dog would choke itself on its leash.
1 6. He has a great windup and curve ball.

page 161

Take Me out to the Ball Game

Use the diagram to answer the questions.

1. Who plays left field? Bob Gordon
2. How far is it from first to second base? 60'
3. Does Monk Lawler play the outfield? no
4. How many innings are played in Little League? 6 innings
5. If a batter hits a triple, how many feet will he run? 180'
6. What position does Cliff Borton play? 1st base
7. How far is Paul Mather from home plate? 44'
8. Can a 10-year-old child play Little League ball? yes
9. How long may a bat be? no longer than 33"
10. What position does Jim Hakken play? shortstop
11. Is Stu closer to Monk or Kenny? Monk



Regulations

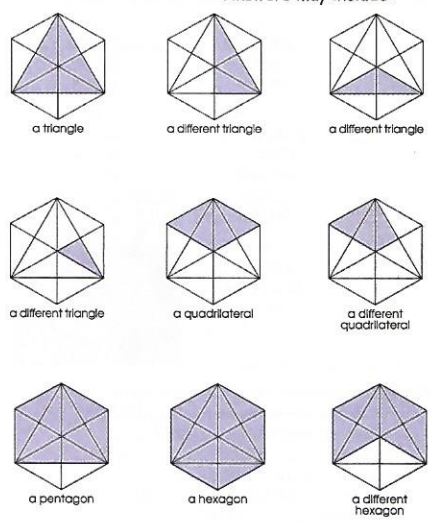
ages:	9–12
game length:	6 innings
bat length:	no longer than 33"
diamond size:	1 regulation baseball size
ball weight:	5–5¼ oz.

page 162

Shapes in Hiding

Shade triangles to make each shape.

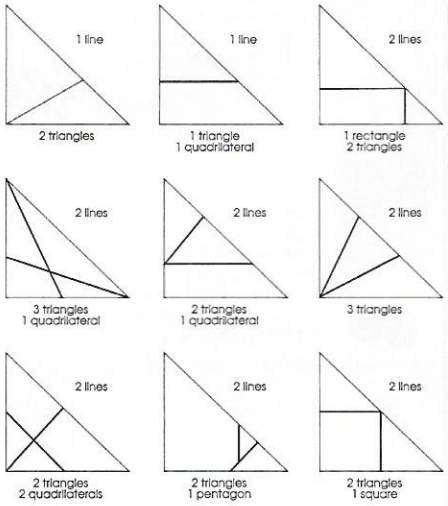
Answers may include:



page 164

Lines Across a Triangle

Answers may include:



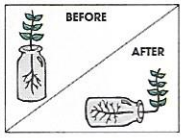
page 165

Plant Movements

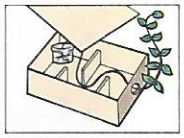
After a seed germinates and anchors itself by its roots in one place, it can still show some movement. These movements are called **tropisms**. Tropisms are a plant's response to stimuli such as light, gravity and water.

Geotropism, hydrotropism and **phototropism** are three tropisms that are easily demonstrated with bean seedlings. Research these three types of tropisms using an encyclopedia, science textbook or other source. Study the pictures of the three experiments. Name the kind of tropism and explain what happened.

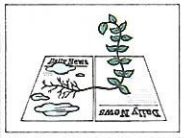
Sample answers:



Kind of Tropism: phototropism
What happened? When the bottle tipped over, the plant started to grow up toward the light.



Kind of Tropism: geotropism
What happened? Plant moved toward heat source.



Kind of Tropism: hydrotropism
What happened? Plant moved toward water source.

page 166

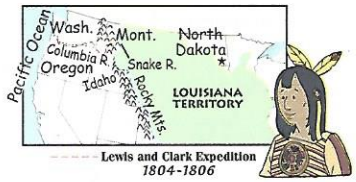
What a Trip!

Read the paragraphs about Meriwether Lewis and William Clark's journey to the Pacific Coast. Then, **plot** their journey on the map below.

Lewis and Clark led the first expedition across our country's vast northwestern wilderness. It began in 1804 and lasted more than two years. The expedition covered almost 7,700 miles.

President Thomas Jefferson chose Lewis to lead the expedition. Then, Jefferson and Lewis selected Clark to be second in command. Lewis and Clark and their group of about 45 people set out on May 14, 1804, and traveled up the Missouri River. In October, they reached a village of friendly Mandan Indians in what is now North Dakota. They built Fort Mandan near there and stayed for the winter.

On April 17, 1805, the journey resumed. By summer, the group made the hardest part of the trip—they crossed the Rocky Mountains. This took them about a month. From there, they reached the Clearwater River in what is now Idaho. They built new canoes and then paddled toward the Columbia River which they reached in October. The expedition continued on in hopes of reaching the Pacific Coast. They ultimately succeeded, arriving at the coast in November of 1805.



1. Label the areas that are now states through which Lewis and Clark journeyed.
2. Label the rivers on which the expedition traveled.
3. Label the Rocky Mountains.
4. Label the Pacific Ocean.
5. Put a star where the group met the Mandan Indians.

page 167

"R" You Listening?

When the letter **r** comes after a vowel, it sometimes changes the vowel sound. **Write** each spelling word under the category with the same spelling pattern.

afford
carton
curtain
departing
directions
emergency
forlorn
further
girth
harbor
observe
origin
perfume
refer
starch
sturdy
temper
thirst

ir
directions
girth
thirst

or
afford
forlorn
origin

er
emergency
observe
perfume
refer
temper

ur
curtain
further
sturdy

ar
carton
departing
harbor
starch

Answers may include:

Write the spelling words that fit in the appropriate categories.

1. Can be used as an adverb, adjective or verb. further
2. Can be used as a noun or verb. thirst
   temper, starch, harbor
3. Used only as an adjective. sturdy
4. Used as a verb. afford, forlorn
   observe, refer

page 172

Throwing Too Many Curves

Interpret these quotations from *Hang Tough, Paul Mather* and **write** them in your own words.

Chapter 2
"The world begins and ends with basketball for the punk . . ."

Chapter 4
"I grinned. I knew what the punk was planning. I had to hand it to him. He was maneuvering with a straight face."

Chapter 8
"That night A... bugging them about calling Dr. Kinsella ... sleeping dogs lie."

Answers will vary.

Chapter 8
"I wasn't (sure of myself), but I wasn't going to tell him that. When you've spent months in a hospital bed, you learn to play things close to the vest."

Chapter 13
"Tom and my father got along carefully. Dad thought Tom was young."

page 173

Day of Reckoning

Use the time line to answer the questions.

At what time does Paul ask for his mirror? 3:30

Which happens earlier? Do Red and Paul shake hands or does Paul greet Toddy? Paul greets Toddy

What is the earliest time shown on the time line? 2:00

Which happens later? Does Brophy give Paul his medication or does the game begin? Brophy gives Paul his medication

What is the final score of the game? 5-2

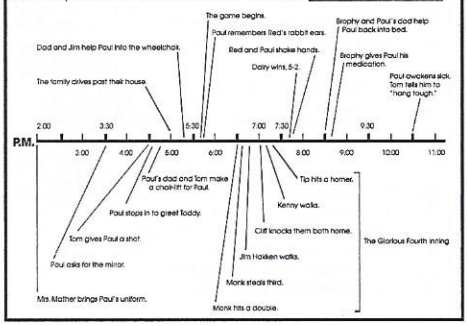
At what time does the game end? around 7:45

When do Brophy and Paul's dad get Paul back into bed? 8:30

How many Dairy players walk in the fourth inning? 2 players

What happens first in the fourth inning? Monk hits a double

How many hours does this time line cover? Be careful! 9 hrs

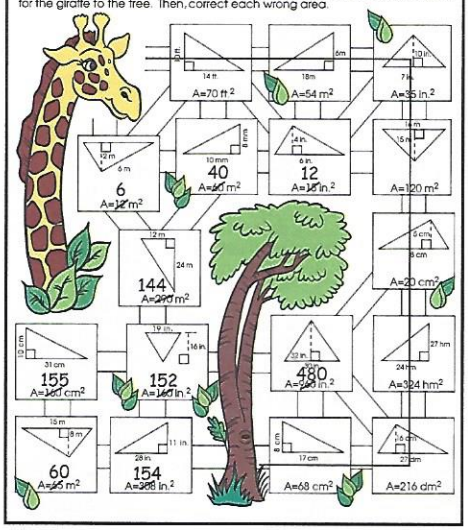


page 174

Go to p. 382 for answers to pages 175 & 176 — These answers are not correct

I'm Hungry!

Someone has already found the area for each triangle, but some are incorrect. Check each problem. Connect the problems with correct areas to make a path for the giraffe to the tree. Then, correct each wrong area.



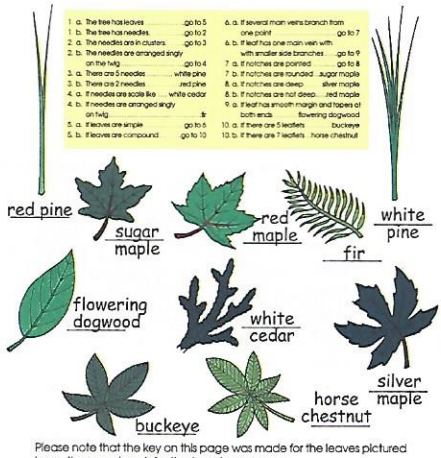
page 175

Name That Tree

Trees can be identified by their shape, bark, buds and leaves. A key is a valuable tool that can be used to identify a tree by its leaves. The key on this page was designed to identify the leaves pictured below.

Use the key to identify the leaves. Write the name of each leaf on the space provided.

1. a. The tree has leaves ... go to 5
1. b. The tree has needles ... go to 2
2. a. The needles are in clusters ... go to 3
2. b. The needles are arranged singly on the twig ... go to 4
3. a. There are 3 needles ... white pine
3. b. There are 2 needles ... red pine
4. a. If needles are scale like ... white cedar
4. b. If needles are arranged singly on twig ... fir
5. a. If leaves are simple ... go to 6
5. b. If leaves are compound ... go to 10
6. a. If several main veins branch from one point ... go to 7
6. b. If leaf has one main vein with with smaller side branches ... go to 9
7. a. If notches are pointed ... go to 8
7. b. If notches are rounded ... sugar maple
8. a. If notches are deep ... silver maple
8. b. If notches are not deep ... red maple
9. a. If leaf has smooth margin and tapers at both ends ... flowering dogwood
10. a. If there are 5 leaflets ... buckeye
10. b. If there are 7 leaflets ... horse chestnut



Please note that the key on this page was made for the leaves pictured here. It may not work for the trees in your area.

page 176

Dynamic Digraphs

Consonant digraphs consist of two letters that represent one sound. Consonant digraphs may be found anywhere in a word.

although
another
athlete
birth
channel
chauffeur
chiffon
chocolate
choir
chrome
exchange
radish
sheriff
shovel
Thursday
whether
whiskers
whisper

- The digraph **sh** usually has the sound heard in **sharp** and **fish**.
- The digraph **wh** usually has the sound heard in **white** and **wheel**.
- The digraph **th** has two common sounds: **th** as in **this** and **th** as in **thin**.
- The digraph **ch** has three different sounds: **ch** as in **chair**, **ch** (like **k**) as in **chorus** and **ch** (like **sh**) as in **chef**.

Answers may include:

Write each spelling word under the appropriate category.

ch as in **reach**	**sh** as in **dish**
channel	radish
chocolate	sheriff
exchange	shovel
chief	wish

wh as in **whale**	**th** as in **thimble**	**th** as in **this**
whether	Thursday	although
whiskers	athlete	another
whisper	birth	whether
whip	with	mother

ch as in **chorus**	**ch** as in **chef**
choir	chauffer
chrome	chiffon
chord	chalet

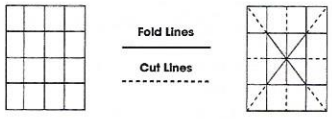
Now, think of one additional word for each category and write it on the dotted line.

page 182

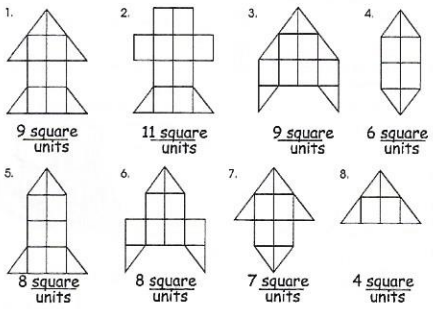
The Rocketangular Puzzle

Take an 8½" x 11" piece of paper. Fold it in half, half again, half again and half again. Open it up. It should look like this:

Draw in the two diagonals using a ruler and fold on them. Trace over all the fold lines on both sides. Cut on the dashed lines.



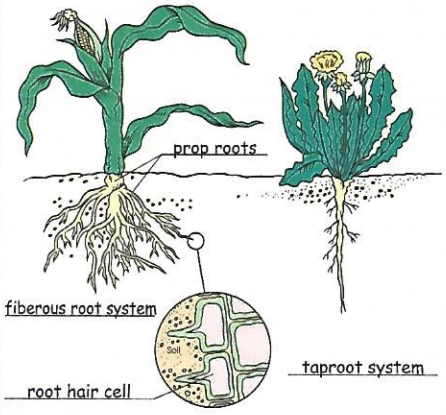
Fold the piece of paper flat to make each shape below. Calculate the area of each shape and write it on the blank.



page 183

Root Systems

Label the two root systems pictured below. Use the terms in the Word Box.



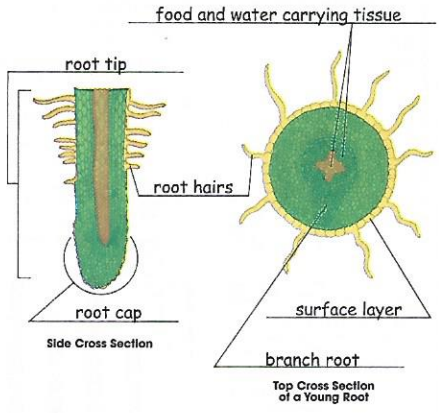
Word Box

fibrous root system
taproot system
root hair cell
prop roots

page 184

Inside a Root

Study the two views of a root shown below. **Label** the parts in both the top cross section and side cross section. Use the terms in the Word Box.



Side Cross Section

Top Cross Section of a Young Root

Word Box

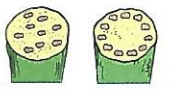
root hairs
surface layer
root cap
branch root
root tip
food and water carrying tissues

page 185

Plant Pipelines

How does the plant get its food? Thin tubes in the stem carry food from the leaf to the rest of the plant. Other tubes carry water and minerals from the roots to the leaves. Both kinds of tubes are found in bundles in the stem.

The tube bundles are arranged in two ways. A **monocot** plant has bundles scattered throughout the stem. A **dicot** plant has bundles arranged in a ring around the edge of the stem.



monocot dicot

Dicot or monocot stem?
Label the two pictures above.

Observing Plant Pipelines

You will need: a drinking glass, water, food coloring, an eyedropper, a knife and a stalk of celery

Directions:
Put a few drops of food coloring in a glass of water. Trim off the bottom inch of the celery stalk. Place the celery in the water.

Answers may include:

Analysis:

1. Describe what you see. Red in the veins of the leaves.
2. Cut the stalk crosswise. Look at the cut end. What do you see?
   Red holes across the top of the cut.
3. What carried the water up the stalk? veins
4. What would happen if the stem of a plant were broken? Why?
   No food would get to the top because the food path would be interrupted, and the plant might die.

Repeat this experiment using a white carnation in place of the celery. Watch what happens!

Beguiling Blends

Use the clues to **fill in** the blanks with the correct consonant blend to complete each spelling word.

Consonant Blends
sp bl tr sl cl

1. nearby cl ose
2. close your eyes and sl eep
3. used to catch lobsters tr ap
4. what a top does sp in
5. cannot see bl ind
6. not very fast sl ow
7. to go up a hill cl imb
8. a pretty color bl ue
9. to utter something sp eak
10. trains run on it tr ack

Consonant Blends
pl sm fr sw

1. an amphibian fr og
2. not big or large sm all
3. food is placed on this pl ate
4. do it with a broom sw eep
5. one of the food groups fr uit
6. bees do this sw arm
7. you do this with your nose sm ell
8. a little chubby pl ump

blind
blue
climb
close
frog
fruit
plate
plump
sleep
slow
small
smell
speak
spin
swarm
sweep
track
trap

Write the spelling word that rhymes with each word below.

1. creep	sleep	10. jute	fruit
2. find	blind	11. storm	swarm
3. stack	track	12. strap	trap
4. peak	speak	13. chump	plump
5. grate	plate	14. flog	frog
6. twin	spin	15. mime	climb
7. throw	slow	16. dose	close
8. jeep	sweep	17. stall	small
9. dwell	smell	18. glue	blue

Watch for Grandpa's Watch

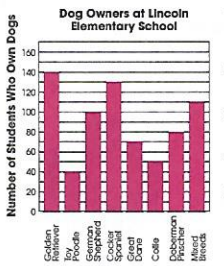
Answers may include:

	Meaning 1	Meaning 2
1. spring	a season	a coil of metal
2. run	operate	move quickly
3. ruler	monarch	measuring device
4. duck	a feathered animal	bend down
5. suit	a man's clothes	agree
6. cold	illness	low temperature
7. fall	season	topple over
8. tire	wheel	become exhausted
9. rose	a flower	get up
10. face	body part	look straight at
11. train	instruct	line of boxcars on a track
12. play	stage production	to have fun
13. foot	12 inches	body part
14. pen	writing instrument	fenced in area
15. box	carton	hit with fists
16. dice	cut up	small cubes with numbers
17. fly	an insect	move through the air
18. seal	close	an animal
19. bowl	game using 10 pins, 1 ball	container for soup
20. ride	carried on an animal	pester someone

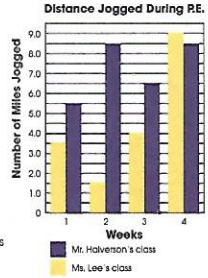
Choose some of the above words and illustrate both meanings on another sheet of paper.

Dog and Jog Graphs

Answer the questions using the graphs indicated.



1. How many students own Great Danes at Lincoln Elementary School? 70
2. Which breed of dog is owned by the fewest students? Toy Poodle
3. Which breed is owned by the most students? Golden Retriever
4. How many students own Doberman pinschers? 80
5. How many more students own German shepherds than collies? 50



1. What class jogged the most during a one-week period? Ms. Lee's
2. Which class jogged the most miles during this four-week period? 29
   What was the difference between classes? 11
3. Which week had the greatest range between the two classes? 2
4. Which week had the smallest range? 4
5. What was the range for Mr. Halverson's class during these four weeks?
   5.5 to 8.5

Troublesome Verb Pairs

Don't confuse verbs that have similar meanings.

Lay means *put* or *place*.
Lie means *rest* or *recline*.

Set means *put something somewhere*.
Sit means *sit down*.

Let means *allow*.
Leave means *allow to remain*.

Teach means *show how*.
Learn means *find out*.

Lend means *give to someone*.
Borrow means *get from someone*.

Write the correct verb on each blank below.

"Mark, did you set (set, sit) the saddle on the fence?" David asked.
"Yes, David. I was going to leave (let, leave) it in the barn, but it was heavy."
Did you learn (teach, learn) how to throw the saddle onto your horse's back yet?" Mark asked.
"Yes, and then I needed to lie (lay, lie) down and rest," David answered.
"I was going to lend (lend, borrow) you a hand, but I was too busy trying to learn (teach, learn) how to rope," David remarked.
"Will you let (let, leave) me borrow (lend, borrow) your horse tomorrow morning?" Mark inquired.
"Sure, Mark. I'm going to just sit (set, sit) under a tree and read a book tomorrow morning," David responded.

Write the correct verb from the parentheses for each sentence.

1. Tell your dog to lie (lay, lie) down in front of the barn.
2. Please, lay (lay, lie) that saddle down in front of the stall and set (set, sit) the bridle on the table.
3. Sit (Set, Sit) on that bale of hay and rest your tired legs.
4. Will you let (let, leave) me wear your boots tomorrow?
5. Don't leave (let, leave) those oats there.
6. I want to learn (teach, learn) how to trim my horse's hooves.
7. We will certainly be happy to teach (teach, learn) you.

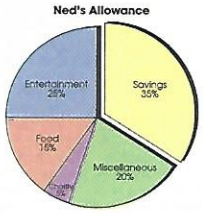
The Right Stuff

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. Another word for "route."
   (thesaurus) math textbook world atlas
4. A map of the United Kingdom.
   thesaurus (world atlas) *The Guinness Book of World Records*
5. The difference between a muffler and a mantle.
   (dictionary) science textbook cookbook
6. Information about the author, C. S. Lewis.
   almanac (encyclopedia) *Guidebook for Art Instructors*
7. Which is the world's most massive dam.
   (*The Guinness Book of World Records*) dictionary thesaurus
8. The oldest words in the English language.
   (almanac) atlas *The Guinness Book of World Records*
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
12. The average snowfall for December 25th.
    (almanac) cookbook spelling workbook

Circle Graph

Ned earns an allowance of $10.00 each week. He created this circle graph on his computer to show his parents how he spends the money. Refer to the graph to answer each question below.



1. Ned highlighted the savings segment of the circle graph because his family believes that having a savings account is very important. If Ned saves $3.50 each week, how much will he have left for other things?
   $6.50
2. Ned spends all of his entertainment allowance on movies. How much does he spend each week on movies?
   $2.50
3. How much does Ned spend each week on miscellaneous expenses? Name some things he might buy which would fall into this category.
   $2.00 candy, supplies
4. If you have an allowance, create your own circle graph detailing your spending habits. If you don't have an allowance, write two sentences describing how you would spend $10.00 differently than Ned.
   Answers may include: I would save more money. I would spend less on food.

page 202

Second Quarter Test

Add or **subtract**.

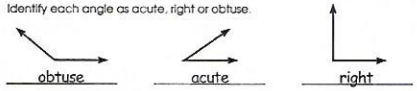
1. 87 + 36,542 + 3 = 36,632
2. 22 + 17 = 39
3. 7 ft. 3 in. + 2 ft. 9 in. = 10 ft. 0 in.
4. 3 wks. 2 days − 3 days = 2 wks. 6 days
5. 103 − 58 = 45
6. 89 − 27 = x, x = 62

Estimate.

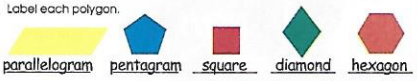
7. 29,365 → 29,000 + 7,850 → 8,000 = 37,000
8. 87 x 4 = 360
9. 22 ⟌ 3,849 = 200

Multiply or **divide**.

10. 9 ⟌ 736 = 81 R7
11. 76 x 30 = 2,280
12. 529 / 31 = 17 R2
13. What is the change from $5 for a purchase of $1.87? $3.13
14. Identify each angle as acute, right or obtuse.



15. Draw a 60° angle.
16. Draw 2 parallel lines.
17. Label each polygon.



page 203

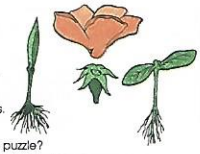
What Am I?

Find the answers to the riddles in the word search. **Circle** them and **write** them on the blanks provided. Use pages 131, 144 and 177 to help you. **Hint:** Words may be found horizontally, vertically, diagonally and backwards.

1. I am made of sapwood and heartwood. What am I? xylem
2. I am a seed with two cotyledons. What kind of seed am I? dicot
3. I carry food made by the leaves to other parts of the tree. What am I? phloem
4. A monocot has only one of me. What am I? cotyledon
5. Every year, I produce a new layer of bark. What am I? cambium
6. I am the female reproductive part of the flower. What am I? pistil

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

7. I am the male reproductive part of the plant. What am I? stamen
8. We absorb water and minerals from the soil. What are we? roots
9. I am a leaf with many blades. What kind of leaf am I? compound
10. Animals and wind can disperse us. What are we? seeds
11. My food is stored inside two cotyledons. What am I? embryo
12. I carry water from the roots to the leaves. What am I? stem



Can you find other plant terms hidden in the puzzle?

page 204

Double Trouble

cactus
celebrate
cement
certain
citizen
citrus
convoy
cumbersome
cyclone
dangerous
gallery
gesture
gopher
gurgle
gypsum
Gypsy
magic
region

The letters **c** and **g** each make two distinctly different sounds, depending on the letters following them within a word. Both **c** and **g** can make a hard sound or a soft sound.

Hard **c** sounds like **k** when followed by **a**, **o** or **u**.
Examples: cake, cobra, cut

Soft **c** sounds like **s** when followed by **e**, **i** or **y**.
Examples: cent, city, cycle

Hard **g** carries its regular sound when followed by **a**, **o** or **u**.
Examples: gate, goat, gurgle

Soft **g** sounds like **j** when followed by **e**, **i** or **y**.
Examples: gem, giant, gym

Say each of the spelling words carefully while listening for the hard and soft sounds of **c** or **g**. Then, **write** each word under the appropriate heading.

hard **c** as in **carton**	hard **g** as in **gutter**
1. cactus	1. gallery
2. convoy	2. gopher
3. cumbersome	3. gurgle

soft **c** as in **center**	soft **g** as in **gerbil**
1. celebrate	1. dangerous
2. cement	2. gesture
3. certain	3. gypsum
4. citrus	4. Gypsy
5. cyclone	5. magic
6. citizen	6. region

page 210

How's It Said?

Circle the word which best describes the mood or tone of the person speaking.

1. When Winnie's grandmother heard the little melody in the woods, she said, "That's it! That's the elf music I told you about."
   resentful (eager) anxious
2. Winnie spied on Jesse in the woods and watched as he drank from the spring. When he saw her, Jesse cried, "What're *you* doing here?"
   stern hopeless (joyful)
3. When Jesse told her not to drink from the spring, Winnie questioned, "Why not? It's mine, anyway, if it's in the wood."
   (stubborn) reluctant worried
4. Winnie cried when she realized she was being kidnapped. Seeing this, Mae exclaimed, "Please don't cry, child! We're not bad people, truly we're not."
   angry reluctant (dismayed)
5. When Winnie was calmed, everyone relaxed. Jesse began to explain the family's story. "We're friends, we really are. But you got to help us."
   persuasive happy (helpless)
6. Miles recalled how his family reacted when he didn't age. "My wife, she left me. She went away and she took the children with her."
   stern (sad) stubborn

Answers may include:

1. . . . you were angry at your parents for not letting you go outside? It's not fair. Everyone else is outside.
2. . . . you were hopelessly unprepared for your spelling test? I don't know how well I did.

page 211

Help Me!

Circle the reference source you would use to answer each question below.

1. Which source would you use to learn how to make pancakes?
   dictionary atlas (cookbook)
2. Which source might show where Treegap is?
   dictionary (atlas) thesaurus
3. Which source would describe the peacock?
   book on insects (encyclopedia) newspaper
4. Which source would describe the sounds a cricket makes?
   (book on insects) thesaurus atlas
5. Which source would give the meaning of "constable"?
   newspaper (dictionary) atlas
6. Which source would describe the most recent world events?
   (newspaper) encyclopedia thesaurus
7. Which source would tell how to divide "accommodations" into syllables?
   thesaurus book on insects (dictionary)
8. Which source could give a synonym for "push"?
   (thesaurus) cookbook encyclopedia
9. Which source might best forecast tomorrow's weather?
   encyclopedia atlas (newspaper)

Use references to answer the following questions:

Which countries border Nepal?
Answer: Sources will vary.
Source:
Page #:

What are the headlines in to
Answer:
Source:
Page #:

page 212

Equivalent Fractions

Match the pairs of equivalent fractions to find which line is longest—**A**, **B** or **C**.

Line A

$\frac{3}{8}$ • $\frac{2}{4}$ • $\frac{1}{2}$ • $\frac{6}{10}$

Line B

$\frac{6}{16}$ • $\frac{2}{3}$ • $\frac{3}{5}$ • $\frac{5}{6}$ • $\frac{4}{6}$ • $\frac{3}{7}$ • $\frac{6}{14}$

Line C

$\frac{10}{12}$ • $\frac{2}{8}$ • $\frac{1}{2}$ • $\frac{1}{3}$ • $\frac{2}{6}$ • $\frac{6}{8}$ • $\frac{3}{4}$ • $\frac{5}{8}$ • $\frac{10}{16}$ • $\frac{1}{5}$ • $\frac{2}{10}$

Circle the longest line. **A** **B** **C**

Line A

$\frac{2}{3}$ • $\frac{2}{16}$ • $\frac{2}{6}$ • $\frac{3}{4}$ • $\frac{1}{3}$ • $\frac{1}{2}$

Line B

$\frac{5}{8}$ • $\frac{3}{8}$ • $\frac{10}{17}$ • $\frac{6}{16}$

Line C

$\frac{9}{12}$ • $\frac{1}{8}$ • $\frac{3}{12}$ • $\frac{1}{4}$ • $\frac{4}{6}$ • $\frac{5}{10}$

page 215

Fussing About f

affection
autograph
cough
enough
familiar
foreign
frequent
furniture
geography
laughter
muffler
paragraph
philosophy
physical
raffle
slough
stuff
tough

The **f** sound can be made using the following letter combinations:

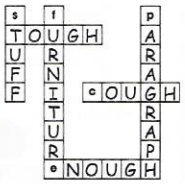
f as in **afternoon** **ff** as in **staff**
gh as in **rough** **ph** as in **photo**

Write each spelling word in the appropriate category.

f	ff
1. familiar	1. affection
2. foreign	2. muffler
3. frequent	3. raffle
4. furniture	4. stuff

gh	ph
1. cough	1. autograph
2. enough	2. geography
3. laughter	3. paragraph
4. slough	4. philosophy
5. tough	5. physical

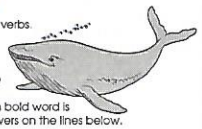
Use the spelling words to complete the puzzle. Some of the letters are already given.



page 220

A Whale of an Activity

Some words may be used as either nouns or verbs.



Example: Fish
Fish are good to eat. (noun)
We ***fish*** every Saturday in the summer. (verb)

Read the paragraphs below. Decide if each bold word is used as a noun or as a verb. **Write** your answers on the lines below.

A whale is a mammal that does not live on **land**. It would be impossible to **land** a whale with ordinary fishing gear. A whale would not **attack** a boat unless the whale was injured. However, an **attack** by an injured whale could be very dangerous. Whales can **dive** in the sea to a depth of more than one-half of a mile. Their powerful tails make such a **dive** possible. Whales do not **fight** among themselves. A **fight** with a whale would be a losing battle! The skeleton of a whale is not strong enough to **support** the whale's weight. Water provides the extra **support** needed to hold up such huge bodies. Whales **swim** across entire oceans searching for food. Such a long **swim** is not unusual for a whale.

Whalers **hunt** for whales in many countries of the world. In the old days, sailing ships might stay at sea for 2 to 3 years on a whale **hunt**. Men would **race** to get into small boats. It was a **race** to see who could get to the whale first. Now, whaling boats may **catch** just a few whales each year. Their **catch** may not include mother whales with calves. Whalers have had to **part** with old ways. They may no longer catch whales in every **part** of the ocean.

1. noun	8. noun	15. verb
2. verb	9. verb	16. noun
3. verb	10. noun	17. verb
4. noun	11. verb	18. noun
5. verb	12. noun	19. verb
6. noun	13. verb	20. noun
7. verb	14. noun	

page 221

Because . . .

Remember:
The **cause** is the reason for the action or **why** something happened. The **effect** is the result of the action **what** actually happened.

Underline the causes.

1. Because she knew her face so well, Mae didn't need a mirror.
2. Because the Tucks had drunk water from the spring, they could not age.
3. Mae went into town, because her two boys were returning home.
4. The Tucks kidnapped Winnie, because she had discovered the spring.
5. Because Miles and Winnie brought no fish home for breakfast, the Tucks had flapjacks instead.

Circle the effects.

1. The Tuck boys never worked in the same place for long because their employers would become suspicious.
2. Because the stranger wished to obtain the property in the woods, he offered to return Winnie to her parents.
3. Because the stranger planned to sell the secret, Mae clubbed him.
4. The constable couldn't charge the Tucks with kidnapping because Winnie declared that she had gone with them of her own free will.
5. Winnie's grandmother ordered her to enter the house soon because the heat was intense that day.

What do you think caused the most problems in the story?

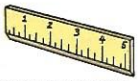
a. The Tucks' discovery of the spring
b. The stranger's greed
c. Winnie's discovery of Jesse Tuck
d. Other: _____

Answers will vary.

Explain your answer. _____

page 222

Conversion



Find the number of units in each fraction described.

1. If there are 12 eggs in a dozen, how many eggs are in . . .
   $\frac{1}{2}$ dozen? 6
   $\frac{1}{4}$ dozen? 3
   $\frac{1}{3}$ dozen? 4
2. If there are 100 centimeters (cm) in a meter, how many cm are in . . .
   $\frac{1}{2}$ meter? 50
   $\frac{1}{4}$ meter? 25
   $\frac{1}{10}$ meter? 10
3. If there are 16 ounces in a pound, how many ounces are in . . .
   $\frac{1}{2}$ pound? 8
   $\frac{1}{4}$ pound? 4
   $\frac{1}{8}$ pound? 6
4. If there are 4 quarts in a gallon, how many quarts are in . . .
   $\frac{1}{2}$ gallon? 2
   $\frac{1}{4}$ gallon? 1
   $\frac{3}{4}$ gallon? 3
5. If there are 60 seconds in a minute, how many seconds are in . . .
   $\frac{1}{2}$ minute? 30
   $\frac{1}{4}$ minute? 15
   $\frac{3}{4}$ minute? 45
6. If there are 1,000 meters in a kilometer, how many meters are in . . .
   $\frac{1}{10}$ kilometer? 100
   $\frac{1}{2}$ kilometer? 500
   $\frac{1}{4}$ kilometer? 250
7. If there are 30 days in most months, how many days are in . . .
   $\frac{1}{3}$ month? 10
   $\frac{1}{6}$ month? 5
   $\frac{1}{10}$ month? 3
8. If there are 24 hours in a day, how many hours are in . . .
   $\frac{1}{3}$ day? 8
   $\frac{2}{3}$ day? 16
   $\frac{1}{4}$ day? 6
9. If there are 36 inches in a yard, how many inches are in . . .
   $\frac{2}{3}$ yard? 24
   $\frac{1}{4}$ yard? 9
   $\frac{1}{2}$ yard? 18
10. If there are 2,000 pounds in a ton, how many pounds are in . . .
    $\frac{1}{2}$ ton? 1,000
    $\frac{1}{4}$ ton? 500
    $\frac{1}{20}$ ton? 100

page 223

Silent Knight

ballet
castle
crumb
doubt
height
knack
knight
known
knuckle
listen
plumber
soften
thumb
weight
wreck
wren
wrench
wrestle

Many words contain one or more letters that are silent. Say each spelling word aloud. **Write** each spelling word in the appropriate silent letter category. (Some words may fit into more than one category.)

silent w	silent k
1. wreck	1. knack
2. wren	2. knight
3. wrench	3. known
4. wrestle	4. knuckle

silent gh	silent b
1. height	1. crumb
2. weight	2. doubt
3. knight	3. plumber
	4. thumb

silent t	
1. ballet	4. soften
2. castle	5. wrestle
3. listen	

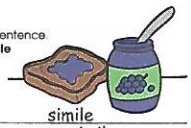
Answer the following questions with other silent **b** words.

What . . .

1. Is a part of a tree? limb
2. followed Mary to school? lamb
3. means no feeling? numb
4. smooths your hair in place? comb
5. Is a destructive force? listening

page 228

Like . . . a Simile!



Underline the two being compared in each sentence. On the blank, **write** if the comparison is a **simile** or a **metaphor**. Remember, a simile uses **like** or **as**; a metaphor does not.

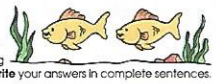
1. Angel was as mean as a wild bull. simile
2. Toni and Mattie were like toast and jam. simile
3. Mr. Ashby expected the students to be as busy as beavers. simile
4. The pin was a masterpiece in Mattie's mind. metaphor
5. The park's peacefulness was a friend to Mattie. metaphor
6. The words came as slow as molasses into Mattie's mind. simile
7. Mrs. Stamps's apartment was like a museum. simile
8. Mrs. Benson was as happy as a lark when Mattie won the contest. simile
9. Mr. Phillip's smile was a glowing beam to Mattie and Mrs. Benson. metaphor
10. Mattie ran like the wind to get her money. simile
11. Angel's mean words cut through Charlene like glass. simile
12. Mr. Bacon was a fairy godmother to Mattie. metaphor
13. The gingko tree's leaves were like fans. simile

Complete the following similes. Answers may include:

1. Matt was as artistic as Van Gogh
2. Hannibal's teeth were like a vampire's.
3. Toni's mind worked fast like a well oiled machine.
4. Mattie was as sad as a clown.
5. Mrs. Stamps was like sugar.

page 229

A Trip to the Ocean



Maria's girls' club earned enough money from their cookie sale to go on a camping trip by the ocean. Read about their trip. **Write** your answers in complete sentences.

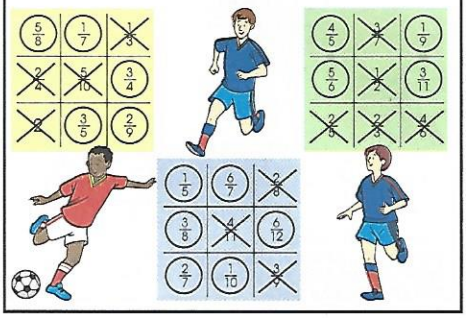
1. The bus started with 6½ gallons of gasoline. When the driver added 9½ more gallons of gasoline, how much gasoline did the bus have in it?
   There were 16 gallons of gas in the bus.
2. The girls and their leaders stopped for a picnic after driving 58½ miles. After the picnic, they drove another 43½ miles before reaching the ocean. How far were they from home?
   They were 102 miles from home.
3. Before leaving home, the girls made sandwiches for their lunch. They had 7½ tuna sandwiches, 4½ cheese sandwiches, 2½ peanut butter sandwiches and 5½ beef sandwiches. How many total sandwiches did they bring?
   They brought 20 sandwiches.
4. The leader cut a watermelon into 16 slices for lunch. The girls ate 8 of the slices. What fraction of the watermelon did they eat?
   They ate $\frac{8}{16}$ or $\frac{1}{2}$ of the melon.
5. When they arrived, they took 1½ hours to set up the tents. They spent another ½ hour getting their bedrolls ready. How long did they work before they could play in the ocean?
   They worked 20 hours.
6. The girls swam and played in the water for 1½ hours. Then, they sat in the sun for ½ hour. How many hours did they play and sunbathe?
   They played and sunbathed for 2½ hours.
7. After dinner, they had a campfire. First, they sang for 1½ hours. Then, they told ghost stories for ½ hour. If they put out the fire and went to sleep at 10:30 P.M., what time did they begin the campfire?
   They began the campfire at 8:30 P.M.
8. The next morning, ⅛ of the girls went fishing. The rest of the girls hunted for shells. If there were 8 girls altogether, how many hunted for shells? Five hunted for shells.
   How many went fishing? Three went fishing.

page 230

Tic-Tac-Toe Fractions

Solve each problem. Then, look in the boxes below for the answers to the problems. **Draw** an **X** over each correct answer. **Circle** the other numbers.

1. $\frac{7}{8} - \frac{5}{8} = \frac{2}{8}$
2. $\frac{8}{10} - \frac{3}{10} = \frac{5}{10}$
3. $2\frac{1}{2} - \frac{1}{2} = \frac{4}{2} = 2$
4. $\frac{7}{9} - \frac{4}{9} = \frac{3}{9}$
5. $\frac{5}{3} - \frac{4}{3} = \frac{1}{3}$
6. $\frac{6}{7} - \frac{3}{7} = \frac{3}{7}$
7. $\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$
8. $\frac{9}{11} - \frac{5}{11} = \frac{4}{11}$
9. $\frac{11}{12} - \frac{5}{12} = \frac{6}{12}$
10. $\frac{11}{6} - \frac{7}{6} = \frac{4}{6}$
11. $\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$
12. $\frac{3}{3} - \frac{1}{3} = \frac{2}{3}$



page 231

Plentiful Plurals

accounts
adventures
arches
blouses
classes
compasses
couches
decisions
dresses
erasers
eyelashes
inches
indexes
larynxes
syllables
telescopes
toothbrushes
walruses

The plural form of most words is formed by adding **s** to the singular form. **Example:** horse + s = horses

Singular words ending in **x**, **ss**, **sh** or **ch** usually form the plural by adding **es** to the singular.
Examples: tax + es = taxes church + es = churches

Write the singular form of each spelling word.

1. telescopes telescope
2. inches inch
3. adventures adventure
4. blouses blouse
5. toothbru toothbrush
6. arches arch
7. decisions decision
8. erasers eraser
9. classes class
10. indexes index
11. walruses walrus
12. compasses compass
13. eyelashes eyelash
14. couches couch
15. larynxes larynx
16. dresses dress
17. accounts account
18. syllables syllable

Read the following clues. **Write** the word that matches each clue.

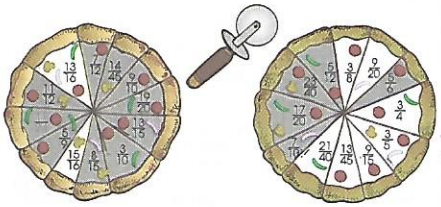
1. these protect your eyes eyelashes
2. used to indicate direction compass
3. used to clean teeth toothbrush
4. used to view the heavens telescope
5. unit of measurement inches

page 236

Adding Unlike Fractions

Solve the problems. **Shade** in your answers on the pizzas below to show which pieces have been eaten.

$\frac{1}{10}$	$\frac{3}{12}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{5}$
$+\frac{4}{5}$	$+\frac{1}{6}$	$+\frac{1}{3}$	$+\frac{1}{5}$	$+\frac{1}{3}$
$\frac{9}{10}$	$\frac{5}{12}$	$\frac{5}{6}$	$\frac{19}{20}$	$\frac{8}{15}$
$\frac{2}{3}$	$\frac{5}{12}$	$\frac{2}{6}$	$\frac{1}{3}$	$\frac{3}{15}$
$+\frac{1}{4}$	$+\frac{1}{6}$	$+\frac{9}{20}$	$+\frac{2}{9}$	$+\frac{1}{10}$
$\frac{11}{12}$	$\frac{7}{12}$	$\frac{17}{20}$	$\frac{5}{9}$	$\frac{7}{10}$
$\frac{1}{10}$	$\frac{2}{3}$	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{1}{5}$
$+\frac{2}{5}$	$+\frac{1}{5}$	$+\frac{1}{3}$	$+\frac{1}{5}$	$+\frac{1}{9}$
$\frac{3}{10}$	$\frac{13}{15}$	$\frac{11}{24}$	$\frac{23}{40}$	$\frac{14}{45}$



page 237

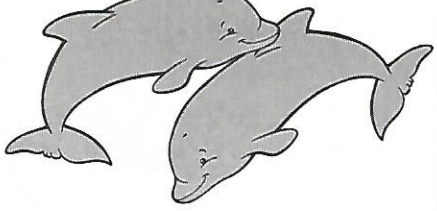
Dolphins

Underline the topic sentence of each paragraph. Add the missing punctuation.

Dolphins are among the most intelligent animals on Earth. They are playful as well as smart, and are easily trained for zoo and aquarium shows. They jump through hoops and fetch and grab objects from the trainer's hands. Dolphins communicate with each other in a variety of ways using clicking, whistling and slapping sounds.

Dolphins can locate objects easily under the water through a system called *echolocation*. This is like a built-in sonar system. The dolphin makes a series of clicking sounds, then listens for the sounds as echoes bounce back from the underwater object.

Many dolphins are caught and killed. These friendly mammals are killed by hunters of several nations for their meat and oils and are often caught in fishing nets intended to catch tuna, cod and other fish. Steps have been taken to try to limit the number of dolphins killed.



page 242

Persistent Plurals

anniversary, beauty, birthday, chimney, decoy, dictionary, highway, holiday, industry, monkey, mortuary, party, quantity, salary, strawberry, survey, turkey, valley

Words ending in **y**, preceded by a vowel, form the plural by adding **s** to the singular. **Example:** boy → boys

Words ending in **y**, preceded by a consonant, form the plural by changing the **y** to **i** and adding **es**. **Example:** bunny → bunnies

Using the rules above, **write** the **singular** and **plural** forms of each spelling word in the appropriate category.

vowel **y** = add **s**

1.	birthday	birthdays
2.	chimney	chimneys
3.	decoy	decoys
4.	highway	highways
5.	holiday	holidays
6.	monkey	monkeys
7.	survey	surveys
8.	turkey	turkeys
9.	valley	valleys

consonant **y** = change **y** to **i** + **es**

1.	anniversary	anniversaries
2.	beauty	beauties
3.	dictionary	dictionaries
4.	industry	industries
5.	mortuary	mortuaries
6.	party	parties
7.	quantity	quantities
8.	salary	salaries
9.	strawberry	strawberries

Answers may include:
When a word ends in vowel y, add an s to make a plural.
When a word ends in consonant y, change the y to i and add es to make a plural.

page 243

Sandwich Solutions

Solve the following subtraction problems to find out who invented the sandwich. **Write** the letter next to each problem above its answer at the bottom.

A. $\frac{3}{5} - \frac{1}{4} = \frac{7}{20}$

A. $\frac{5}{6} - \frac{1}{3} = \frac{1}{2}$

E. $\frac{9}{16} - \frac{1}{4} = \frac{5}{16}$

I. $\frac{7}{10} - \frac{3}{5} = \frac{1}{10}$

D. $\frac{1}{2} - \frac{5}{12} = \frac{1}{12}$

C. $\frac{7}{8} - \frac{3}{4} = \frac{1}{8}$

W. $\frac{13}{18} - \frac{1}{6} = \frac{10}{18}$

N. $\frac{2}{3} - \frac{1}{12} = \frac{7}{12}$

H. $\frac{19}{20} - \frac{4}{5} = \frac{3}{20}$

F. $\frac{18}{25} - \frac{2}{5} = \frac{8}{25}$

L. $\frac{8}{9} - \frac{1}{6} = \frac{13}{18}$

R. $\frac{5}{8} - \frac{3}{16} = \frac{7}{16}$

O. $\frac{4}{5} - \frac{2}{3} = \frac{2}{15}$

S. $\frac{1}{7} - \frac{1}{14} = \frac{1}{14}$

E	A	R	L	O	F	S	A	N	D	W	I	C	H
$\frac{5}{16}$	$\frac{7}{20}$	$\frac{7}{16}$	$\frac{13}{18}$	$\frac{2}{15}$	$\frac{8}{25}$	$\frac{1}{14}$	$\frac{1}{2}$	$\frac{7}{12}$	$\frac{1}{12}$	$\frac{5}{9}$	$\frac{1}{10}$	$\frac{1}{8}$	$\frac{3}{20}$

page 244

Fractions: Improper to Mixed

Change the fractions to mixed numbers. **Shade** in each answer to find the path to the pot of gold.

1. $\frac{11}{9} = 1\frac{2}{9}$ 2. $\frac{8}{3} = 2\frac{2}{3}$ 3. $\frac{8}{7} = 1\frac{1}{7}$ 4. $\frac{11}{6} = 1\frac{5}{6}$
5. $\frac{7}{3} = 2\frac{1}{3}$ 6. $\frac{7}{6} = 1\frac{1}{6}$ 7. $\frac{9}{4} = 2\frac{1}{4}$ 8. $\frac{8}{5} = 1\frac{3}{5}$
9. $\frac{4}{3} = 1\frac{1}{3}$ 10. $\frac{7}{2} = 3\frac{1}{2}$ 11. $\frac{3}{2} = 1\frac{1}{2}$ 12. $\frac{6}{5} = 1\frac{1}{5}$
13. $\frac{7}{4} = 1\frac{3}{4}$ 14. $\frac{9}{2} = 4\frac{1}{2}$ 15. $\frac{11}{8} = 1\frac{3}{8}$ 16. $\frac{5}{2} = 2\frac{1}{2}$
17. $\frac{9}{7} = 1\frac{2}{7}$ 18. $\frac{11}{4} = 2\frac{3}{4}$ 19. $\frac{17}{12} = 1\frac{5}{12}$ 20. $\frac{13}{12} = 1\frac{1}{12}$

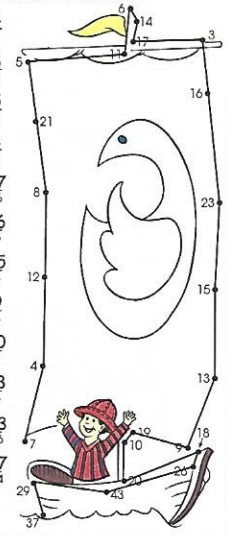
page 245

Go to p. 382a for the answers to p. 255

Fractions: Mixed to Improper

Solve the problems. **Connect** the dots in the order of the answers.

1. $1\frac{2}{5} = \frac{7}{5}$ 2. $1\frac{1}{3} = \frac{4}{3}$
3. $1\frac{5}{7} = \frac{12}{7}$ 4. $2\frac{2}{3} = \frac{8}{3}$
5. $2\frac{5}{8} = \frac{21}{8}$ 6. $2\frac{1}{2} = \frac{5}{2}$
7. $1\frac{5}{6} = \frac{11}{6}$ 8. $1\frac{1}{5} = \frac{6}{5}$
9. $2\frac{4}{5} = \frac{14}{5}$ 10. $1\frac{1}{16} = \frac{17}{16}$
11. $1\frac{1}{2} = \frac{3}{2}$ 12. $3\frac{1}{5} = \frac{16}{5}$
13. $1\frac{11}{12} = \frac{23}{12}$ 14. $1\frac{7}{8} = \frac{15}{8}$
15. $1\frac{6}{7} = \frac{13}{7}$ 16. $2\frac{1}{4} = \frac{9}{4}$
17. $1\frac{7}{12} = \frac{19}{12}$ 18. $1\frac{3}{7} = \frac{10}{7}$
19. $6\frac{2}{3} = \frac{20}{3}$ 20. $3\frac{3}{5} = \frac{18}{5}$
21. $1\frac{5}{21} = \frac{26}{21}$ 22. $1\frac{7}{36} = \frac{43}{36}$
23. $1\frac{9}{20} = \frac{29}{20}$ 24. $1\frac{13}{24} = \frac{37}{24}$



page 246

Perplexing Plurals

calves, echoes, elves, geese, halves, handkerchiefs, heroes, leaves, moose, potatoes, scarves, shelves, thieves, tomatoes, wives, wolves, women, yourselves

Some plurals involve changes in vowels or even consonants. These are called irregular plurals. Here are some common rules for spelling plurals.

Most words ending in **f** or **fe** form the plural by changing the **f** or **fe** to **v** and adding **es**. **Example:** wolf–wolves

A few words ending in **f** just add **s**. **Example:** chief–chiefs

Words ending in **o** add **s** or **es**. **Example:** buffalo–buffaloes

Some plurals involve changes within the word. **Examples:** foot–feet mouse–mice

Some singular and plural forms have the same spelling. **Examples:** deer–deer sheep–sheep

Write the plural form of each spelling word in the appropriate category.

f to **v**, add **es**

calves	shelves
elves	thieves
halves	wives
leaves	wolves
scarves	yourselves

same singular and plural: moose

add **s** only: handkerchiefs

vowel change: geese, women

end in **o**, add **es**: echoes, heroes, potatoes, tomatoes

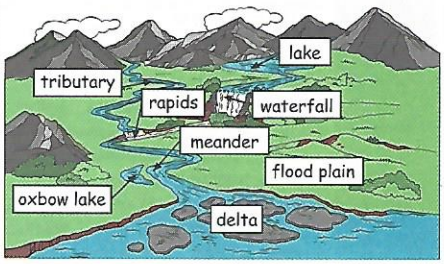
Complete the following analogies using the spelling words.

1. **Snow** is to **shovel** as leaves are to **rake**.
2. **Boys** are to **men** as **girls** are to women.
3. Scarves are to **neck** as **belts** are to **waist**.
4. **Lives** are to **life** as **calves** are to calf.
5. **Mouse** is to **mice** as **goose** is to geese.

page 254

River System

Using resource materials and the terms below, **label** the parts of the river system. **Write** a description of each word in the space provided.



Answers may include:

waterfall: water falling from a high place

meander: the twisting course of a river or stream

rapids: swiftly moving water, usually over rocks

flood plain: low lying land prone to flooding

delta: deposits at the mouth of a river

oxbow: a u-shaped lake formed when a stream cuts off a meander

tributary: a stream that flows into a larger river

lake: a body of water surrounded by land

page 255

This diagram is not the answer key

Preparing for Prefixes

A **prefix** is a word part that is added to the beginning of a root word to make a new word. Every prefix has a meaning and alters the meaning of the root word.

Prefixes
pre—before **con**—with, together
im—not **re**—again, back

Complete each sentence with a word containing the prefix **im**.

conserve, constructed, impatient, imperfect, impersonate, impractical, impure, prearrange, prepaid, preview, react, recall, recharge, reclaim, redecorate, redeem, relate, retain

1. Be careful! Don't drink that ___impure___ water.
2. It is ___impractical___ to own five automobiles.
3. Don't be so ___impatient___—this takes time to complete.
4. The comedian will ___impersonate___ the president.
5. It was not a very good mold; it was ___imperfect___.

Match each clue with a word containing the prefix **re**.

1. call again ___recall___
2. energize the battery ___recharge___
3. to pay off, buy back ___redeem___
4. to decorate again ___redecorate___
5. to tell or narrate ___relate___
6. to respond ___react___
7. win in competition after losing title ___reclaim___
8. to hold onto ___retain___

Complete the passage with words containing the prefixes **pre** or **con**.

Last week, a group of teachers was asked to ___preview___ a science-fiction TV program. We had to ___prearrange___ a specific time and date with the producers. When everyone was settled, the producers described how they had ___constructed___ creatures for the program. They discussed how they tried to ___conserve___ time, money and materials by planning every detail in advance. They even ___prepaid___ for all materials to take advantage of discounts. We all felt the production was informative as well as entertaining.

page 264

Fractions: Addition and Subtraction

Identify the shaded part.

1. $\frac{1}{4}$ 2. $\frac{2}{8}$ 3. $1\frac{1}{8}$

Complete. Reduce to lowest terms.

4. $\frac{2}{3} = \frac{10}{15}$ 5. $\frac{9}{12} = \frac{3}{4}$ 6. $\frac{18}{54} = \frac{2}{6}$

Compare using > or <.

7. $\frac{13}{27} > \frac{12}{27}$ 8. $\frac{5}{6} > \frac{3}{4}$ 9. $2\frac{3}{4} < \frac{13}{4}$

Add or **subtract**.

10. $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$ 11. $\frac{3}{8} - \frac{2}{8} = \frac{1}{8}$ 12. $\frac{3}{4} + \frac{1}{2} = \frac{5}{4} = 1\frac{1}{4}$

13. $\frac{7}{8} - \frac{3}{4} = \frac{1}{8}$ 14. $5\frac{1}{2} + 2\frac{1}{2} = \frac{6}{2} = 3$ 15. $2\frac{1}{8} - 1\frac{5}{8} = \frac{4}{8} = \frac{1}{2}$

16. $\frac{21}{5} - \frac{21}{10} = 2\frac{1}{10}$ 17. $5\frac{1}{6} + \frac{2}{3} = 8\frac{16}{24} = 8\frac{2}{3}$ 18. $\frac{5}{3} + \frac{2}{5} = \frac{31}{15} = 2\frac{1}{15}$

Draw a model to show each fraction.

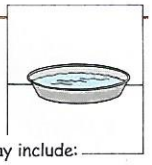
19. $3\frac{1}{4}$ 20. $\frac{10}{3}$

page 265

The Salty Seas

Swimming in the sea is easier than swimming in a lake. This is because seawater contains salty material that helps a swimmer float. Three-fourths of a sea's salty material is the same as the salt we use in our food. Seawater contains 55.2% chlorine, 30.6% sodium, 7.6% sulfate, 3.7% magnesium, 1.2% calcium, 1.1% potassium and other elements. All these ingredients are found in rocks and soil around the world. When seawater evaporates, most of the salt is left behind. When it rains, the rivers continually wash in more soil and rocks (and, therefore, more salt). But the seas do not get more salty, because the salt gets trapped with the mud and sand that builds up on the seafloor. Did you know that if all the salt was taken out of the seas and spread over the land surface of Earth, there would be a layer 500 feet thick? To learn more about evaporation, try the experiment below.

You will need: pie pan or saucer, water, salt, teaspoon



Experiment:
1. Fill the pie pan halfway with water.
2. Pour as much salt in the water as will dissolve. Stir with the teaspoon.
3. Place the salt water in a warm, dry place until the water has evaporated.

Answers may include:

Predict:
1. What do you think will happen to the water? ___It will evaporate.___
2. How long do you think this will take? ___1 day___
3. What do you think will happen to the salt? ___It will still be there.___

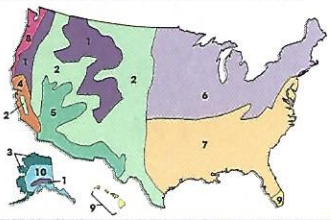
Answers will vary:

Analyze:
1. On another sheet of paper, make a chart to record the daily water level.
2. What has happened to the water? ___It evaporated.___
3. How long did it take? ___Answers will vary (2,3,4 days).___

page 266

U.S. Climate Zones

The word **climate** is used to describe the weather in a particular place over a long period of time. Because the United States covers such a large area, it has a number of different climate zones. Some areas have long, cold winters and short, cool summers, while other areas are warm in both summer and winter.



Map Key

1 alpine	4 mediterranean		7 subtropical	9 tropical	
2 steppe	5 desert				
3 tundra	6 continental		8 marine	10 subarctic	

Choose colors to color-code the Map. Then, determine the . . .

Answers may include:

climate zone you live in. ___6-continental___
climate zone of the Northeast. ___6-continental___
climate zones of the Rocky Mountains. ___1-alpine___
three climate zones found in Alaska. ___1-alpine 10-subartic 3-tundra___
climate zones found in Texas. ___7-subtropical 2-steppe 5-desert___
climate zones of Florida. ___7-subtropical 9-tropical___
climate zone of Michigan. ___6-continental___

page 267

Practice With Prefixes

administer, advantage, adventure, defog, dehumidify, depart, derail, disagree, disappeared, dishonest, disinterested, explode, export, external, extricate, unequal, unprepared, untrue

Prefixes
ex—out of, from **dis, un**—not, opposite of
de—down, away from **ad**—to, at, toward

Note the prefixes in the box above and how they change the meaning of a root word. **Write** each spelling word under the appropriate category.

words with the prefix **un**
1. ___unequal___
2. ___unprepared___
3. ___untrue___

words with the prefix **dis**
1. ___disagree___
2. ___disappeared___
3. ___dishonest___
4. ___disinterested___

words with the prefix **ad**
1. ___administer___
2. ___advantage___
3. ___adventure___

words with the prefix **ex**
1. ___explode___
2. ___export___
3. ___external___
4. ___extricate___

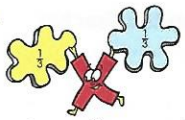
Add the prefix **de** to each of these root words. Say each word to yourself as you write it on the line.

humidify	part	fog	rail
dehumidify	depart	defog	derail

page 272

Puzzling Fractions

Multiply to solve the problems.



$7 \times \frac{1}{5} = \frac{7}{5} = 1\frac{2}{5}$ $9 \times \frac{1}{10} = \frac{9}{10}$ $8 \times \frac{1}{8} = \frac{8}{8} = 1$ $8 \times \frac{8}{7} = 1\frac{1}{7}$

$7 \times \frac{1}{11} = \frac{7}{11}$ $9 \times \frac{1}{3} = \frac{9}{3} = 3$ $3 \times \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$ $12 \times \frac{12}{5} = 2\frac{2}{5}$

$\frac{1}{5} \times 4 = \frac{4}{5}$ $\frac{1}{3} \times 9 = \frac{9}{3} = 3$ $\frac{1}{5} \times 20 = \frac{20}{5} = 4$ $\frac{1}{6} \times 12 = \frac{12}{6} = 2$

$\frac{1}{10} \times \frac{1}{100} = \frac{1}{1000}$ $\frac{1}{6} \times \frac{1}{10} = \frac{1}{60}$ $\frac{1}{12} \times \frac{1}{3} = \frac{1}{36}$ $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$

$\frac{1}{9} \times \frac{1}{8} = \frac{1}{72}$ $\frac{1}{9} \times \frac{1}{10} = \frac{1}{90}$ $\frac{1}{10} \times \frac{1}{10} = \frac{1}{100}$ $\frac{1}{20} \times \frac{1}{5} = \frac{1}{100}$

$8 \times \frac{1}{10} = \frac{8}{10} = \frac{4}{5}$ $\frac{1}{5} \times \frac{1}{8} = \frac{1}{40}$ $\frac{1}{6} \times \frac{1}{7} = \frac{1}{42}$ $\frac{1}{100} \times \frac{1}{10} = \frac{1}{10,000}$

$\frac{1}{9} \times 9 = \frac{9}{9} = 1$ $\frac{1}{8} \times 7 = \frac{7}{8}$ $\frac{1}{7} \times 6 = \frac{6}{7}$ $12 \times \frac{1}{4} = \frac{12}{4} = 3$

$\frac{1}{15} \times \frac{1}{13} = \frac{1}{195}$ $\frac{1}{3} \times \frac{1}{7} = \frac{1}{21}$ $\frac{1}{8} \times 3 = \frac{3}{8}$ $\frac{1}{7} \times 21 = \frac{21}{7} = 3$

page 273

Multiplication With Mixed Numbers

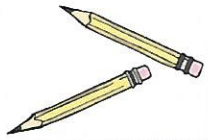
When multiplying by a mixed number, change the mixed number to an improper fraction. Cancel if possible. Multiply the numerators, then the denominators. **Write** the improper fractions as mixed numbers.

Example A: $\frac{3}{4} \times 1\frac{1}{2} = \frac{3}{4} \times \frac{3}{2} = \frac{9}{8} = 1\frac{1}{8}$ (multiply)

Example B: $2\frac{4}{7} \times \frac{5}{9} = \frac{18}{7} \times \frac{5}{9} = \frac{10}{7} = 1\frac{3}{7}$ (multiply)

Multiply.

1. $\frac{1}{2} \times 8\frac{3}{4} = \frac{1}{2} \times \frac{35}{4} = 4\frac{3}{8}$
2. $5\frac{1}{3} \times \frac{6}{7}$ $4\frac{4}{7}$
3. $\frac{11}{12} \times 11\frac{1}{3}$ $10\frac{7}{18}$
4. $7\frac{1}{2} \times \frac{8}{9}$ $6\frac{2}{3}$
5. $\frac{2}{5} \times 2\frac{1}{12}$ $\frac{5}{6}$
6. $8\frac{2}{3} \times \frac{1}{4}$ $2\frac{1}{6}$



page 274

Dividing Fractions

When dividing fractions, change the problem to multiplication. Invert the divisor. Cancel if possible. Multiply the numerators, then the denominators. **Write** improper fractions as mixed numbers.

Example A: $\frac{3}{10} \div \frac{4}{5} = \frac{3}{10} \times \frac{5}{4} = \frac{3}{2} \times \frac{1}{4} = \frac{3}{8}$ (multiply)

Example B: $\frac{5}{12} \div \frac{3}{8} = \frac{5}{12} \times \frac{8}{3} = \frac{5}{3} \times \frac{2}{3} = \frac{10}{9} = 1\frac{1}{9}$ (multiply)

Divide.

1. $\frac{1}{2} \div \frac{3}{10} = \frac{1}{2} \times \frac{10}{3} = 1\frac{2}{3}$
2. $\frac{3}{8} \div \frac{1}{4}$ $1\frac{1}{2}$
3. $\frac{4}{9} \div \frac{2}{3}$ $\frac{2}{3}$
4. $\frac{3}{8} \div \frac{5}{12}$ $\frac{9}{10}$
5. $\frac{1}{10} \div \frac{2}{5}$ $\frac{1}{4}$
6. $\frac{5}{6} \div \frac{11}{12}$ $\frac{10}{11}$
7. $\frac{14}{15} \div \frac{2}{3}$ $1\frac{2}{5}$
8. $\frac{4}{5} \div \frac{3}{10}$ $2\frac{2}{3}$

page 275

Radical Referents

Write the name of the person or thing to which the **bold** words refer.

1. Mama took Ellen's hand and told **her she** had beautiful hair. Ellen
2. After discussing the girls, Papa and Mama decided that **they** should be taken to Henrik's house. girls
3. Papa reached for the phone to call Henrik, hoping that **he** would still reach **him** at home. Papa—Henrik
4. Papa promised Mama and the children **they** would be safe. Mama—children
5. A soldier on the train asked Mama where **she** was going. Mama
6. Kirsti told the soldier, "I am going to visit **my** Uncle Henrik!" Kirsti
7. Annemarie was surprised when Ellen said **she** had never seen the sea. Ellen
8. Henrik named his fishing boat the *Ingeborg* after Mama, who was **his** sister. Henrik

In the morning, Annemarie awoke and stumbled downstairs where **she** found her chatterbox sister feeding a kitten. Kirsti named **it** after the God of Thunder and **she** was attempting to give it water. Annemarie / the kitten / Kirsti

When Kirsti laughed, the kitten scurried off to be alone and soon **it** rested on a windowsill out of **her** reach. There it sat, licking its paws. the kitten / Kirsti

Ellen was still sleeping while Mama prepared oatmeal for **her** and the others. Mama's brother Henrik no longer grew vegetables but **he** was able to provide cream and butter because of Blossom, **his** cow. Ellen / Henrik / Henrik

Underline the character's name hidden in each of the following sentences. The first one has been done for you.

1. May Mary Beth or Betty Ann play the game in the blizzard?
2. The fakir stirred his cauliflower soup with a spatula and a dowel.
3. The party's success was certain when Sam amazed his audience.
4. Matilda foolishly flipped and fell entirely into a foaming filth.
5. The Fieldings figured the top apartment was the best of the lot.
6. My winsome sister could shop eternally for chartreuse stockings.

page 280

Stump the Teacher

The students in Ms. Davidson's class were playing "Stump the Teacher." See if you can solve their problems.

1. If baseball cards are worth $\frac{1}{10}$ of a dollar each, how much are Brad's 54 cards worth? $5.40
2. If $\frac{6}{8}$ of Sally's 8 puppies are female and $\frac{1}{2}$ of the female puppies have been sold, how many female puppies have been sold? 3 puppies
3. Felipe used $\frac{2}{3}$ cup of cheese for each pizza. If he made 4 pizzas, how much cheese did he need to buy? 2 $\frac{2}{3}$ cups
4. Francis bought $\frac{15}{16}$ of a yard of fabric. She used $\frac{1}{2}$ of it to make a dress for her doll. What fraction of a yard did she use? $\frac{15}{32}$ yd.
5. If a lot is $\frac{5}{8}$ of an acre, and the house covers $\frac{1}{2}$ of it, what fraction of an acre is covered by the house? $\frac{5}{16}$ acre
6. At the track meet, Rick entered 5 sprint contests. If each race was $\frac{1}{4}$ mile long, how many miles did Rick sprint in all? $1\frac{1}{4}$ mi.
7. The class had $\frac{1}{4}$ of an hour to take a math quiz. Nate used only $\frac{1}{3}$ of the time. What fraction of an hour did Nate use for the quiz? $\frac{1}{12}$ hr.
8. Lisa and Kim live $\frac{3}{8}$ of a mile apart. If they each walked $\frac{1}{2}$ of the way and met in the middle, what part of a mile did each walk? $\frac{3}{16}$ mi.
9. This year's summer vacation was $\frac{1}{6}$ of the year. How many months long was the summer vacation this year? 2 mo.
10. Paul's dog was asleep $\frac{2}{3}$ of the day. How many hours was it awake? 8 hrs.

page 281

Fractions: Multiplication and Division

Solve.

1. $\frac{7}{9} \times \frac{1}{4} = \frac{7}{36}$
2. $\frac{5}{6} \times \frac{1}{10} = \frac{5}{60} = \frac{1}{12}$
3. $\frac{9}{10} \times \frac{2}{3} = \frac{18}{30} = \frac{3}{5}$
4. $8 \times \frac{1}{4} = \frac{8}{4} = 2$
5. $\frac{1}{3} \times 15 = \frac{15}{3} = 5$
6. Jaime sat in his chair for $\frac{5}{6}$ of an hour. For $\frac{1}{3}$ of this time, he worked on his assignment. What fraction of an hour did he work on his assignment? $\frac{1}{3} \times \frac{5}{6} = \frac{5}{18}$

7. $\frac{1}{2} + \frac{1}{5} = \frac{5}{2} = 2\frac{1}{2}$
8. $\frac{1}{5} + \frac{1}{2} = \frac{2}{5}$
9. $\frac{3}{4} + \frac{3}{8} = \frac{4}{2} = 2$
10. $\frac{7}{16} + \frac{4}{7} = \frac{49}{64}$

page 282

Third Quarter Test

Identify the shaded fraction and simplify to lowest terms.

1. $\frac{3}{8}$
2. $\frac{4}{8} = \frac{1}{2}$
3. $\frac{16}{20} = \frac{4}{5}$

Compare using > or <.

4. $\frac{3}{5} < \frac{4}{5}$
5. $\frac{5}{8} > \frac{5}{11}$
6. $1 > \frac{7}{8}$

Add or **subtract.**

7. $\frac{1}{9} + \frac{5}{9} = \frac{6}{9} = \frac{2}{3}$
8. $\frac{2}{5} + \frac{1}{10} = \frac{5}{10} = \frac{1}{2}$
9. $\frac{3}{8} + \frac{1}{6} = \frac{13}{24}$
10. $3\frac{1}{4} + 2\frac{1}{3} = 5\frac{7}{12}$
11. $\frac{7}{9} - \frac{2}{3} = \frac{1}{9}$
12. $11\frac{7}{8} - 4\frac{5}{12} = 7\frac{11}{24}$
13. Change $\frac{17}{4}$ to mixed number. $4\frac{1}{4}$
14. Change $3\frac{2}{5}$ into improper fraction. $\frac{17}{5}$

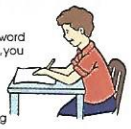
Multiply or **divide.**

15. $\frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$
16. $\frac{11}{12} \times \frac{4}{5} = \frac{44}{60} = \frac{22}{30} = \frac{11}{15}$
17. $\frac{2}{3} \div \frac{1}{3} = 2$
18. $\frac{1}{2} \div \frac{1}{4} = 2$

page 283

Serving up Suffixes

A **suffix** is a group of letters added to the end of a root word to form a new word. When the root word ends in silent **e**, you usually drop the final **e** before adding the suffix.



arrange
bore
capture
compare
create
crowd
dance
divide
explore
give
mend
promise
reduce
shake
strange
surprise
tame
write

Examples: trade + **ed** = traded
move + **er** = mover
surprise + **ing** = surprising

Use the spelling words to **write** the correct root word.

1. comparing	compare	9. shaker	shake
2. surprising	surprise	10. taming	tame
3. promised	promise	11. arranged	arrange
4. captured	capture	12. giving	give
5. dancer	dance	13. bored	bore
6. writing	write	14. reducing	reduce
7. stranger	strange	15. divided	divide
8. creating	create	16. exploring	explore

Write the two spelling words you have not used. Then, **write** each one, adding the **ed** and the **ing** endings.

1.	crowd	crowded	crowding
2.	mend	mended	mending

Brainstorm and list more words to fit the rule.

Samples include: lose, bite, bake

page 288

You Be the Judge

Sample answers:

1. Rank these people from 1 to 4, with 1 being the bravest. Explain in one paragraph why you ranked them this way.

1 Henrik 3 Mrs. Rosen 4 Kirsti 2 Mama

Henrik and Mama risked their lives to help the Rosens. Mrs. Rosen had to trust Mama to help. Kirsti was too small to know what was going on. She acted just like a little girl would act.

2. How would you compare this book with the last book you read? How is it similar? How is it different?

Title of last book: _____

Similar	Different
1. Left their homes	1. Forced to leave
2. Characters same age	2. Different wars
3. Neighbors helping neighbors	3. Religious persecution

3. **Write** three sentences from different chapters in the book that you believe illustrate the emotion of fear.

Page no. 5 Ellen whispered suddenly, "I was so scared."

Page no. 45 Terrified, both girls looked up at the 3 Nazi officers who entered the room.

Page no. 93 Mama, Annmarie, and the Rosens sat in silence. There was a slight commotion outside the door.

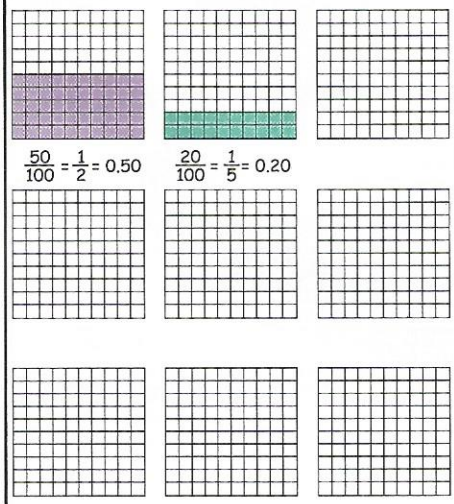
4. Argue either for or against this statement: *Number the Stars* is a book written especially for girls because its main character is a girl.

Number the Stars is a book boys and girls would both like. The main character may be a girl, but the events happen to both.

page 289

Base-Ten Squares

Samples given:



$\frac{50}{100} = \frac{1}{2} = 0.50$ $\frac{20}{100} = \frac{1}{5} = 0.20$

page 290

Searching for Suffixes

This group of spelling words has the same suffixes used in Week 28, but these suffixes were added without any changes to the root words.

attached
attended
avoiding
builder
catcher
concerned
drawing
enjoying
escorted
established
poster
prisoner
repeated
scalding
scooter
seller
spelling
younger

Examples: clean + **ed** = cleaned
clean + **er** = cleaner
clean + **ing** = cleaning

Exception: When a word ends in a single consonant preceded by a short vowel, the consonant is usually doubled before adding a suffix that begins with a vowel.

Examples: sit + **t** + **ing** = sitting
pad + **d** + **ed** = padded

Write each spelling word in the appropriate category.

Root + er	Root + ing	Root + ed
1. builder	1. avoiding	1. attached
2. catcher	2. drawing	2. attended
3. poster	3. enjoying	3. concerned
4. prisoner	4. scalding	4. escorted
5. scooter	5. spelling	5. repeated
6. seller		6. spelling
7. younger		

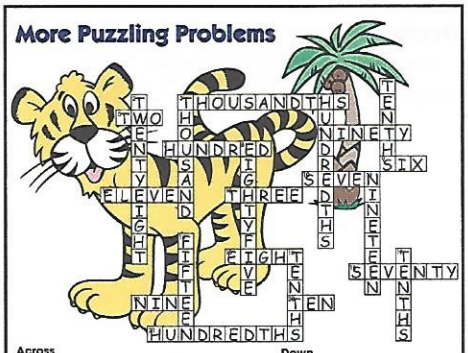
Searching Suffixes

Circle the root word in each word.

1. (clapping)	3. (equipping)	5. (slapped)	7. (quiver)
2. (canned)	4. (trimmer)	6. (beginning)	8. (dragging)

page 296

More Puzzling Problems



Across

3. 7.333 = seven and three hundred thirty-three _____
5. 67.02 = sixty-seven and _____ hundredths
6. 490.1 = four hundred _____ and one tenth
7. 0.512 = five _____ twelve thousandths
9. 8.06 = eight and _____ hundredths
10. 0.007 = _____ thousandths
12. 11.3 = _____ and three tenths
13. 300.12 = _____ hundred and twelve hundredths
15. 62.08 = sixty-two and _____ hundredths
18. 70.009 = _____ and nine thousandths
19. 9.3 = _____ and three tenths
20. 10.51 = _____ and fifty-one hundredths
21. 1,000.02 = one thousand and two _____

Down

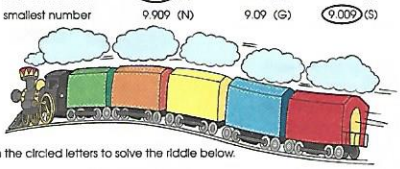
1. 6.5 = six and five _____
2. 0.428 = four hundred _____ thousandths
3. 8,100.1 = eight _____ one hundred and one tenth
4. 3.02 = three and two _____
8. 0.685 = six hundred _____ thousandths
11. 50.19 = fifty and _____ hundredths
14. 0.015 = _____ thousandths
16. 430.7 = four hundred thirty and seven _____
17. 73.4 = seventy-three and four _____

page 297

Missing Train

Circle the ...

1.	smallest number	0.31 (A)	(0.05) (F)	0.20 (R)
2.	greatest number	0.001 (R)	(0.137) (O)	0.100 (A)
3.	greatest number	(9.910) (L)	9.010 (C)	9.909 (T)
4.	smallest number	0.110 (A)	(0.09) (L)	0.3 (R)
5.	greatest number	0.090 (S)	0.10 (P)	(0.12) (O)
6.	smallest number	0.131 (H)	0.2 (T)	(0.08) (W)
7.	greatest number	1.310 (E)	1.03 (H)	(1.33) (T)
8.	smallest number	(2.001) (H)	2.9 (F)	2.010 (A)
9.	greatest number	(0.3) (E)	0.03 (A)	0.003 (R)
10.	greatest number	1.01 (U)	1.001 (R)	(1.1) (T)
11.	greatest number	(3.04) (R)	3.009 (U)	3.039 (N)
12.	smallest number	(6.01) (A)	6.11 (C)	6.030 (O)
13.	greatest number	0.001 (T)	(0.100) (C)	0.090 (N)
14.	smallest number	(1.027) (K)	1.270 (R)	1.207 (P)
15.	smallest number	9.909 (N)	9.09 (G)	(9.009) (S)



Fill in the circled letters to solve the riddle below.

How do you search for a missing train?

F	O	L	L	O	W		T	H	E		T	R	A	C	K	S
1	2	3	4	5	6		7	8	9		10	11	12	13	14	15

page 298

Exploring Friction

Friction is the force that keeps some things from moving or slows them down when they do move. Friction is present when surfaces touch one another. The amount of friction depends on the kinds of materials that are touching, how smooth their surfaces are and how much force presses the two surfaces together.

You will need: string, a screw eye, a block of wood and a spring balance

Experiment:
You will measure the amount of force needed to overcome the friction created by the block of wood on different surfaces. You will be measuring in Newtons (N). The greater the amount of friction created by a surface, the greater the force needed to overcome it. Screw the screw eye into the block. Attach one end of the string to the screw eye on the block of wood and the other to the hook on the spring balance. Put the block on its side on a smooth tabletop and pull evenly on your spring balance until the block moves. Keep pulling so that the block of wood moves at the same speed across the table for each surface. Your parent can take a reading from the spring balance. **Write** this quantity in the chart. Repeat the procedure for each surface listed. Hint: When using marbles, place books around the area to keep them from scattering.

Surface	Amount of Force Needed to Overcome Friction (N)
Aluminum foil	3 N
Marbles	1 N
Sandpaper	5 N
Smooth tabletop	2 N

Does sliding or rolling create more friction? Sliding

page 299

Simplifying Suffixes

When adding a suffix beginning with a vowel to a word that ends in a consonant + **y**, change the **y** to **i** before adding the suffix. An exception to this rule occurs when adding the suffix **ing**.

apply
boundary
canary
century
city
company
country
dairy
enemy
factory
grocery
hobby
lily
marry
memory
pity
reply
worry

Examples:
worry + **es** = worries
dry + **ing** = drying
copy + **ed** = copied
fry + **ing** = frying

Write the correct spelling word with an appropriate suffix on each line.

1. joined in matrimony married
2. USA and Mexico are examples of these countries
3. felt sorry for pitied
4. answering replying
5. food purchases groceries
6. to be concerned worried
7. one's adversaries enemies
8. places of manufacturing factories
9. petitioned applied
10. more than one period of 100 years centuries
11. Easter flowers lilies
12. fun things done in free time hobbies
13. milk processors dairies
14. little yellow birds canaries
15. urban areas cities
16. recollections memories
17. borders boundaries
18. people work for these companies

page 304

Tim Burr, Tall Tale Hero

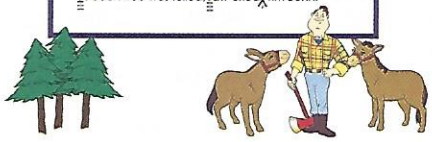
Read the following tall tale about Tim Burr. Use proofreading marks to edit the paragraphs and correct the sentence fragments. **Write** the quotations correctly. Use proper capitalization and the appropriate homophones.

Answers may vary:

far up north, in the rugged, wooded regions of canada, ~~their~~ there lived the famous lumberjack tim burr. his trusty sidekick, saw mills, lived there, too. one day, saw and tim loaded up their axes and set off for the woods, to fell more trees. for the local mill, Log Lagoon. they took along their pack mules, ~~they're~~ beauty and beast. they chopped so fast that the trees began falling onto each other, creating quite a logjam. "It's not ~~is not~~ my fault," yelled saw. "I can't see where you are cutting."

the problem grew worse. beauty, tim's beloved mule, almost got his ~~tale~~ tail sliced off by a falling tree trunk that does ~~is~~ yelled tim angrily, "when you cut down a tree, call for me, so ~~he~~ I know where you are."

saw obeyed tim's wishes. from that day on, as each tree was felled, saw cried, "TIM BURR!"



page 305

Decimal Delight

Kooky Claude Clod, the cafeteria cook, has some strange ideas about cooking. He does not understand fractions—only decimals. Help Claude convert these measurements to decimals so he can get cooking!

Kooky Soup

Mix together and sauté:
$\frac{9}{20}$ cup minced cat whiskers
$\frac{7}{8}$ cup crushed snails
$\frac{3}{5}$ cup toothpaste
$\frac{3}{4}$ tablespoon vinegar
$\frac{11}{25}$ cup pig slop

Simmer 93$\frac{1}{2}$ days.

Gradually fold in:
$\frac{1}{4}$ teaspoon soot
$\frac{2}{5}$ cup motor oil
$\frac{7}{8}$ tablespoon lemon juice
$\frac{11}{20}$ cup chopped poison ivy
6$\frac{1}{4}$ rotten eggs

Brew for 1,500$\frac{24}{25}$ years. Enjoy!

Mix together and sauté:
0.45 cup minced cat whiskers
0.875 cup crushed snails
0.60 cup toothpaste
0.75 tablespoon vinegar
0.44 cup pig slop

Simmer 93.50 days.

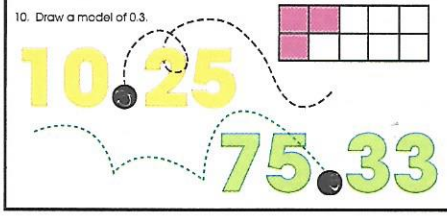
Gradually fold in:
0.20 teaspoon soot
0.375 cup motor oil
0.90 tablespoon lemon juice
0.55 cup chopped poison ivy
6.25 rotten eggs

Brew f 1,500.96 s. Enjoy!

page 306

Decimals

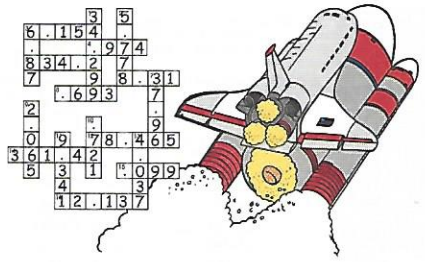
1. Write out 36.124 in words. thirty-six and one hundred twenty four thousandths
2. Write two hundred thirty-seven and twenty-six hundredths in numerals. 237.26
3. Use > or < to indicate which decimal fraction is greater.
   3.147 < 3.205 3.06 > 3.059
4. Round 87.658 to the nearest whole number. 88
5. Round 87.658 to the nearest tenth. 87.7
6. Round 87.658 to the nearest hundredth. 87.66
7. Write 0.5 as a fraction in lowest terms. $\frac{5}{10} = \frac{1}{2}$
8. Write 0.69 as a fraction in lowest terms. $\frac{69}{100}$
9. Write 7.85 as a fraction in lowest terms. $7\frac{85}{100} = \frac{17}{20} = 7\frac{17}{20}$
10. Draw a model of 0.3.



page 307

Blast Off!

Hint: Decimal points take up their own square. Do not use a zero before the decimal.



Across

3. 8.237 − 2.083 = 6.154
4. 2.23 − 1.256 = .974
5. 1,376.33 − 542.13 = 834.20
6. 8.538 − 0.228 = 8.31
8. 3.099 − 2.406 = .693
12. 124.107 − 45.642 = 78.465
14. 465.52 − 104.1 = 361.42
15. 0.732 − 0.633 = .099
16. 67.549 − 55.412 = 12.137

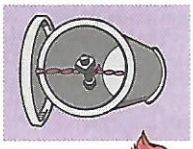
Down

1. 33.333 + 0.896 = 34.229
2. 2.587 + 3.191 = 5.778
3. 5.78 + 1.09 = 6.87
7. 22.05 + 15.91 = 37.96
9. 2.057 + 0.008 = 2.065
10. 0.531 + .19 = .721
11. 7.852 + 1.489 = 9.341
13. 3.012 + 1.025 = 4.037

page 308

Come-Back Can

You will need: a large can with a plastic lid, a compass, 2 long rubber bands, a paper clip, a piece of wire and a bolt



Making the Come-Back Can
With a compass point, punch a hole in the center of the can bottom. Punch another hole in the center of the plastic lid. Feed two long rubber bands through the hole in the bottom of the can. Use a paper clip on the outside of the can to keep the loops of the rubber bands from pulling out. Wrap a piece of wire around a bolt and tie the wire to the center of one of the rubber bands inside the can. Thread the other ends of the rubber bands through the hole in the lid. Use another paper clip to keep these outside loops from pulling out. Snap the lid on the can.

Using the Come-Back Can
Place the can on the floor and roll it away from you. Does it come back? yes
Roll it harder. Does it come all the way back? no
Rolls farther than the ramp bottom.

Making Hypotheses
Why do you think the can comes back? Because the rubber band is unwinding.
Can you make the can roll farther(faster)or longer? Winding the band tighter.
What can you change about the can's design? Answer will vary.

Try your new design. How does it work? Answer will vary.

page 309

Vital Vowel Digraphs

Vowel Digraph are two vowels together that make only one vowel sound. Generally, the vowel digraphs below carry the following sounds:

ee, ea = long e as in **peep, flea**
ue = oo as in **true**
oa, oe = long o as in **moan**

approach
beaten
blueprint
boasted
bread
breath
disagreement
easel
eastern
feelings
flue
glued
groan
increase
leather
needless
peek
reason

Sometimes the vowel digraph **ea** carries the **short e** sound as in **pleasure**.

Write each spelling word in the appropriate category. **Write** the number of syllables in each word in the parentheses.

ee = ē	ea = ē
disagreement (4)	beaten (2)
feelings (2)	easel (2)
needless (2)	eastern (2)
peek (1)	increase (2)
	reason (2)

oa = ō	Elephant ea Words	ue = o͞o
approach (2)	bread (1)	blueprint (2)
boasted (2)	breath (1)	flue (1)
groan (1)	leather (2)	glued (1)

Write the spelling word that is a compound.
blueprint

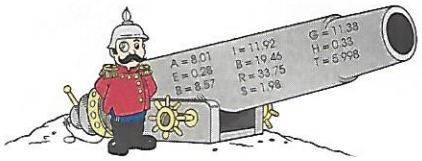
Write the eight spelling words that contain either a prefix or a suffix.

beaten	needless	eastern	glued
disagreement	boasted	feelings	increase

page 314

Historical Harry

What were the large cannons that were used by Germany in World War I?
Solve the following subtraction problems and find the answers in the cannon.
Write the corresponding letter above the problem's number at the bottom of the page to spell out the answer to this historical trivia question.



1. 9 – 0.43 = 8.57
2. 12 – 0.08 = 11.92
3. 15 – 3.62 = 11.38
4. 20 – 0.54 = 19.46
5. 1 – 0.72 = 0.28
6. 46 – 12.25 = 33.75
7. 6 – 0.002 = 5.998
8. 21 – 20.67 = 0.33
9. 9 – 0.99 = 8.01
10. 4 – 2.02 = 1.98

B	I	G		B	E	R	T	H	A	S
1	2	3		4	5	6	7	8	9	10

page 315

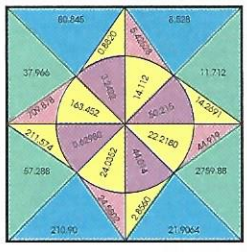
A Multiple Design

Solve the problems on a separate sheet of paper. Find the answers in the design and **color** correctly.

green	blue	red
0.463	28.5	6.51
x 82	x 7.4	x 6.9
37.966	210.9	44.919

yellow	purple	purple
39.2	7.54	0.670
x 0.36	x 0.43	x 0.94
14.112	3.2422	0.62980

yellow	yellow	purple
64.9	0.592	7.46
x 3.26	x 40.6	x 5.9
211.574	24.0352	44.014



green	blue	blue	green	purple
92.4	32.8	85.1	7.32	6.05
x 0.62	x 0.26	x 0.95	x 1.6	x 8.3
57.288	8.528	80.845	11.712	50.215

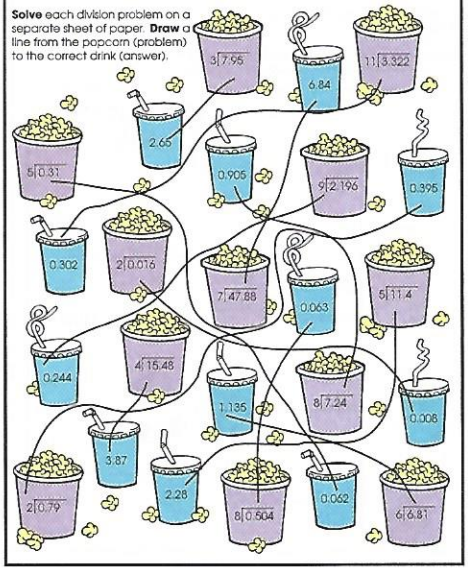
green	blue	yellow	red	red
3.27	5.56	80.5	5.77	95.8
x 844	x 3.94	x 0.276	x 4.26	x 7.41
2759.88	21.9064	22.218	24.5802	709.878

red	yellow	yellow	yellow	yellow
0.784	2.57	29.3	6.80	0.245
x 6.92	x 63.6	x 0.497	x 0.42	x 3.6
5.42528	163.452	14.2691	2.856	0.8820

page 316

The Perfect Sweet-Treat Solution

Solve each division problem on a separate sheet of paper. **Draw** a line from the popcorn (problem) to the correct drink (answer).



page 317

Logic Puzzlers

1. Four volumes of an encyclopedia set, Volumes A, B, C and D, are placed on a shelf out of order. Volume A is between B and C. Volume D is not next to Volume C, which is the first volume on the left. From left to right, in what order are the volumes? CABD
2. My cat just tried to eat my telephone book. I cannot find pages 3, 4, 26, 27, 39 and 40. How many sheets of paper did my cat remove from the book? 4
3. Ken collects balls. Betsy collects postage stamps. Ken thinks 3 balls are as valuable as 2 stamps. If Betsy agrees to swap 14 stamps, how many balls will Ken need to give her? 21 balls
4. (Do after completing #3.) Amy collects baseball cards. She thinks 5 stamps are worth the same as 1 card. If Amy decides to trade 2 cards, how many stamps should she receive? How many balls ? 10 stamps 15 balls
5. Four people are introduced to one another at a party. Each of the four shakes hands with the other three. How r 6 handshakes ?
6. Four friends meet for dinner. One is a cab driver, one is a carpenter, one is an accountant and one is a fisherman. The four sit at a square table with one person on each side of the tat cab driver, but the accountan and write where each person your square.

cab driver
fisherman [ ] accountant
carpenter

7. James and Esther are brother and sister. Both are married and have children. Carolyn is James's wife. Ryan is Esther's husband. Ron and Gary are cousins in the same family. Gary is not James's son. Who is Ron's mother? Carolyn
8. At Lee's next birthday he will be three times the age of his son, Robert. Robert is now two and a half times the age of his little sister, Michelle, who is 6. How old is Lee right now? 44 years old

page 322

More Vowel Digraphs

The vowel digraphs **ie** and **ei** usually carry the following sounds:

ie = long i as in **tie** **ie = long e** as in **relief**
ei = long a as in **weigh** **ei = long e** as in **deceive**

believe, brief, died, eight, freight, leisure, lie, perceive, piece, pies, receive, reign, retrieve, shield, shriek, siege, sleigh, vein

The following rhyme may be helpful to you:

I before E
Except after C
Or when sounded like A
As in neighbor or weigh.
Either, neither, leisure and seize
Are four exceptions,
If you please!

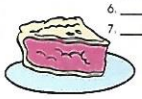
Write each spelling word in the appropriate category.

ie = ī
1. died
2. lie
3. pies

ie = ē
1. brief
2. believe
3. leisure
4. piece
5. retrieve
6. shield
7. shriek

ei = ē
1. perceive
2. receive
3. seige

ei = ā
1. eight
2. freight
3. reign
4. sleigh
5. vein



page 323

Working With Decimals

1. Write 207.426 in words.
two hundred seven and four hundred twenty six thousandths
2. Write forty-seven and thirteen thousandths in numerals. 47.013
3. Use > or < to indicate which decimal fraction is greater.
17.35 > 17.295

Fill in the blanks.

4. Round 12.836 to the nearest whole number. 13
5. Round 12.836 to the nearest tenth. 12.8
6. Round 12.836 to the nearest hundredth. 12.8
7. Write 0.36 as a fraction in lowest terms. $\frac{36}{100} = \frac{9}{25}$
8. Write 0.25 as a fraction in lowest terms. $\frac{25}{100} = \frac{1}{4}$
9. Write $\frac{3}{4}$ as a decimal number. 0.75

Solve.

10. 36.2 + 27.325 = 63.525
11. 87.36 − 84.95 = 2.41
12. 4.6 x 1.2 = 5.52
13. 3.46 x 10 = 34.6
14. 11.55 ÷ 7 = 1.65
15. 39 ÷ 12 = 3.25
16. 367.52 ÷ 10 = 36.752

page 324

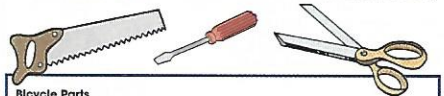
Simple Machines

There are six simple machines that are the basic units of all complex machines: the lever, the wheel and axle, the wedge, the pulley, the inclined plane and the screw.

Recognizing Simple Machines

Which simple machines can you find in each of the tools listed below?

hammer	lever	scissors	levers
doorstop	wedge	drill	screw
saw	wedge	screwdriver	wheel and axle
crowbar	lever	monkey wrench	wheel and axle



Bicycle Parts

Study a bicycle carefully. Fill in the blanks with the simple machines you find.

tire	wheel and axle	kickstand	inclined plane
caliper brakes	lever	handlebars	lever
chain and sprocket	pulley	gearshift	wheel and axle
pedal and shaft	wheel and axle	fork	lever
other			

page 325

Falsehood Follies

Here are some simple statements that are guaranteed to make you think. Carefully read and solve the first set before going on to the second.

A. Only one of the following statements is true. Find it.

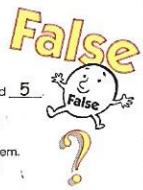
1. One of these statements is false.
2. Two of these statements are false.
3. Three of these statements are false.
4. Four of these statements are false.
5. Five of these statements are false.

Answer: The one true statement is number 4.

B. Now, here is a slightly trickier variation. This time there are *two* true statements. To find them, you will have to **fill in** the blank in sentence number five.

1. One of these statements is false.
2. Two of these statements are true.
3. Three of these statements are false.
4. Three of these statements are true.
5. Four of these statements are false
6. Five of these statements are false.

Answer: The two true statements are numbers 2 and 5.



C. Now, find all statements in this set that *could* be true.

1. If one statement is true, then three are false.
2. If two statements are true, then number 1 is one of them.
3. If three statements are false, then three are also true.
4. If one statement is false, then five are true.
5. If four statements are true, then number 4 is false.
6. There are six true statements in this set.

Answer: The statements that could be true are numbers 3, 5

page 330

Very Important Digraphs

The vowel digraphs **au** and **aw** make the same **ô** sound.
Examples: fault, jawn

Write each spelling word in the appropriate category in the two inner triangles. After you have written each word, **circle** the digraph.

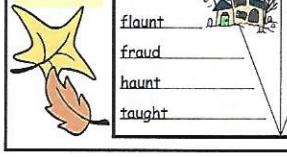
Then **write** the spelling words in alphabetical order in the two outer triangles.

auction, audience, autumn, awkward, caught, cause, dawn, fawns, flaunt, fraud, haunt, jaw, lawful, raw, scrawl, shawl, taught, yawn

ô carried by **au**	ô carried by **aw**
auction	awkward
audience	dawn
autumn	fawns
caught	jaw
cause	lawful
flaunt	raw
fraud	scrawl
haunt	shawl
taught	yawn

au
auction
audience
autumn
caught
cause
flaunt
fraud
haunt
taught

aw
dawn
awkward
fawns
jaw
lawful
raw
scrawl
shawl
yawn



page 331

Dynamic Diphthongs

Diphthongs are two adjacent letters that both contribute to the vowel sound heard. The two vowel sounds are blended. **Examples: ol, oy** as in **coin, joy; ou, ow** as in **hound, flower**

appointed, boiling, county, destroying, disloyal, employ, eyebrow, fowl, joyous, mountain, noises, pronounce, power, shower, spoiled, stout, surround, thousand

Write each spelling word in the appropriate category.

ol
1. appointed
2. boiling
3. spoiled
4. noises

oy
1. destroying
2. disloyal
3. employ
4. joyous

ou
1. county
2. mountain
3. pronounce
4. stout
5. surround
6. thousand

ow
1. eyebrow
2. fowl
3. power
4. shower

Here come the elephants! Remember that the letters **ow** can also be a vowel digraph carrying the **ō** sound as in **hollow.** The letters **ou** can carry the **ō** as in **although**, the **ô** as in **thought** or the **ŭ** as in **southern**.

Complete the words within each family by filling in the correct digraph.

ou as in **thought**	**ou** as in **although**	**ow** as in **hollow**	**ou** as in **southern**
f**ou**ght	thor**ou**gh	swall**ow**	c**ou**ple
br**ou**ght	b**ou**quet	marshmall**ow**	tr**ou**ble

page 336

Get the Facts, Max

Read the paragraphs to answer the questions below.

The islands of Aruba, Bonaire and Curaçao, sometimes known as the ABC Islands, are part of the Netherlands Antilles. They lie 50 miles north off the coast of Venezuela. Three more islands, St. Eustatius, Saba and St. Martin (the northern half of which belongs to France), are approximately 500 miles northeast of the ABC Islands.

Until 1949, the islands were known as the Dutch West Indies or Curaçao Territory. In 1986, Aruba separated to become a self-governing part of the Netherlands Realm.

On the island of Curaçao, most food is imported. Because it is so rocky, little farming is possible. The island is the largest and most heavily populated of the Netherlands Antilles. Its oil refineries, among the largest in the world, give its people a relatively high standard of living. Today, most people of Curaçao work in the shipping, refining or tourist industry.

Netherlands Antilles—Other Facts

Area:

Aruba	75 square miles
Bonaire	111 square miles
Curaçao	171 square miles
Saba	5 square miles
St. Eustatius	11 square miles
St. Martin	13 square miles

Capital: Willemstad

Major Languages: Dutch, Papiamento (a mixture of Spanish, Dutch, Portuguese, Carib and English), English, Spanish

1. Name the capital of the Netherlands Antilles. Willemstad
2. What industry gives the people a high standard of living? oil refinery
3. Name the ABC Islands. Aruba, Bonaire and Curaçao
4. What is Papiamento? a mixture of languages
5. Why must food be imported to Curaçao? land is too rocky for farming
6. Which island is smallest? Saba
7. Which two islands are the largest? Bonaire and Curaçao
8. Which island belongs in part to France? St. Martin
9. In what year did Aruba become self-governing? 1986

page 337

Big Bucks for You!

Solve the problems on another sheet of paper.

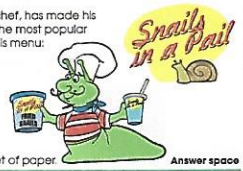
	Answer space
1. You receive your first royalty check for $1,000.00 and deposit it in your checking account. You go directly to the music store and spend $234.56 on new CDs. What is your balance?	$765.44
2. You naturally treat all your friends to pizza, which costs you $47.76. You pay with a check. What is your balance now?	$717.68
3. You decide to restock your wardrobe and buy $389.99 worth of new clothes. What is your balance?	$327.69
4. Your next royalty check arrives, and you deposit $1,712.34. You also treat yourself to a new 15-speed bicycle, which costs $667.09. What is your balance?	$1372.94
5. You buy your mother some perfume for a present. You write a check for $37.89. What is your balance?	$1335.05
6. You need a tennis racket and some other sports equipment. The bill comes to $203.45 What is your new balance?	$1131.60
7. You treat your family to dinner at **Snails in a Pail**, where the check comes to $56.17. What is your new balance?	$1075.43
8. You join a health club, and the first payment is $150.90. What is your new balance?	$924.53
9. You deposit your latest royalty check, which amounts to $4,451.01. What is your new balance?	$5375.54
10. To celebrate this good fortune, you take your entire peewee football team to a professional football game. The bill comes to $4,339.98. What is your new balance?	$1035.56

page 338

Snails in a Pail

Sly Me Slugg, world-famous French chef, has made his fast-food business, **Snails in a Pail**, the most popular restaurant in the whole area. This is his menu:

Slime Soup	$.49
Slugburger	$1.69
Chicken-Fried Snails	$2.99
Slimy Slush	$.89
Snailcream Shake	$1.49
Snailbits Salad	$1.09



Solve the problems on another sheet of paper.

	Answer space
1. Sly Me Slugg sold 60 Slimy Slushes and 40 Snailcream Shakes on Friday. How much did he make on drinks that day?	$113.00
2. A coach treated 15 of his team players to Slugburgers. How much change did he receive from $40.00?	$14.65
3. Your brother was so hungry that he ordered one of everything on the menu. How much change did he get from a $10.00 bill?	$1.36
4. Sly Me Slugg sold $43.61 in Slime Soup orders on Wednesday and $38.22 in soup orders on Thursday. How many orders of Slime Soup did he sell in those 2 days?	167
5. You had a party at **Snails in a Pail** and bought 9 Slugburgers, 3 orders of Chicken-Fried Snails, 2 Snailbits Salads, 5 Snailcream Shakes and 10 Slimy Slushes. What was the total cost for the party?	$42.71
6. In one week, Sly Me Slugg sold 200 Slugburgers and 79 orders of Chicken-Fried Snails. How much money did he earn from these 2 items?	$574.21
7. You ordered 10 Slugburgers, 10 Snailcream Shakes and 10 Slimy Slushes. What was your total cost?	$40.70
8. On Friday, Sly Me earned $1,252. On Saturday, he earned $1,765. On Sunday, he earned $2,998. What was his average daily earnings for those 3 days?	$2005

page 339

The "Nym" Family

answer, broad, combine, council, cymbal, downstairs, false, freeze, narrow, pause, plain, punish, question, reward, separate, thaw, true, upstairs

Words that have similar meanings are called **synonyms.** **Examples:** trip, journey

Words that have opposite meanings are called **antonyms.** **Examples:** hot, cold

Words that sound the same but have different spellings and meanings are called **homonyms.** **Examples:** blue, blew

Use the word list to unscramble the spelling words below. Then, **draw** a line to connect each pair of antonyms.

etusniqo	question	zrefee	freeze
dralswtson	downstairs	wersan	answer
waht	thaw	woranr	narrow
nieocbm	combine	treapsea	separate
odarb	broad	rlusptas	upstairs

Write a synonym for each of the following.

to chastise	punish	faithful	true
a prize	reward	erroneous	false

Write the homonym that will complete each pair.

1. plane	plain	3. paws	pause
2. symbol	cymbal	4. counsel	council

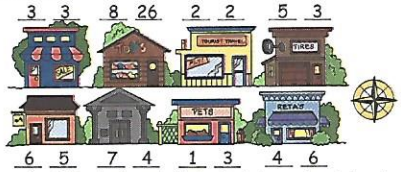
Answers may include:

1.	son	sun	5.	no	know	9.	sail	sale
2.	night	knight	6.	there	their	10.	tail	tale
3.	blew	blue	7.	two	to	11.	bail	bale
4.	new	knew	8.	so	sew	12.	your	you're

page 344

Delivery Dilemma

Dilly's Deliveries is under new management, and the new boss just instructed his top driver to follow a most peculiar route. The driver is to deliver packages to each of the eight businesses shown below, but she is not necessarily meant to visit them in a logical order.



Help the confused driver plan her route. Number the businesses above in the order in which they should be visited in the first blank. **Write** the number of packages to be delivered in the second blank.

1. The second delivery is directly north of the first delivery and has one fewer package than the first.
2. Melody's Music needs all five packages delivered before 11:00 A.M.
3. By the time the paperwork is completed, the packages are verified and greetings are exchanged between the driver and the recipient, each delivery takes fifteen minutes.
4. The bank is never the last delivery. It always receives four packages.
5. Troy's Toys has the most packages of all. His delivery will contain as many packages as all the others combined.
6. Pete's deliveries are live animals, which need to be unloaded first when the store opens at 9:30 A.M.
7. The fourth delivery is directly east of the first delivery and contains twice the number of packages.
8. The travel agency and the pet store combined are to receive the same number of packages as the music store.
9. The fifth delivery contains three boxes.
10. The third delivery is two stores west of the second.
11. The tire store, the grocery store and the pet store will all receive the same number of packages. They are the only ones to receive this exact amount.

page 345

Percents and Fractions

Write the fraction and percent represented in each situation.

Situation	Fraction	Percent
30 marbles out of 100 marbles are red.	$\frac{30}{100}$	30%
29 people out of 100 people voted.	$\frac{29}{100}$	29%
10 fish out of 100 fish are tropical.	$\frac{10}{100}$	10%
7 cats out of 100 cats live indoors.	$\frac{7}{100}$	7%
4 turtles out of 100 turtles laid eggs.	$\frac{4}{100}$	4%
7 out of 10 puppies had spots.	$\frac{7}{10} = \frac{70}{100}$	70%
5 out of 10 baskets were made.	$\frac{5}{10} = \frac{50}{100}$	50%
6 out of 25 rocks in my yard are igneous.	$\frac{6}{25} = \frac{24}{100}$	24%
17 out of 25 rulers are metric.	$\frac{17}{25} = \frac{68}{100}$	68%
18 out of 20 goldfish are orange.	$\frac{18}{20} = \frac{90}{100}$	90%
The dress was reduced $5 from $20.	$\frac{5}{20} = \frac{25}{100}$	25%

page 346

Models

Draw the model and **fill in** the missing fraction, percent or decimal.

Draw	Fraction	Percent	Decimal
	$\frac{25}{100}$	25%	0.25
	$\frac{37}{100}$	37%	0.37
	$\frac{18}{100}$	18%	0.18
	$\frac{7}{10}$	70%	0.7
	$\frac{4}{100}$	4%	0.04

page 347

Final Exam

1. Write out 2,645,782.06 in words. two million, six hundred forty-five thousand, seven hundred eighty-two and six hundredths

Solve.

2. $65 + \underline{18} = 83$
3. $13{,}692 + 78 + 313 = a$, $a = 14{,}083$
4. $37 \times 30 = y$, $y = 1{,}110$

Estimate.

5. $856{,}311 - 21{,}400 \rightarrow 900{,}000 - 20{,}000 = 880{,}000$
6. $33 \overline{)5{,}827} \rightarrow 200$
7. Find the average of these numbers: 7, 12, 29, 15, 18, 15. 16
8. Identify each polygon. square, hexagon, triangle
9. Find the perimeter and area. perimeter 28, area 24.5 sq. in.
10. Write this fraction in lowest terms. $\frac{6}{16} = \frac{3}{8}$
11. Use < or > to indicate which fraction is greater. $\frac{7}{9} > \frac{4}{9}$ $\frac{5}{12} < \frac{5}{9}$

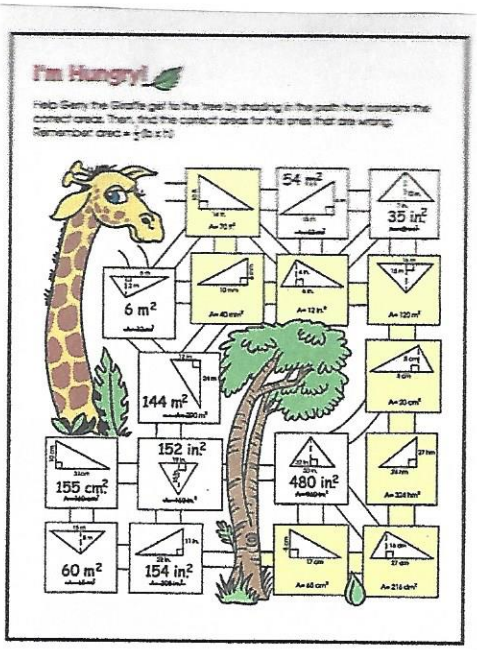
Solve.

12. $\frac{3}{11} + \frac{5}{11} = \frac{8}{11}$
13. $\frac{3}{4} + \frac{1}{8} = \frac{7}{8}$
14. $3\frac{1}{3} + 2\frac{1}{2} = 5\frac{5}{6}$
15. $12\frac{5}{6} - 1\frac{1}{4} = 11\frac{7}{12}$
16. $\frac{7}{8} \times \frac{1}{4} = \frac{7}{32}$
17. $\frac{4}{5} + \frac{2}{3} = \frac{6}{5} = 1\frac{1}{5}$
18. Change $\frac{18}{5}$ into a mixed number. $3\frac{3}{5}$
19. Write 3.4 as a mixed number in lowest terms. $3\frac{2}{5}$

Add, subtract, multiply or divide.

20. $37.3 + 265.25 = 302.55$
21. $4.8 \times 1.3 = 6.24$
22. $3.654 - 1.7 = 1.954$
23. $37.75 \div 100 = 0.3775$
24. Write 35% as a fraction. $\frac{35}{100}$
25. $17.2 \div 8 = 2.15$

page 352



page 175
(new answer key)

A Key to Trees

Name _____

A scientist may use a key to identify a tree by its leaves.

Use the following key to identify the leaves pictured on this page. The first one is done for you.

1. a. The tree has needles ..... go to 2
   b. The tree has leaves ..... go to 5
2. a. The needles are in bundles ..... go to 3
   b. The needles are scale-like ..... white cedar
3. a. There are 5 needles ..... white pine
   b. There are 2 needles ..... go to 4
4. a. The needles are thick and spread away from each other ..... jack pine
   b. The needles are long and thin ..... red pine
5. a. The leaves are simple ..... go to 8
   b. The leaves are compound ..... go to 6
6. a. The leaflets radiate from one point ..... go to 7
   b. The leaflets do not radiate from one point ..... white ash
7. a. There are 5 leaflets ..... buckeye
   b. There are 7 leaflets ..... horse chestnut
8. a. The leaf has notches ..... go to 9
   b. The leaf does not have notches ..... go to 10
9. a. The notches are pointed ..... silver maple
   b. The notches are rounded ..... sugar maple
10. a. The leaf is tapered at both ends ..... dogwood
    b. The leaf is heart-shaped ..... catalpa

white pine — jack pine

white cedar — red pine

sugar maple — dogwood — buckeye — silver maple

horse chestnut — white ash — catalpa

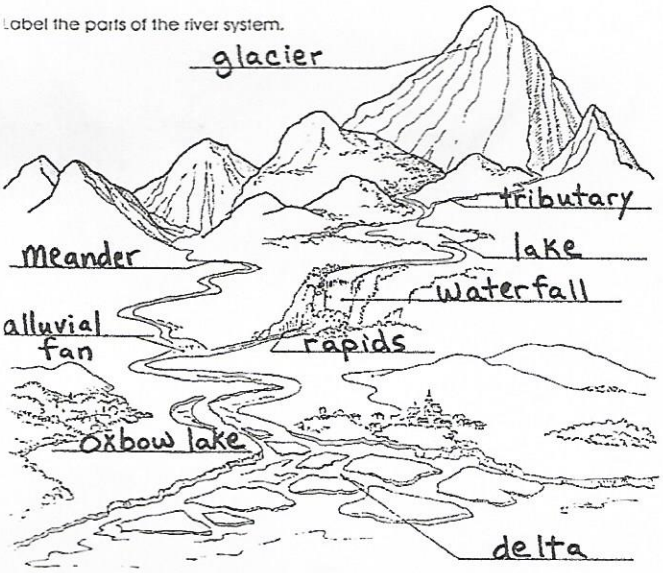
Page 176
(new answer key)

River System

Name _____

A river may begin its journey to the sea high up in the mountains as a melting glacier, or as a number of small streams and brooks high up in the hills. As the river flows downhill the moving water reshapes the land by carrying away sand, stones, and clay. The river and all the water that flows into it make up the river system.

Label the parts of the river system.



WORD BANK

glacier	lake	waterfall	rapids
delta	meander	alluvial fan	tributary
oxbow lake			

Answers for p. 255

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

Organizations to Contact

The Acid Rain Foundation
1630 Blackhawk Hills
St. Paul, MN 55122

Acid Rain Information
Clearinghouse Library
Center for Environmental Information, Inc.
33 S. Washington St.
Rochester, NY 14608

Adopt-A-Stream Foundation
P.O. Box 5558
Everett, WA 98201

Air Pollution Control
Bureau of National Affairs Inc.
1231 25th St. NW
Washington DC 20037

Alliance To Save Energy
1925 K St. NW
Suite 206
Washington DC 20036

American Association of Zoological Parks and Aquariums
Oglebay Park
Wheeling, WV 26003

American Wind Energy Association
1730 N Lynn St.
Suite 610
Arlington, VA 22209

Canadian Coalition On Acid Rain
112 St. Clair Ave. West
Suite 504
Toronto, Ontario, Canada
M4V 2Y3

Center for Marine Conservation
1725 DeSales St. NW
Suite 500
Washington DC 20036

Friends of the Earth
530 Seventh St. SE
Washington DC 20003

Global Releaf, c/o the American Forestry Association
P.O. Box 2000
Washington DC 20013

Greenpeace
1436 U Street NW
Washington DC 20009

Household Hazardous Waste Project
901 S. National Ave.
Box 108
Springfield, MO 65804

National Association of Recycling Industries
330 Madison Ave.
New York, NY 10017

National Clean Air Coalition
530 7th St. SE
Washington DC 20003

National Wildlife Federation
1412 16th St. NW
Washington DC 20036

Public Affairs Office
US Environmental Protection Agency
Washington DC 20036

Renew America
1400 16th St. NW
Suite 710
Washington DC 20036

Save the Manatee Club
500 N. Maitland Ave.
Suite 200
Maitland, FL 32751

U.S. Environmental Protection Agency
401 M St. SW
Washington DC 20460

United Nations Environment Programme
North American Office
Room DC2-0803, United Nations
New York, NY 10017