4th Grade
Week 2

UCPS
UNION COUNTY PUBLIC SCHOOLS

March 2020

Hello Parents,

We hope that this letter finds you doing well. In an effort to help our students keep their skills sharp, we have provided packets of optional activities for your child to work on from home. These packets are full of review material for your child and will not need to be returned to school.

UCPS is also offering many other resources on our EmpowerED Family Portal on our website. Check them out at www.ucps.k12.nc.us/domain/2917.

Stay safe and healthy!

Marzo 2020

Hola padres

Esperamos que todos se encuentren bien. En un esfuerzo para ayudar a nuestros estudiantes a mantener sus habilidades académicas, hemos creado paquetes de actividades opcionales para que su hijo pueda trabajar en casa. Estos paquetes están llenos de material de repaso para su hijo. No es necesario que su hijo los devuelva a la escuela.

UCPS también ofrece muchos otros recursos en nuestro Portal Familiar Empoderado en nuestro sitio web. Véalos en www.ucps.k12.nc.us/domain/2917 .

¡Esperamos que sigan seguros y de buena salud!

Additional Print Resources - March 2020
Week 2 - 4th Grade

Parent/Guardian Instructions:

You will find learning opportunities for reading, math, science/social studies below. These lessons and activities are intended to provide you with 30-40 minutes of learning support **per subject** for each day. All materials listed in the learning calendar below are provided in these additional print materials. For reading and math, you will find lesson materials as well as "apply it" materials. "Apply it" materials are in the form of games, reader's responses, etc. Some math activities may require items such as counters. You may use materials commonly found at home (ie: buttons, cereal, beans, playing cards, beads, etc.).

Reading

Day 6	Day 7	Day 8	Day 9	Day 10
Lesson: Lesson 13, part 6 - (page 22-26) Read the passage "Seashells." Complete the Think activity (questions #1-4) **Apply It:** Choose a part of the passage, Univalves or Bivalves, and write a paragraph retelling the information in your own words. Be sure to clarify meanings of the words that were defined by context clues.	**Lesson:** Lesson 13, part 7 - (page 22-24, 27) Reread the passage "Seashells." Complete the write activity (question #5) Challenge: Choose someone in your house to talk to about what you know about context clues and how they can help you as a reader. Refer to the Learning Target at the bottom of page 27 for help.	**Parent/Guardian Opportunity** **Lesson:** Tools for Instruction - (page 28-29) Find an adult to work with today! Ask them to read the instructions and guide you through the exercise. When the activity asks for a text, choose one of the passages you have read in the materials in a previous lesson.	**Lesson:** Lesson 17, part 2 - (page 34-35) Read the passage "Out to Win." Complete the Think and Talk exercise. **Apply It:** Based on the possible meanings you create, make a short list of items that dissatisfy you and items you are obsessed with.	**Lesson:** Lesson19 - Similes and Metaphors (page 36-37) Read the introduction. Complete the guided practice and independent practice. **Apply It:** Read your independent text. Look for nouns in the text that you could describe using a simile and/or metaphor. Write these down and then describe their literal meaning.

Math

Day 6: Multiplication/Division in Word Problems	Day 7: Dividing Whole Numbers	Day 8: Equivalent and Comparing Fractions	Day 9: Adding and Subtracting Fractions	Day 10: Adding and Subtracting Fractions
Lesson: • Complete EVEN NUMBERED QUESTIONS page 12 "Multiplication in Word Problems" in Student Printable Materials (above) • Complete EVEN NUMBERED QUESTIONS page 19 "Division in Word Problems" **Apply It:** Complete this Multiplication and Division Word Problems Game	**Lesson:** Choose 5 problems to complete pages 20-21 "Dividing with Arrays and Area Models"in Student Printable Materials (above) **Apply It:** Complete this Dividing by One Digit Game	**Lesson:** Complete pages 24-25 "Equivalent Fractions and Comparing Fractions"in Student Printable Materials (above) **Apply It:** Complete this Fraction Vocabulary activity	**Lesson:** Complete pages 26-28 "Adding Fractions" in Student Printable Materials (above) **Apply It:** Complete Add and Subtract Mixed Numbers Game	**Lesson:** Complete pages 30-31 "Subtracting Fractions and Decomposing Fractions" in Student Printable Materials (above) **Apply It:** Complete this Different Ways to Show Sums Game *Options for markers:* - *Beans, blocks, chips, other game pieces* • Make Your Own Dice (from week 1) or use dice from another game you may own

Science

Day 6-10
Energy Choice Board
Related Articles:
Electricity & Energy: Circuits Magnetism

Genre: Science Text

WORDS TO KNOW
As you read, look inside, around, and beyond these words to figure out what they mean.

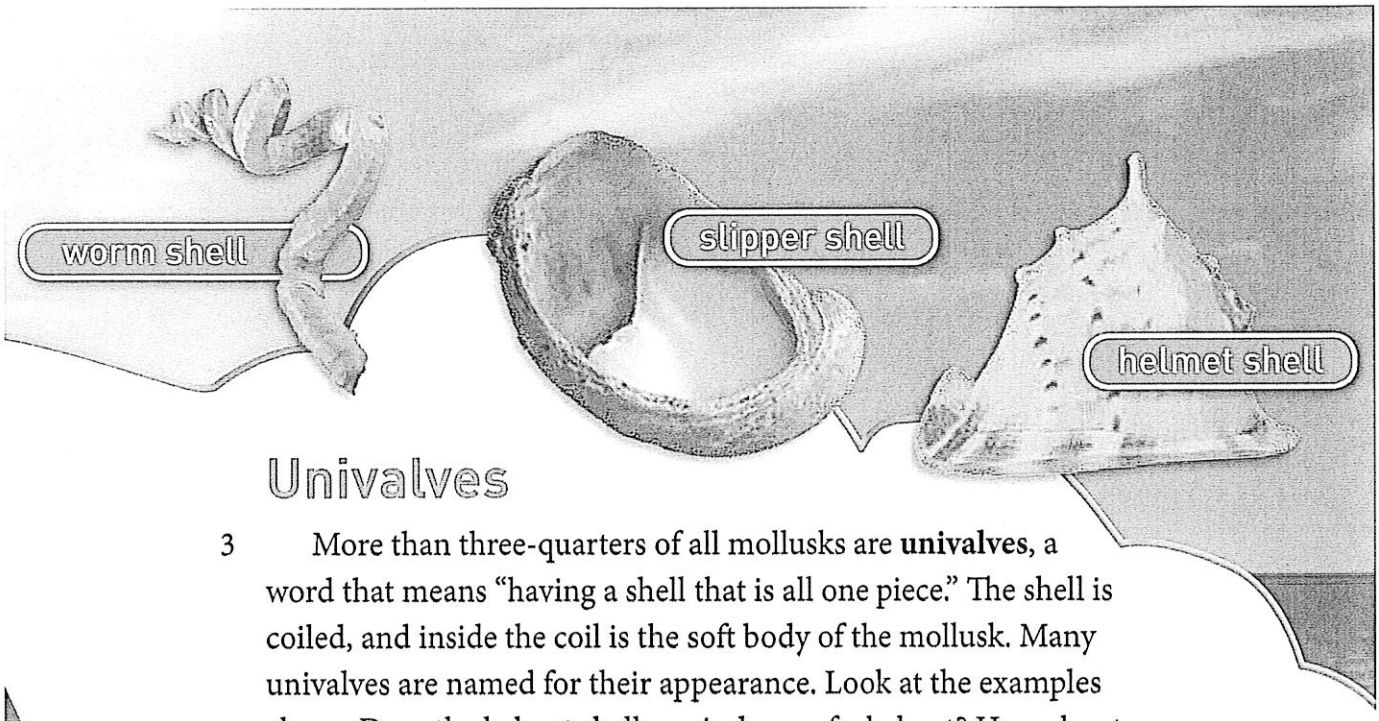
- **series**
- **hinged**
- **foreign**

Seashells

by Bela Moté

1 If you walk along the seashore, you will probably see many kinds of shells. Seashells were once the homes of live animals. The animals that live inside shells have soft bodies, so they need their shells to protect them from harm. Their shells save them from storms or predators such as starfish, birds, and otters. Shells also give the animals a shape. In that way, shells are like skeletons on the outside of the body. When the animals die, the shells remain.

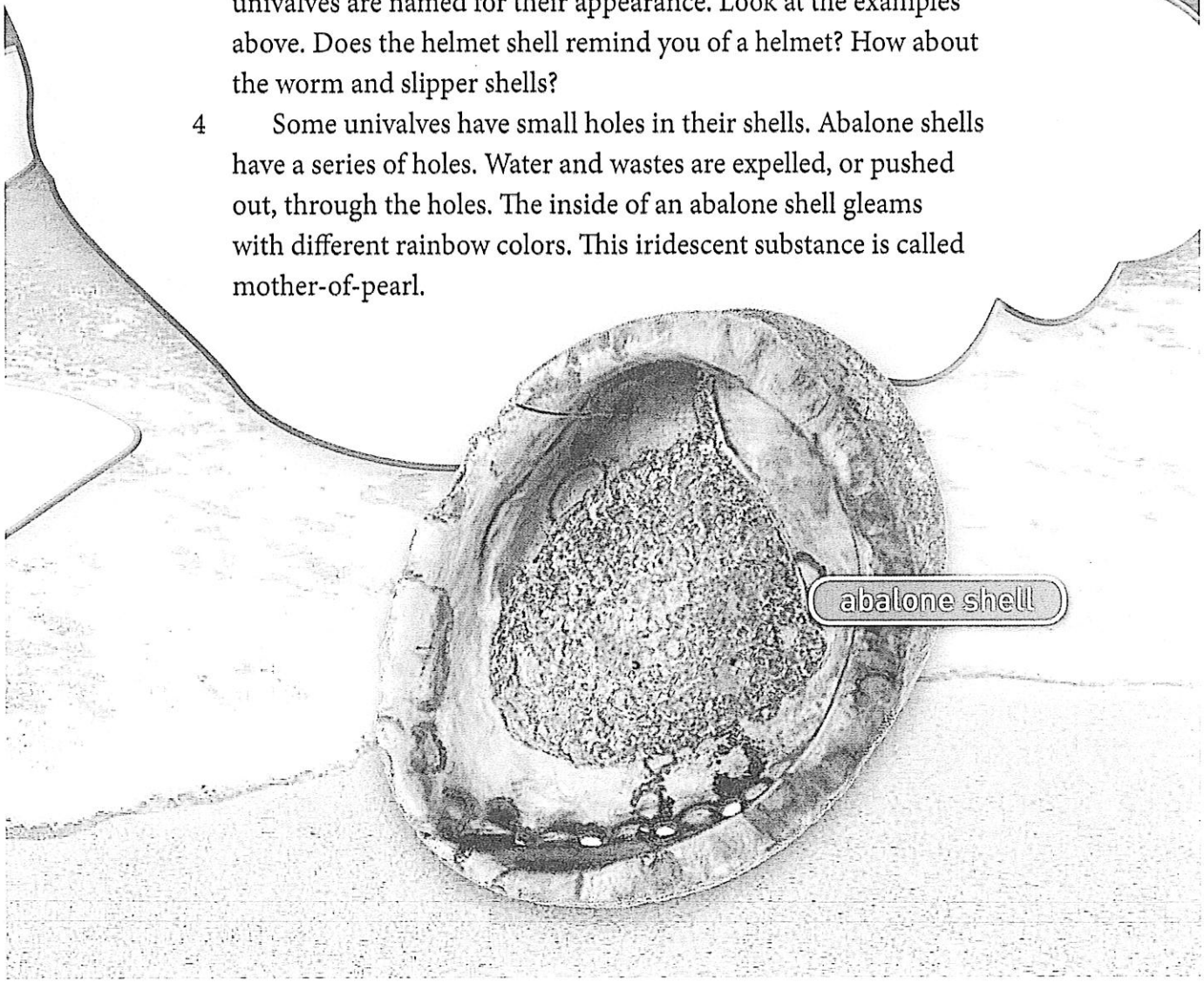
2 Creatures with shells belong to a group of animals called **mollusks**. Not all mollusks have shells. Of the mollusks that do have shells, there are two main groups.



Univalves

3 More than three-quarters of all mollusks are **univalves**, a word that means "having a shell that is all one piece." The shell is coiled, and inside the coil is the soft body of the mollusk. Many univalves are named for their appearance. Look at the examples above. Does the helmet shell remind you of a helmet? How about the worm and slipper shells?

4 Some univalves have small holes in their shells. Abalone shells have a series of holes. Water and wastes are expelled, or pushed out, through the holes. The inside of an abalone shell gleams with different rainbow colors. This iridescent substance is called mother-of-pearl.



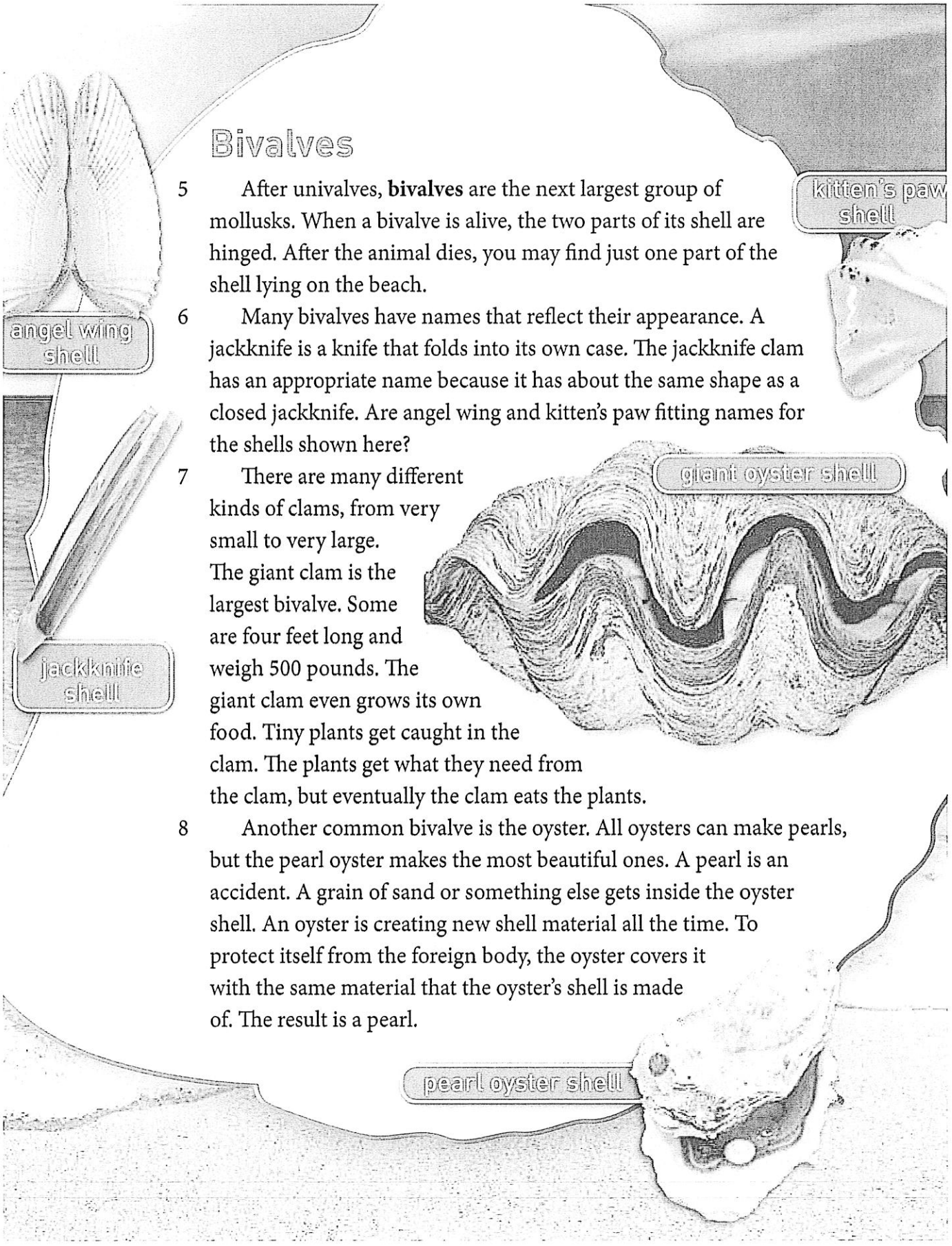
Bivalves

5 After univalves, **bivalves** are the next largest group of mollusks. When a bivalve is alive, the two parts of its shell are hinged. After the animal dies, you may find just one part of the shell lying on the beach.

6 Many bivalves have names that reflect their appearance. A jackknife is a knife that folds into its own case. The jackknife clam has an appropriate name because it has about the same shape as a closed jackknife. Are angel wing and kitten's paw fitting names for the shells shown here?

7 There are many different kinds of clams, from very small to very large. The giant clam is the largest bivalve. Some are four feet long and weigh 500 pounds. The giant clam even grows its own food. Tiny plants get caught in the clam. The plants get what they need from the clam, but eventually the clam eats the plants.

8 Another common bivalve is the oyster. All oysters can make pearls, but the pearl oyster makes the most beautiful ones. A pearl is an accident. A grain of sand or something else gets inside the oyster shell. An oyster is creating new shell material all the time. To protect itself from the foreign body, the oyster covers it with the same material that the oyster's shell is made of. The result is a pearl.



Think Use what you learned from reading the science text to respond to the following questions.

1 Read the sentence from paragraph 1 in the passage.

> Their shells save them from storms or predators such as starfish, birds, and otters.

What does the author suggest to the reader by using the word predators? Pick **two** choices.

- **A** Predators can harm some animals.
- **B** Predators need to find shelter from storms.
- **C** An animal's shell helps protect it.
- **D** All predators have skeletons.
- **E** When the animal dies, the shell remains.

2 This question has two parts. First, answer Part A. Then answer Part B.

Part A

What is the meaning of the word iridescent as it is used in paragraph 4?

- **A** not letting light through
- **B** easy to notice or understand
- **C** shining with many varying colors
- **D** a small amount of something

Part B

Which phrase from the passage helps the reader understand the meaning of iridescent?

- **A** "next largest group of mollusks"
- **B** "have small holes in their shells"
- **C** "the inside of an abalone shell"
- **D** "gleams with different rainbow colors"

3 This question has two parts. First, answer Part A. Then answer Part B.

Part A

What is the meaning of the word bivalve as it is used in paragraph 5?

- **A** having a hard outer shell
- **B** having a shell with two pieces
- **C** having a soft outer shell
- **D** having a shell that is all one piece

Part B

Underline the **two** phrases in paragraph 5 that **best** support your answer in Part A.

> After univalves, **bivalves** are the next largest group of mollusks. When a bivalve is alive, the two parts of its shell are hinged. After the animal dies, you may find just one part of the shell lying on the beach.

4 Read the sentence from the passage.

> The jackknife clam has an appropriate name because it has about the same shape as a closed jackknife.

What does the author tell the reader by using the word appropriate? Pick **two** choices.

- **A** Bivalves are the largest group of mollusks.
- **B** Jackknife describes the shape of the clam.
- **C** An angel wing is a good name for the clam.
- **D** Jackknife is a good name for the clam.
- **E** The clam looks like an open jackknife.
- **F** A jackknife folds into its own case.

Write

5 **Short Response** What does the author tell the reader by using the underlined word in the sentence below from paragraph 8? How do the details in the paragraph further develop this idea? Include **one** or more context clues from the text to support your response.

A pearl is an <u>accident</u>.

Learning Target

In this lesson, you learned to use context clues to figure out the meaning of unfamiliar words or phrases. Explain how using context clues deepened your understanding of the text.

Use Context to Find Word Meaning

Using context to determine a word's intended meaning is an essential reading strategy. Although students are often told to "use the context" to figure out the meaning of an unfamiliar word, they may need more specific guidance. To help students use context effectively, introduce specific types of context clues that they can look for in sentences and paragraphs.

Three Ways to Teach

Identify Sentence-Based Context Clues 20–30 minutes

Connect to Writing Explicitly teach students about the different types of context clues that can be used to determine meanings for unknown words. Then have students develop their own sentences with clues that help classmates guess above-level missing words.

- Display the following chart. Name the first type of clue, and read aloud the example sentence. Help students figure out a meaning for the italicized word and identify the (highlighted) context clues in the sentence, which give a definition for the word. Then guide students to tell how they can recognize definition clues in other sentences. Record a simple explanation in the "What It Does" column.
- Repeat the process to introduce the remaining types of clues. Each time, note signal words that emphasize the clue, including *is, or, and other,* and *but.*

Type of Clue	Example Sentence	What It Does
Definition	An *asteroid* is a rocky body that orbits the Sun.	Tells the meaning of the unfamiliar word explicitly
Appositive	An animal that is a *carnivore*, or meat eater, may hunt for its food.	Tells the meaning of the unfamiliar word beside it, marked off by commas or dashes
Examples	The streets were filled with buses, taxis, and other *vehicles*.	Describes the unfamiliar word by naming types of it
Contrast	Lush, green forests receive steady rains, but deserts are bare and *arid*.	Tells the meaning of an unfamiliar word by describing its opposite

- For independent practice, give each student two words likely to have known meanings, such as *skyscraper, meal, author,* and *study.*
- Tell students to write a sentence with their word, leaving a blank in its place. Challenge them to write a sentence with such strong context that listeners will easily guess the word.
- As students read aloud their sentences (saying "blank" for the word), talk about the context clues that helped listeners figure out the missing word. Repeat the activity, challenging students to write a sentence that uses a different type of context clue for their second word.

Identify Paragraph or Text-Based Context Clues 10–15 minutes

Explain that sometimes readers have to read the sentences before and after an unfamiliar word to determine its meaning. Choose a passage with a challenging, above-level word that is not defined in the same sentence but can be understood by rereading the paragraph. Display the paragraph with the word underlined, and model asking and answering questions such as these to determine the word's meaning:

- *What is this paragraph about?*
- *Do the sentences around the unfamiliar word describe it in a different way, by giving a synonym or example or by showing a contrast?*
- *Can I make an educated guess about what the word could mean?*
- *If I replace the word with what I think it might mean, does the sentence make sense with the topic or purpose of the paragraph?*

For independent practice, have partners choose another paragraph that includes one or two unfamiliar words. Have them use the questions above to search for context clues that will help them figure out the meaning of the unfamiliar words.

Use Multiple-Meaning Words to Highlight Context 10–15 minutes

- Explain to students that context clues can help readers clarify the intended meaning of a multiple-meaning word. Say, *Although looking up a word in a dictionary can be helpful, it can sometimes be hard to know which meaning was used in the text when a word has several definitions.*
- Display a list of multiple-meaning words. Then provide sentences using varied meanings for the words.

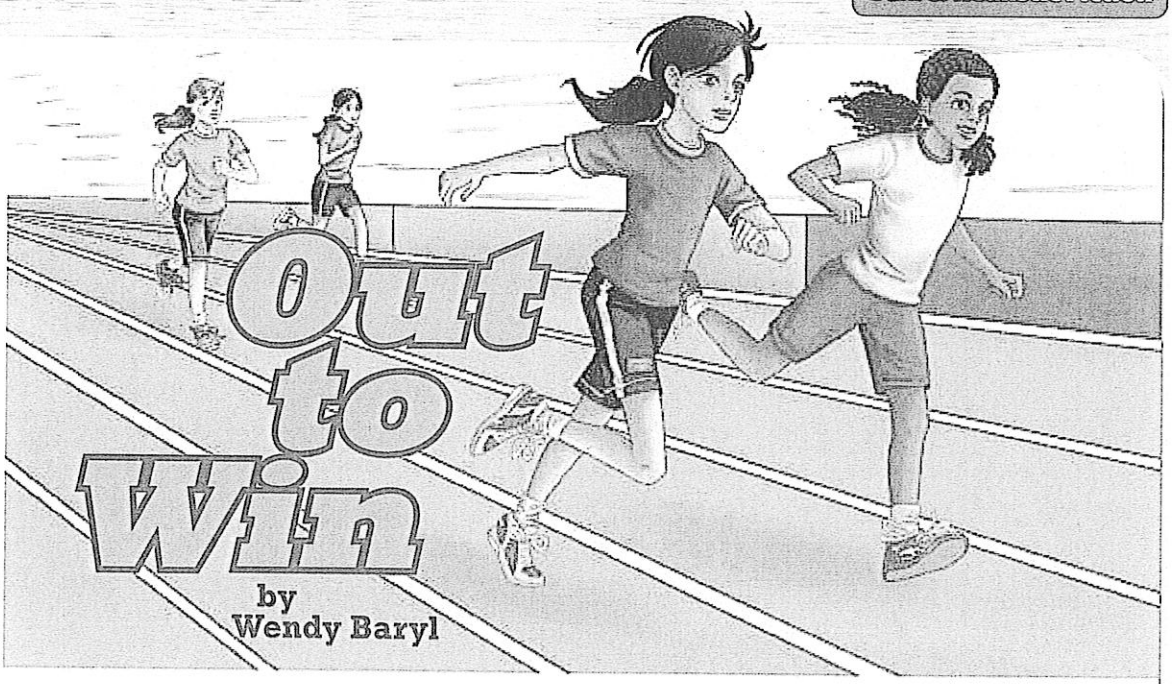
fan	The fan cheered for her team.	There was only a fan to keep us cool.
fry	The fry swim downstream right after hatching.	My dad will fry potatoes for dinner.
lap	I held the plate in my lap.	We ran one lap around the track.
strike	Watch the hammer strike the nail.	That pitch looks like a strike.

- Discuss how the context clues in each sentence clarify the intended meaning of the word. Provide independent practice by suggesting other multiple-meaning words and asking students to give oral sentences that make each of the word meanings clear. Then ask students to choose one word and draw each of its meanings.

Check for Understanding

If you observe...	Then try...
difficulty using context to define an unfamiliar word	confirming that students have sufficient background knowledge to understand the context. Ask students to briefly summarize the paragraph in their own words. Correct any misunderstandings, and proceed to model using the context to define the unfamiliar word.
errors in determining word meanings based on context	substituting students' definitions for the unfamiliar word, and verifying whether the inserted meaning makes sense.

Genre: Realistic Fiction



Out to Win

by Wendy Baryl

1 As the annual school track meet approached, all I could think about was defeating Anna Banks. For the past three years, she'd beaten me in the 400-meter run, and always by just a step. No longer would I be satisfied with second place, however. Dissatisfied, I planned to win this year, and I couldn't think about anything else. I became obsessed with beating Anna. My thoughts focused on one goal all the time—winning. Naturally, I did more than just think. I practiced my starts daily, and I ran and ran and ran.

2 On the day of the race, I was eager to compete, and by the time we gathered at the starting line, I was really pumped. BAM—the starting gun fired and we were off! Anna and I quickly sprinted ahead of the other racers. When we shot across the finish line, I wasn't even certain who'd won at first. Then I heard the announcer—it was me!

3 Still breathing hard, Anna rushed over, smiling, and shook my hand. "You were great!" she declared. "Good race!" Right then, I realized that I'd been looking at the situation all wrong. Before, I'd been thinking of Anna as if she were some powerful enemy out to destroy me. But Anna wasn't my nemesis[1] at all; she had no urge to crush me. In fact, she had given me an opportunity to become a better sprinter than I ever would have been without her.

Close Reader Habits

Circle unfamiliar words and phrases. **Underline** phrases that give you clues to the word meanings.

[1]**nemesis:** a powerful rival; from the Greek goddess who punished overconfidence

Explore

How do context clues help you figure out the meaning of unfamiliar words in "Out to Win"?

Context clues can appear before or after the sentence having an unfamiliar word.

Think

1. Complete the chart below to show what you have figured out about the meanings of the words.

Unknown Word	Context	Possible Meaning	Clues
dissatisfied			
obsessed			
nemesis			

Talk

2. Explain the meaning of the word opportunity (paragraph 3). What context clues help you understand what the word means?

HINT Reread paragraph 3 to find all the clues to the meaning of opportunity.

Write

3. **Short Response** Explain the meaning of opportunity (paragraph 3). Also include the context clues that helped you figure out the meaning of the word. Use the space provided on page 276 to write your response.

Lesson 19

Similes and Metaphors

Introduction Authors sometimes help readers imagine what one thing is like by comparing it to something else. Comparisons can help readers picture what is being described by showing how two things are alike in some way.

- A **simile** makes a comparison using the word *like* or *as*. Look at these similes. The dog's paws are compared to dinner plates. His bark is compared to thunder.

Simile	What It Means
Alicia's dog, Ollie, has *paws* as big as *dinner plates*.	Ollie has very big paws.
His *bark* sounds like *thunder*.	Ollie has a loud bark.

- A **metaphor** makes a comparison without using the word *like* or *as*. In this metaphor, the dog's size is compared to a mountain.

Metaphor	What It Means
Ollie is a *mountain* of a dog.	Ollie is a very large dog.

Guided Practice

Find the simile or metaphor in each sentence. Underline the two things being compared. Then write the meaning of the simile or metaphor.

HINT After you find the two things being compared, ask yourself, *How are they the same?* Use your answer to figure out what each simile or metaphor means.

1. Ollie's mouth was a trap that held a giant stick.

_____

2. Ollie leapt toward Alicia like a clumsy ballerina.

_____

3. Ollie raced past Alicia like a strong wind.

_____

4. Suddenly, Ollie was a freight train racing into the house.

_____

Independent Practice

For numbers 1–5, read each sentence. Then choose the correct meaning of the underlined simile or metaphor.

1. The stick in Ollie's mouth was a sword, knocking over one object after another.
   - **A** The stick was heavy.
   - **B** The stick was dangerous.
   - **C** Ollie was dangerous.
   - **D** The stick was made of metal.

2. The plates on the table became flying saucers that Alicia had to dodge.
   - **A** Flying saucers came from outer space.
   - **B** Alicia had to play dodge ball.
   - **C** Alicia had to fly across the kitchen.
   - **D** Plates flew through the air.

3. Salad covered the floor like a large blanket.
   - **A** The salad was warm.
   - **B** The salad tasted awful.
   - **C** There was a large blanket on the floor.
   - **D** A layer of salad covered the floor.

4. The floor was as sticky as glue.
   - **A** Glue covered the floor.
   - **B** The floor was a glue stick.
   - **C** The floor was very sticky.
   - **D** Glue made the floor sticky.

5. Alicia was a whirlwind as she cleaned up the mess.
   - **A** Alicia spun wildly.
   - **B** Alicia worked quickly.
   - **C** Alicia was getting tired.
   - **D** Alicia was breathing hard.

Multiplication in Word Problems

Name: _____

Use a strategy of your choice to solve each problem.

1. The library has 5 mystery books on a shelf. It has 4 times as many fiction books on another shelf. How many fiction books are on the shelf?

   There are _____ fiction books on the shelf.

2. Paul runs 2 laps around the gym. Carrie runs 6 times as many laps as Paul. How many laps does Carrie run?

   Carrie runs _____ laps.

3. Violet has 3 markers. She has 6 times as many colored pencils as markers. How many colored pencils does she have?

   Violet has _____ colored pencils.

4. Owen draws 7 comics in April. He draws 3 times as many comics in May. How many comics does Owen draw in May?

   Owen draws _____ comics in May.

5. Tasha used 8 tomatoes to make salsa. She used 4 times as many tomatoes to make sauce. How many tomatoes did Tasha use to make sauce?

   Tasha used _____ tomatoes to make sauce.

6. There are 7 pear trees on a farm. There are 7 times as many apple trees as pear trees. How many apple trees are on the farm?

   There are _____ apple trees.

7. There are 9 school buses in the parking lot. There are 6 times as many cars as school buses in the parking lot. How many cars are in the parking lot?

   There are _____ cars in the parking lot.

8. There are 8 vases at an art show. There are 9 times as many paintings as vases at the art show. How many paintings are at the art show?

   There are _____ paintings at the art show.

9. Write and solve a word problem for this equation: $5 \times 6 = ?$

Division in Word Problems

Name: _____

Use a strategy of your choice to solve each problem.

1. There are 5 times as many tulips as rose bushes in a garden. There are 15 tulips. How many rose bushes are in the garden?

   There are _____ rose bushes in the garden.

2. Kelly has 2 times as many quarters as dimes. She has 18 quarters. How many dimes does she have?

   Kelly has _____ dimes.

3. There are 18 blueberries in a bowl. There are 3 times as many blueberries as strawberries in the bowl. How many strawberries are in the bowl?

   There are _____ strawberries in the bowl.

4. Amanda swims for 16 minutes. This is 4 times as many minutes as Julio swims. How many minutes does Julio swim?

   Julio swims _____ minutes.

5. A tile pattern has 6 times as many white squares as gray squares. There are 48 white tiles in the pattern. How many gray tiles are there?

   There are _____ gray tiles in the pattern.

6. Leah has 3 times as many country songs as she has pop songs on her MP3 player. She has 27 country songs. How many pop songs does Leah have?

   Leah has _____ pop songs.

7. Erik sees 42 stars in the sky on Tuesday night. This is 7 times as many stars as he sees on Monday night. How many stars does Erik see on Monday night?

   Erik sees _____ stars on Monday night.

8. Lucas spends 72 minutes cleaning his room. This is 8 times as long as it takes him to wash the dishes. How long does it take Lucas to wash the dishes?

   It takes Lucas _____ minutes to wash the dishes.

9. Write and solve a word problem for this equation: $6 \times n = 54$

Day 6

Multiplication and Division Word Problems

What You Need

- Recording Sheet

Check Understanding

Kelly picks 21 peaches. She picks 3 times as many peaches as Ron. How many peaches does Ron pick?

What You Do

1. Take turns. Pick a letter.
2. Read the word problem aloud.
3. Draw a bar model on the **Recording Sheet** to model the problem. Then write an equation to solve the problem.
4. Your partner checks your work and reads the answer aloud.
5. Repeat until all the letters are used.

A	Flora buys 6 apples and 24 oranges. How many times as many oranges as apples does Flora buy?
B	Beth has 2 times as many stickers as Kim. Beth has 18 stickers. How many stickers does Kim have?
C	Mr. Cruz orders 4 small pizzas. He orders 3 times as many large pizzas as small pizzas. How many large pizzas does Mr. Cruz order?
D	A chef makes 20 sandwiches and 5 salads. How many times as many sandwiches as salads does the chef make?

Go Further!

For each problem on the **Recording Sheet,** write a different equation that can be used to solve the problem.

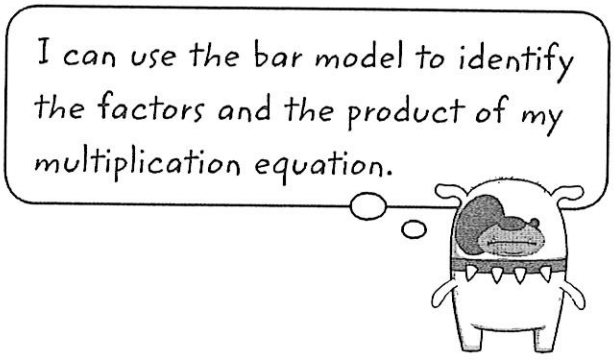
Day 6

Partner A _____

Partner B _____

Multiplication and Division Word Problems

	Bar Model	Equation
A	Apples Oranges	
B	Kim Beth	
C	Small pizzas Large pizzas	
D	Sandwiches Salads	



Dividing with Arrays and Area Models

Name: _____

The answers to problems 1–12 are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1. 606 ÷ 2 = _____
2. 606 ÷ 3 = _____
3. 903 ÷ 3 = _____
4. 408 ÷ 8 = _____
5. 243 ÷ 3 = _____
6. 721 ÷ 7 = _____
7. 545 ÷ 5 = _____
8. 488 ÷ 8 = _____
9. 816 ÷ 4 = _____
10. 728 ÷ 8 = _____
11. 459 ÷ 9 = _____
12. 366 ÷ 6 = _____

13. What strategies did you use to solve the problems?

14. Explain how to use multiplication to check your answer to problem 10.

Answers

91	303	61	202	204	109
81	51	301	103	51	61

Dividing with Estimation and Area Models

Name: _____

Check the student's answer by multiplying the quotient by the divisor and adding the remainder. If an answer is incorrect, cross out the answer and write the correct quotient, including the remainder.

Division Problems	Student Answers	
637 ÷ 4	~~149 R 1~~ 159 R 1	Check: 149 × 4 = 596 596 + 1 = 597
139 ÷ 2	*69 R 1*	
188 ÷ 5	*38 R 2*	
344 ÷ 6	*57 R 3*	
458 ÷ 9	*58 R 8*	
222 ÷ 7	*31 R 5*	
692 ÷ 8	*85 R 4*	
479 ÷ 3	*169 R 2*	

Day 7

Dividing by One-Digit Numbers

Check Understanding

What is the quotient?

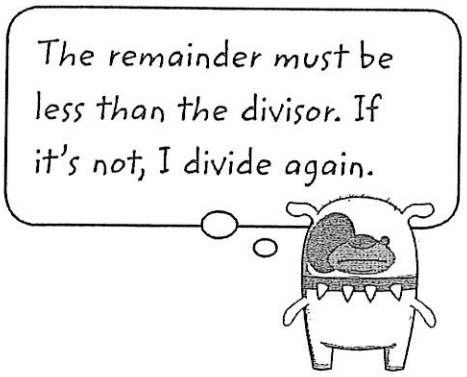
3,265 ÷ 4 = _____

What You Need

- 6 game markers in one color
- 6 game markers in a different color
- Recording Sheet and Game Board

What You Do

1. Take turns. Pick a problem on the **Recording Sheet.**
2. Divide. Write the quotient including the remainder.
3. Your partner uses multiplication to check the answer.
4. If your answer is correct, cover the remainder on the **Game Board.** If it is incorrect, your turn ends.
5. Continue until all problems have been solved. The player with the greater number of markers on the **Game Board** wins.



Go Further!

On a separate sheet of paper, rewrite the dividend of the problem 342 ÷ 5 so there is a remainder of 5. Use multiplication and addition to check your answer. Exchange papers with your partner to check.

Ready® Center Activity 4.25 ★★ **Recording Sheet and Game Board**

Partner A _____

Partner B _____

Dividing by One-Digit Numbers

342 ÷ 5 = _____	2,176 ÷ 6 = _____	388 ÷ 3 = _____
4,632 ÷ 9 = _____	735 ÷ 8 = _____	5,178 ÷ 7 = _____
638 ÷ 2 = _____	4,519 ÷ 4 = _____	242 ÷ 9 = _____

3	6	0
7	2	1
5	8	4

Understanding of Equivalent Fractions

Name: _____

Write the missing numbers in the boxes to make each equation true.

1. $\frac{2}{4} \times \frac{\square}{\square} = \frac{8}{16}$

2. $\frac{2}{3} \times \frac{\square}{\square} = \frac{12}{18}$

3. $\frac{5}{6} \times \frac{\square}{\square} = \frac{25}{30}$

4. $\frac{2}{3} \times \frac{\square}{3} = \frac{6}{\square}$

5. $\frac{3}{8} \times \frac{5}{\square} = \frac{15}{\square}$

6. $\frac{5}{6} \times \frac{\square}{\square} = \frac{\square}{12}$

7. $\frac{5}{\square} \times \frac{\square}{\square} = \frac{15}{24}$

8. $\frac{2}{\square} \times \frac{4}{\square} = \frac{\square}{12}$

9. $\frac{\square}{8} \times \frac{2}{\square} = \frac{\square}{16}$

10. Which strategies did you use to solve the problems? Explain why.

Using Common Numerators and Denominators

Name: _____

Compare the fractions. Write <, >, or = .

1. $\frac{3}{4}$ ◯ $\frac{3}{8}$
2. $\frac{2}{3}$ ◯ $\frac{4}{5}$
3. $\frac{1}{5}$ ◯ $\frac{2}{10}$
4. $\frac{2}{10}$ ◯ $\frac{23}{100}$
5. $\frac{7}{8}$ ◯ $\frac{3}{4}$
6. $\frac{7}{12}$ ◯ $\frac{5}{6}$
7. $\frac{10}{12}$ ◯ $\frac{5}{6}$
8. $\frac{53}{100}$ ◯ $\frac{1}{2}$
9. $\frac{2}{8}$ ◯ $\frac{9}{12}$
10. $\frac{1}{6}$ ◯ $\frac{3}{12}$
11. $\frac{4}{5}$ ◯ $\frac{77}{100}$
12. $\frac{1}{3}$ ◯ $\frac{5}{12}$
13. $\frac{1}{4}$ ◯ $\frac{2}{12}$
14. $\frac{9}{10}$ ◯ $\frac{90}{100}$
15. $\frac{2}{3}$ ◯ $\frac{3}{6}$

16. Show a model you can use to check your answer to problem 12.

Ready® Center Activity 4.29 ★★

Use Fraction Vocabulary

What You Need

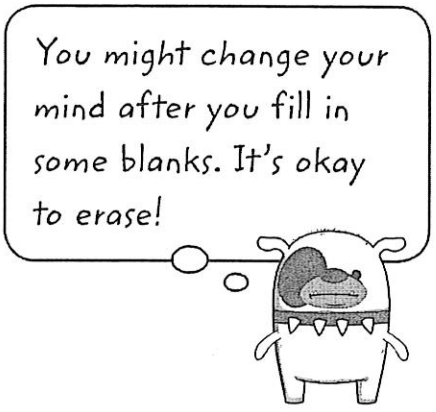
- Recording Sheet

Check Understanding

Use fraction vocabulary to describe one way to compare $\frac{7}{10}$ and $\frac{3}{5}$.

What You Do

1. Use words from the word bank to fill in the blanks on the **Recording Sheet.** You may use some words more than once.
2. Take turns. After you fill in a blank, your partner fills in the next one.
3. When all the blanks are filled in, read the paragraphs aloud. Do they make sense?
4. Fix any mistakes that you find.



Go Further!

Write two sentences about comparing numbers using two of the words in the word bank on the **Recording Sheet.**

Ready® Center Activity 4.29 ★★ Recording Sheet

Partner A _____

Partner B _____

Use Fraction Vocabulary

What are three different ways to compare $\frac{6}{10}$ and $\frac{2}{100}$?

1. Find a fraction _____ to $\frac{6}{10}$ with a _____ of 100: $\frac{6}{10} \times \frac{10}{10} = \frac{60}{100}$. The fraction $\frac{60}{100}$ is _____ $\frac{2}{100}$. So, $\frac{6}{10}$ is _____ $\frac{2}{100}$.

2. Find a fraction _____ to $\frac{2}{100}$ with a _____ of 6: $\frac{2}{100} \times \frac{3}{3} = \frac{6}{300}$. The denominator in $\frac{6}{10}$ is _____ the denominator in $\frac{6}{300}$, which means that $\frac{6}{10}$ has larger parts. The fraction $\frac{6}{10}$ is _____ $\frac{6}{300}$. So, $\frac{6}{10}$ is _____ $\frac{2}{100}$.

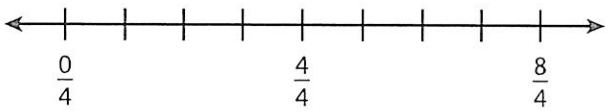
3. Compare $\frac{6}{10}$ and $\frac{2}{100}$ to the _____ fraction $\frac{1}{2}$. The fraction $\frac{6}{10}$ is _____ $\frac{1}{2}$, and $\frac{2}{100}$ is _____ $\frac{1}{2}$. So, $\frac{6}{10}$ is _____ $\frac{2}{100}$.

Word Bank
less than (<)
greater than (>)
benchmark
symbol
numerator
denominator
fraction
equivalent

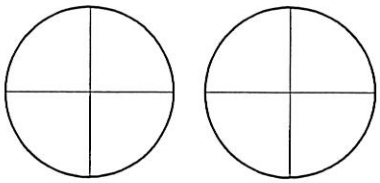
Understanding of Fraction Addition and Subtraction

Name: _____

1 Label the number line and use it to show $\frac{3}{4} + \frac{3}{4}$.

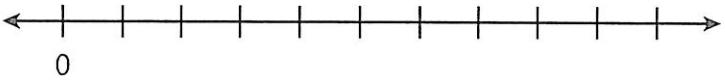


Shade the area model to show $\frac{3}{4} + \frac{3}{4}$.

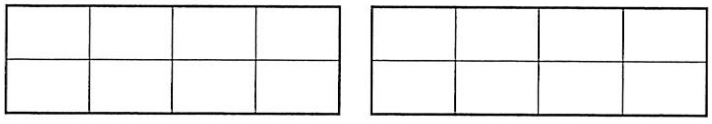


Write the sum. $\frac{3}{4} + \frac{3}{4} =$

2 Label the number line and use it to show $\frac{10}{8} - \frac{4}{8}$.



Show $\frac{10}{8} - \frac{4}{8}$ on the area model.



Write the difference. $\frac{10}{8} - \frac{4}{8} =$

Understanding of Fraction Addition and Subtraction *continued*

Name: _____

3 What type of model do you like best for showing fraction addition and subtraction? Explain why.

4 Compare subtracting $\frac{10}{8} - \frac{4}{8}$ to subtracting $10 - 4$. How are they alike? How are they different?

Adding Fractions

Name: _____

Write the missing numbers in the boxes to make each addition problem true.

1. $\frac{1}{6} + \frac{4}{6} = \frac{\square}{6}$

2. $\frac{1}{8} + \frac{4}{8} = \frac{\square}{\square}$

3. $\frac{1}{10} + \frac{4}{10} = \frac{\square}{\square}$

4. $\frac{4}{12} + \frac{\square}{\square} = \frac{7}{12}$

5. $\frac{4}{6} + \frac{\square}{\square} = \frac{7}{6}$

6. $\frac{4}{3} + \frac{\square}{\square} = \frac{7}{3}$

7. $\frac{\square}{\square} + \frac{2}{4} = \frac{5}{4}$

8. $\frac{\square}{\square} + \frac{2}{10} = \frac{5}{10}$

9. $\frac{\square}{\square} + \frac{2}{8} = \frac{5}{8}$

10. $\frac{\square}{6} + \frac{2}{6} = \frac{\square}{6}$

11. $\frac{\square}{5} + \frac{1}{5} = \frac{\square}{5}$

12. $\frac{4}{10} + \frac{\square}{10} = \frac{\square}{10}$

13. Write a number from 1–12 in each box so that the addition problem is true.

$$\frac{\square}{12} + \frac{5}{\square} = \frac{\square}{12}$$

Day 9

Add and Subtract Mixed Numbers

Check Understanding

Add.

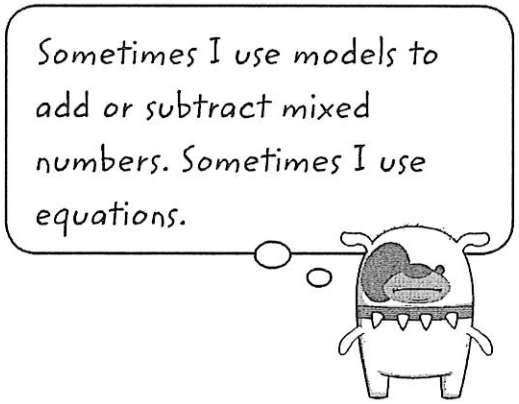
$2\frac{7}{8} + 3\frac{5}{8} =$ _____

What You Need

- Recording Sheet

What You Do

1. Take turns. Choose a problem on the **Recording Sheet.**
2. Choose a method to solve the problem.
3. Your partner uses a different method to check the answer.
4. Continue until all the problems on the **Recording Sheet** have been solved.



Go Further!

Write two mixed numbers that have a sum of $4\frac{9}{10}$. Exchange with your partner to check the sum.

Ready® Center Activity 4.32 ★★ Recording Sheet

Partner A _____

Partner B _____

Add and Subtract Mixed Numbers

$8\frac{11}{12} - 7\frac{5}{12} =$ _____

$2\frac{3}{5} + 3\frac{4}{5} =$ _____

$4\frac{1}{6} + 8\frac{5}{6} =$ _____

$3\frac{1}{4} - 1\frac{3}{4} =$ _____

Linda makes fruit punch with $2\frac{3}{8}$ cups of orange juice and $1\frac{2}{8}$ cups of grapefruit juice. How many cups of juice does she use altogether?

_____ cups

Benito walks $1\frac{2}{3}$ miles on a hiking trail. The trail is $3\frac{1}{3}$ miles long. How many more miles does Benito need to walk to reach the end of the trail?

_____ miles

Subtracting Fractions *continued*

Name: _____

5 On Monday, Adam walks $\frac{3}{10}$ of a mile to the store and then $\frac{4}{10}$ of a mile to the park. How far does he walk in all?

6 Javier has $\frac{7}{8}$ of a cup of flour. He uses $\frac{3}{8}$ of a cup in a recipe. How much flour does Javier have left?

7 Shawna practices piano for $\frac{4}{6}$ of an hour and takes a break. Shawna then practices for $\frac{2}{6}$ of an hour more. How long does Shawna practice in all?

8 Kailee has finished $\frac{4}{5}$ of her math homework so far. What fraction of her math homework does she have left to finish?

9 Explain one way to check your work to problem 2.

Decomposing Fractions

Name: _____

Find three ways to decompose each fraction into a sum of other fractions with the same denominator.

1 $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \_\_\_\_\_$

$\frac{3}{4} = \frac{2}{4} + \_\_\_\_\_$

$\frac{3}{4} = \frac{1}{4} + \_\_\_\_\_$

2 $\frac{7}{8} = \frac{6}{8} + \_\_\_\_\_$

$\frac{7}{8} = \frac{5}{8} + \_\_\_\_\_$

$\frac{7}{8} = \frac{4}{8} + \_\_\_\_\_$

3 $\frac{6}{5} = \_\_\_\_\_ + \frac{3}{5}$

$\frac{6}{5} = \frac{2}{5} + \_\_\_\_\_ + \_\_\_\_\_$

$\frac{6}{5} = \frac{2}{5} + \frac{2}{5} + \_\_\_\_\_ + \_\_\_\_\_$

4 $\frac{5}{6} = \_\_\_\_\_ + \frac{3}{6}$

$\frac{5}{6} = \frac{1}{6} + \_\_\_\_\_ + \_\_\_\_\_$

$\frac{5}{6} = \frac{1}{6} + \frac{1}{6} + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_$

5 $\frac{9}{12} = \_\_\_\_\_ + \frac{5}{12}$

$\frac{9}{12} = \frac{3}{12} + \frac{3}{12} + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_$

$\frac{9}{12} = \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_$

6 $\frac{8}{10} = \_\_\_\_\_ + \frac{4}{10}$

$\frac{8}{10} = \frac{2}{10} + \frac{3}{10} + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_$

$\frac{8}{10} = \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_$

7 Describe your strategy for finding the missing numbers.

Day 10

Different Ways to Show Sums

Check Understanding

Use twelfths to write three different addition expressions that equal $\frac{5}{12}$.

What You Need

- number cube
- 15 game markers in one color
- 15 game markers in a different color
- Game Board

What You Do

1. Take turns. Roll the number cube. Find the fraction sum next to that toss in the table.
2. Find one expression on the **Game Board** that has that sum. Your partner checks your expression.
3. If you are correct, place a game marker on that expression. If you are not correct or if there are no expressions with that sum, your turn ends.
4. Continue until all the expressions on the **Game Board** have been covered.
5. The player with the greater number of markers on the **Game Board** wins.

Toss	Sum
1	$\frac{9}{8}$
2	$\frac{5}{6}$
3	$\frac{3}{8}$
4	$\frac{4}{6}$
5	$\frac{8}{6}$
6	$\frac{7}{8}$

Go Further!

Write two addition expressions using sixths that equal $\frac{8}{6}$ and are NOT on the **Game Board.** Exchange papers with your partner to check.

Ready® Center Activity 4.31 ☆☆ Game Board

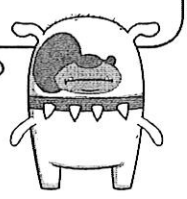
Partner A _____

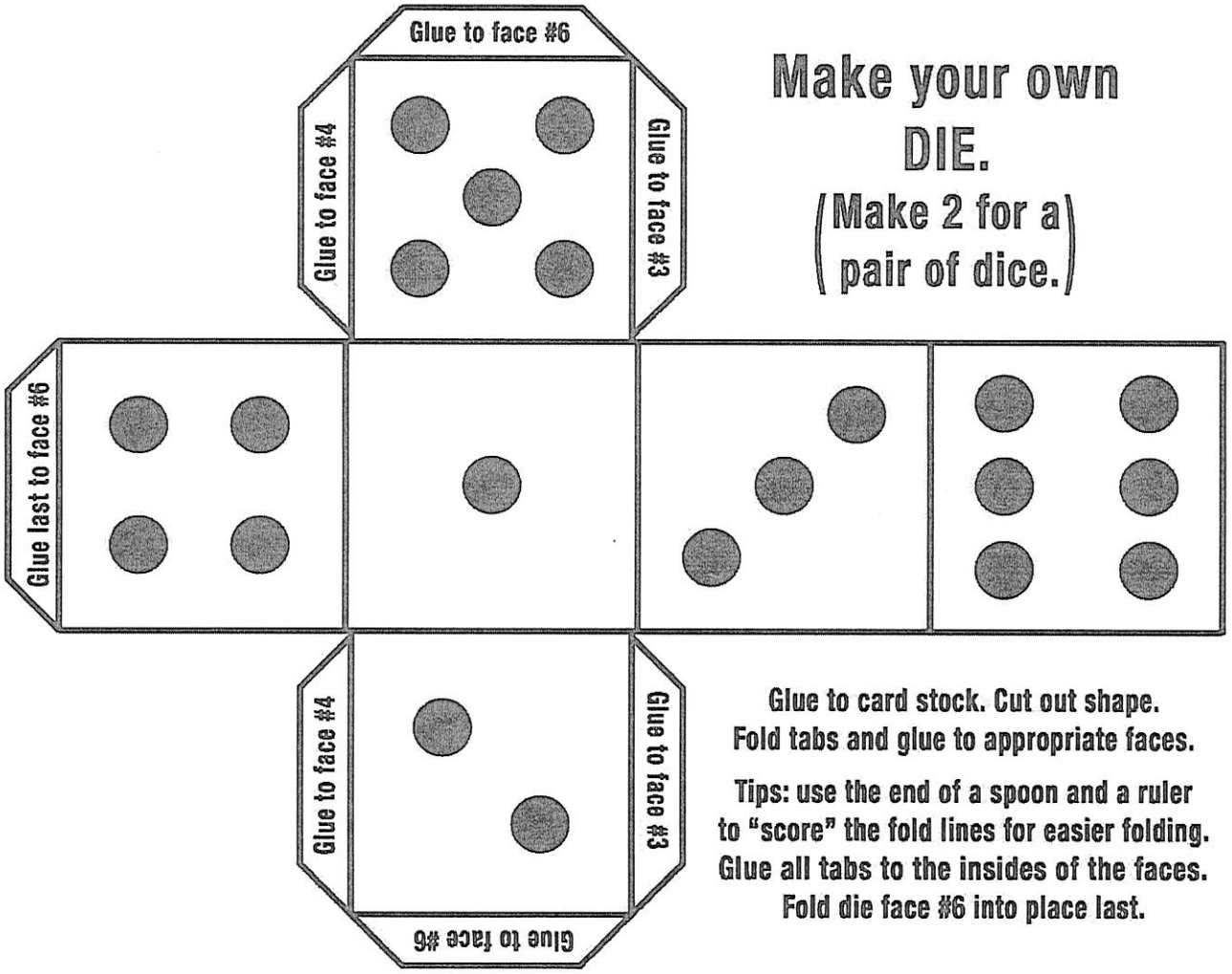
Partner B _____

Different Ways to Show Sums

$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{5}{6}$	$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{2}{8}+\frac{3}{8}+\frac{4}{8}$	$\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{1}{8}+\frac{1}{8}$
$\frac{4}{6}+\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{4}{8}+\frac{3}{8}$	$\frac{2}{6}+\frac{3}{6}$	$\frac{4}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}$	$\frac{2}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$
$\frac{2}{8}+\frac{2}{8}+\frac{3}{8}$	$\frac{3}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{3}{8}$	$\frac{3}{6}+\frac{5}{6}$	$\frac{1}{6}+\frac{2}{6}+\frac{1}{6}$
$\frac{3}{8}+\frac{3}{8}+\frac{3}{8}$	$\frac{2}{6}+\frac{2}{6}+\frac{1}{6}$	$\frac{1}{8}+\frac{2}{8}$	$\frac{2}{6}+\frac{2}{6}$	$\frac{1}{8}+\frac{2}{8}+\frac{1}{8}+\frac{2}{8}+\frac{1}{8}$
$\frac{1}{6}+\frac{2}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{4}{8}+\frac{3}{8}+\frac{1}{8}+\frac{1}{8}$	$\frac{2}{6}+\frac{2}{6}+\frac{4}{6}$	$\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$	$\frac{2}{8}+\frac{1}{8}$

I can combine or break apart addends to find different expressions for a sum.



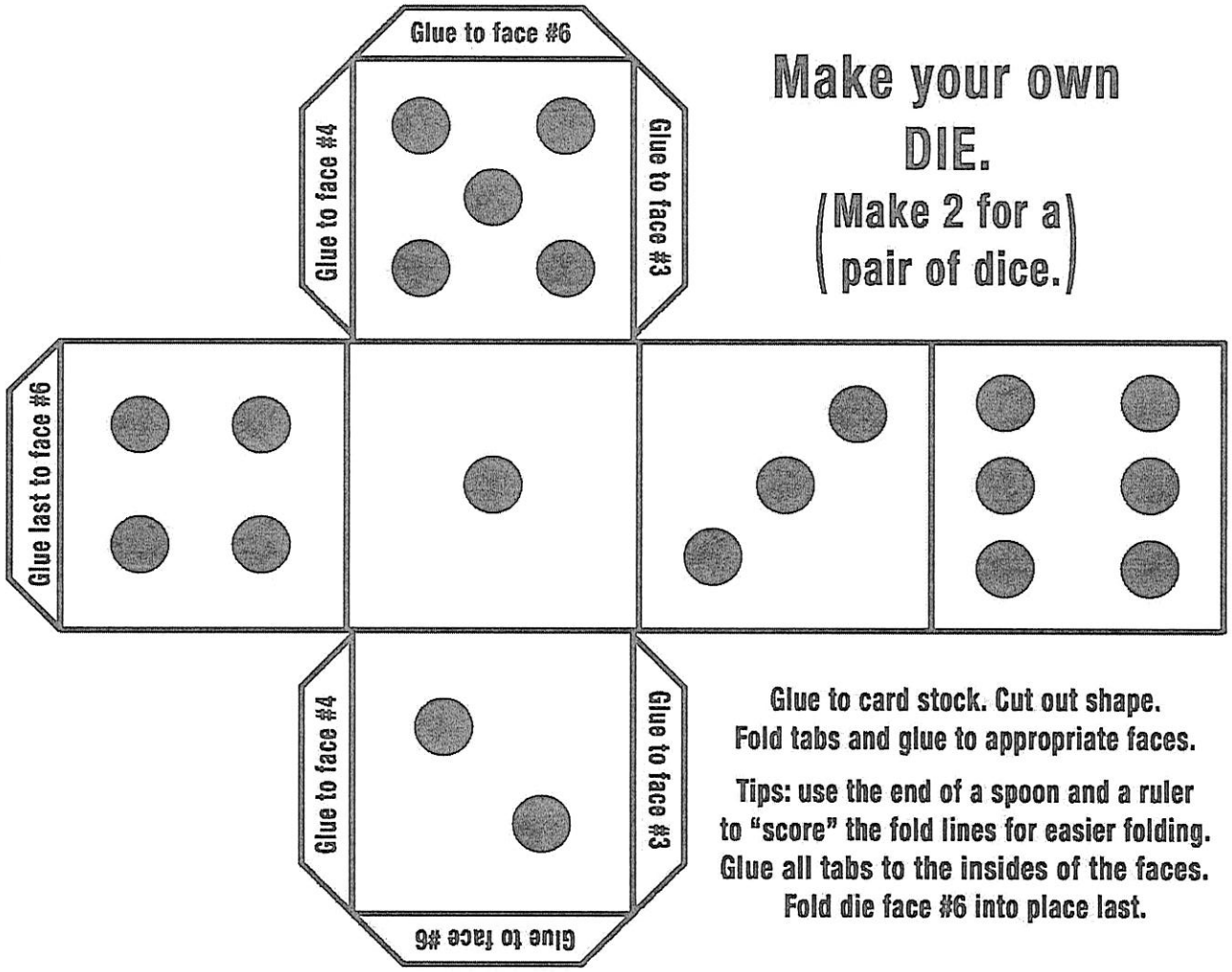


Make your own DIE.

(Make 2 for a pair of dice.)

Glue to card stock. Cut out shape.
Fold tabs and glue to appropriate faces.

Tips: use the end of a spoon and a ruler to "score" the fold lines for easier folding.
Glue all tabs to the insides of the faces.
Fold die face #6 into place last.



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4th Grade Choice Board: Energy

You have spent time this year learning about many different topics of interest in Science. Choose 3 of the activities from the activity board below.

Articles to use for help: The Whys of Weather- Rainbows Forms of Energy Magnetism

<table>
<tr>
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Create an Energy Collage

- Include the different types of energy: electrical, heat, light, sound, or energy of motion
- You may draw pictures, clip from magazines or print off pictures
- Cut and glue the pictures on a sheet of paper
- Try to include at least 8 pictures or more

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Brochure or Slide Show

- Pick a form of energy: electrical, heat, light, sound, or energy of motion.
- Create a brochure, Google Slide, **or** Powerpoint.

- Brochure - front cover and 3 middle sections

Google Slide or Powerpoint - Title Slide and 3 other slides

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Draw and label a circuit

On a sheet of paper, draw a closed circuit and label each part: light bulb, wire, battery.

Write a paragraph describing how a circuit works.

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Prism Article and Questions

Read the passage "The Whys of Weather- Rainbows that is included in the packet. Then complete the questions.

Optional Activity-
Use the directions for "Creating a Prism" that was included in the packet and explore.

</td>
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Discover How Light Travels

Find 10 objects around your home or area. Make a chart with 3 columns: translucent, transparent, opaque

- Transparent - an object that lets all light shine through
- Translucent - an object that lets some light shine through
- Opaque - an object that lets no light shine through

Place object near a light (or go outside and use the sun)

Write the name of the object under the correct column: translucent, transparent, opaque

</td>
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Vocabulary

Choose 5 words from the vocabulary in the table.
Write the word, definition and draw a picture for EACH word.

magnetism	matter	insulator
attract	force	conductor
repel	magnetite	Static electricity
refraction	reflection	absorption

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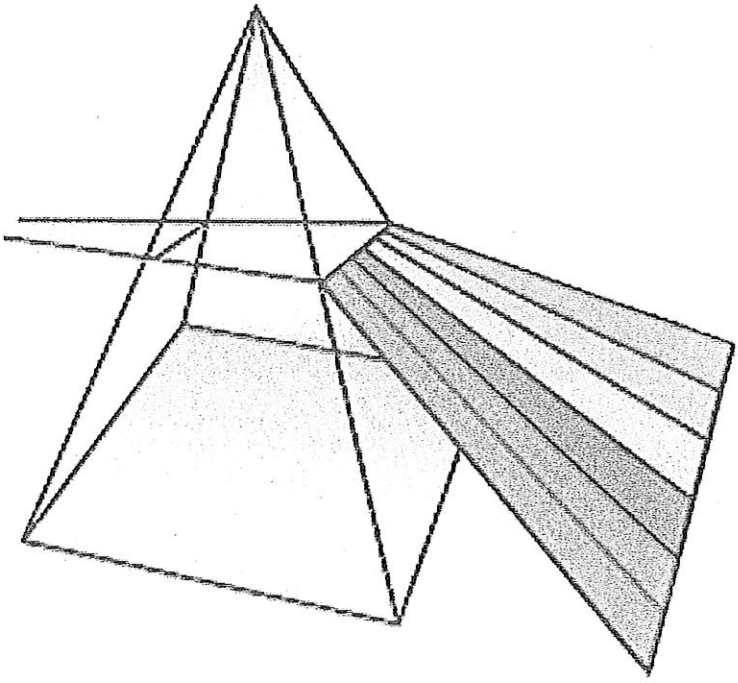
The Whys of Weather - Rainbows

by ReadWorks

If the sun begins to shine after rainfall, you might see a glorious rainbow. But what makes a rainbow? Keep reading to find out.

Did you know that sunlight is made of many colors? It is a combination of every color of the rainbow. Sir Isaac Newton, a famous scientist from England, first made this discovery. Newton passed a triangular prism through a beam of sunlight. A triangular prism is usually made of glass, and its ends are triangles. When the beam of sunlight passed through the prism, it bent. The light separated into red, orange, yellow, green, blue, indigo and violet - all of the colors in the rainbow!



But there isn't any triangular prism in the sky. So then how can you see a rainbow in the sky? Raindrops in the air act as prisms! In order to see a rainbow, the sun has to be behind you, and the clouds can't be blocking the sunlight. The sunlight passes through the raindrops. Then the light is bent, the colors are separated, and a rainbow forms!

Name: _____ Date: _____

1. You would be most likely to see a rainbow after a storm if

A. clouds cover the sky.

B. the sun shines.

C. the air becomes very dry.

D. it gets very windy.

2. What does the text describe?

A. how rainbows form

B. Sir Isaac Newton's famous discoveries

C. how different types of discoveries are made

D. experiments that include triangular prisms

3. Read the following sentences:

"Raindrops in the air act as prisms! In order to see a rainbow, the sun has to be behind you, and the clouds can't be blocking the sunlight. The sunlight passes through the raindrops. Then the light is bent, the colors are separated, and a rainbow forms!"

In order for a rainbow to form, why can't clouds be blocking the sunlight?

A. The sunlight needs to reach the raindrops in order to bend them.

B. The clouds need to bend the sunlight that passes through raindrops.

C. The sunlight needs to act as a triangular prism.

D. The sunlight needs to reach the raindrops in order to pass through them.

4. Which of these things helps to determine your ability to see a rainbow?

A. your height

B. the number of mountains nearby

C. your location

D. the temperature outside

5. This passage is mostly about

A. how rainbows are formed.

B. Sir Isaac Newton's career.

C. the scientific uses of triangular prisms.

D. what sunlight is made up of.

6. Why does the author compare triangular prisms to drops of rain? Use evidence from the text to support your answer.

7. What happened when Sir Isaac Newton passed a triangular prism through a beam of sunlight?

8. Choose the word that best completes the sentence.

Sunlight is made up of many colors, _____ red, orange, and yellow.

A. especially

B. above all

C. particularly

D. including

Make A Prism Activity

Most of the time light looks white, but it is actually made up of colors: red, orange, yellow, green, blue, indigo, and violet. Those seven colors are the same ones you see in a rainbow! A prism is usually made of glass and is used to separate light into its colors. In this project, you can make your own prism to show the colors of light.

What You Need:

- a clear glass
- water
- 2 sheets of white paper
- a chair
- flashlight (one with a small beam works best)

What You Do:

1. Fill the glass a little more than half-way full.
2. Set the glass on the edge of the chair so that nearly half of the bottom of the glass hangs over the edge. The glass might be a little wobbly, so be careful not to let it fall.
3. Lay both sheets of paper side by side on the floor next to the chair where the glass is.
4. Turn on the flashlight and hold it near the outside of the glass at the level of the water, pointing towards the paper on the floor.
5. Look for a rainbow pattern to appear on the white paper. You might need to adjust where you are shining the flashlight or where your paper is at in order to see the rainbow clearly. Depending on the shape of your glass and how much water is in it, you might see more than one rainbow. You could also try this by putting the glass of water in a window where sunlight will shine through it instead of using a flashlight.

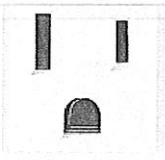
What Happened:

When the beam of light from your flashlight hits the outside of the glass, it bends slightly and breaks into its seven different colors. This bending is called refraction. The beam of light is separated into its different colors because each color bends at a slightly different angle. When the light comes out the other side of the glass, it is no longer a beam of white light. Instead, you see all the colors that make up white light in a rainbow shape on the white paper! This setup is a type of prism. A normal prism is a triangular piece of glass, but it works in the same way as the prism you just made.

A prism refracts light in almost the same way that raindrops refract sunlight to make a rainbow. The seven colors of the rainbow are called the visible colors of light. White light is made up of all of those colors, our eyes just can't see them until they are separated by water, glass, or something else. There are more colors of light, but our eyes can't detect them. Another way to see the rainbow colors of white light is to hold the back of a cd up to a light bulb. To see the colors even more clearly, poke a small hole in a piece of foil and cover a flashlight with the foil so the hole is in the middle, then shine it at the cd.

Source: Home Science Tools

Physics for Kids



Energy

What is Energy?

The simplest definition of energy is "the ability to do work". Energy is how things change and move. It's everywhere around us and takes all sorts of forms. It takes energy to cook food, to drive to school, and to jump in the air.

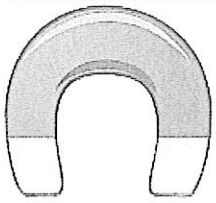
Different forms of Energy

Energy can take a number of different forms. Here are some examples:

- **Chemical** - Chemical energy comes from atoms and molecules and how they interact.
- **Electrical -** Electrical energy is generated by the movement of electrons.
- **Gravitational** - Large objects such as the Earth and the Sun create gravity and gravitational energy.
- **Heat** - Heat energy is also called thermal energy. It comes from molecules of different temperatures interacting.
- **Light** - Light is called radiant energy. The Earth gets a lot of its energy from the light of the Sun.
- **Motion -** Anything that is moving has energy. This is also called kinetic energy.
- **Nuclear** - Huge amounts of nuclear energy can be generated by splitting atoms.
- **Potential** - Potential energy is energy that is stored. One example of this is a spring that is pressed all the way down. Another example is a book sitting high on a shelf.

Source: Ducksters

Physics for Kids

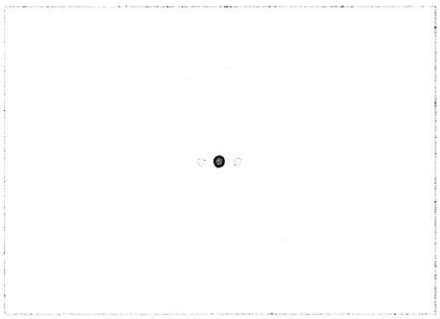


Magnetism

Magnetism is an invisible force or field caused by the unique properties of certain materials. In most objects, electrons spin in different, random directions. This causes them to cancel each other out over time. However, magnets are different. In magnets the molecules are uniquely arranged so that their electrons spin in the same direction. This arrangement of atoms creates two poles in a magnet, a North-seeking pole and a South-seeking pole.

Magnets Have Magnetic Fields

The magnetic force in a magnet flows from the North pole to the South pole. This creates a magnetic field around a magnet.



Have you ever held two magnets close to each other? They don't act like most objects. If you try to push the South poles together, they repel each other. Two North poles also repel each other.

Turn one magnet around, and the North (N) and the South (S) poles are attracted to each other. Just like protons and electrons - opposites attract.

Where do we get magnets?

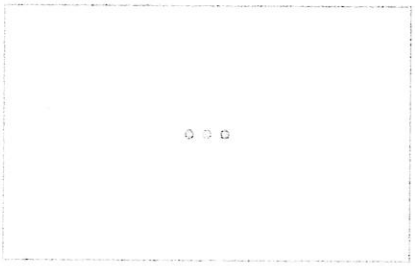
Only a few materials have the right type of structures to allow the electrons to line up just right to create a magnet. The main material we use in magnets today is iron. Steel has a lot of iron in it, so steel can be used as well.

The Earth is a giant magnet

At the center of the Earth spins the Earth's core. The core is made up of mostly iron. The outer portion of the core is liquid iron that spins and makes the earth into a giant magnet. This is where we get the names for the north and south poles. These poles are actually the positive and negative poles of the Earth's giant magnet. This is very useful to us here on Earth as it lets us use magnets in compasses to find our way and make sure we are heading in the right direction. It's also useful to animals such as birds and whales who use the Earth's magnetic field to find the right direction when migrating. Perhaps the most important feature of the Earth's magnetic field is that it protects us from the Sun's solar wind and radiation.

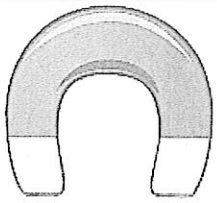
The Electric Magnet and Motor

Magnets can also be created by using electricity. By wrapping a wire around an iron bar and running current through the wire, very strong magnets can be created. This is called electromagnetism. The magnetic field created by electromagnets can be used in a variety of applications. One of the most important is the electric motor.



Source: Ducksters

Physics for Kids

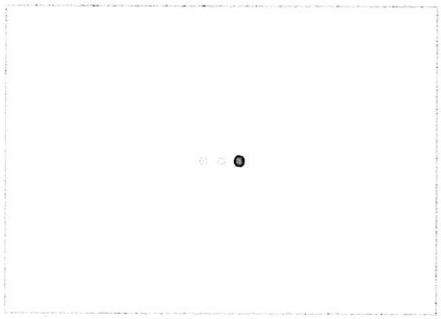


Magnetism

Magnetism is an invisible force or field caused by the unique properties of certain materials. In most objects, electrons spin in different, random directions. This causes them to cancel each other out over time. However, magnets are different. In magnets the molecules are uniquely arranged so that their electrons spin in the same direction. This arrangement of atoms creates two poles in a magnet, a North-seeking pole and a South-seeking pole.

Magnets Have Magnetic Fields

The magnetic force in a magnet flows from the North pole to the South pole. This creates a magnetic field around a magnet.



Have you ever held two magnets close to each other? They don't act like most objects. If you try to push the South poles together, they repel each other. Two North poles also repel each other.

Turn one magnet around, and the North (N) and the South (S) poles are attracted to each other. Just like protons and electrons - opposites attract.

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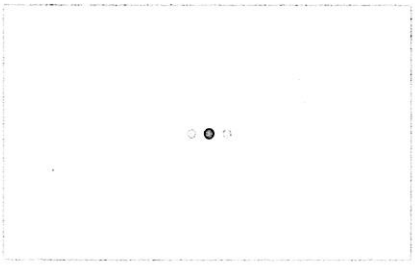

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