KANSAS CITY KANSAS PUBLIC SCHOOLS

4th grade
Continuous Learning Packet
April and May 2020

For students who do not have a computer or reliable internet access, learning packets will be distributed the week of April 6th. Please know that these packets are intended to provide support for continuous learning as we are away from our schools during this time. Learning is retained when we consistently practice. Please pace out the amount of work your child completes daily. We hope you enjoy "practicing" while you are home. Thank you for being partners in this work – we appreciate your dedication to helping our students succeed.

Please Note: Included in this packet are books or texts for your child to read while they are at home. The same book or text will be read multiple times during the week. Enjoy reading!

Close Reading Text Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
<u>First Read</u> Read through the text once. Pay attention to what the text says. Think of the main ideas and key details. Use a pencil or pen to circle unknown words and underline important ideas you find as you read.	<u>Second Read</u> Read through the text a second time. Pay attention to how the text explains the information to you as the reader. Think about the author's word choices and how the author's point of view might impact (or affect) the meaning. Use a pencil or pen to underline or note the important ideas you find as you read.	<u>Third Read</u> Read through the text a third time. At this point, you know the text very well. As you re-read, think carefully about the author's message. Evaluate the evidence that the author uses to support his/her reasoning. Pay attention to what the text is saying. Use a pencil or pen to underline or note the important ideas you find as you read.	<u>**Connections**</u> **3:** Write about three things you learned about or connected to in your life. **2:** Write two interesting facts you learned or questions you still have. **1:** Write one opinion you have about the text you read.	<u>Real World Synthesis</u> Synthesize what you have learned. Relate this event to current times. How can you apply a lesson, conflict, character trait, event, fact, etc. to the world today?
<u>**Think and Respond**</u> Choose one of the following to respond in writing: ❑ Summarize the text in your own words. ❑ Create an	<u>**Think and** Respond</u> Choose one of the following to respond in writing: ❑ **How does the narrator or the author's point of view**	<u>**Think and Respond**</u> Choose one of the following to respond in writing: ❑ **What is the author's message?** ❑ **What evidence**	<u>**Think and Respond**</u> **Think about these questions as you respond to the 3, 2, 1 above.** ❑ **What evidence could the author have**	<u>**Think and Respond**</u> ❑ Write a two-paragraph essay on how you could apply this text to our world today. Be sure to

outline or a graphic organizer that defines the main idea and the supporting details. (nonfiction text) ❏ What conflicts did you see and how were they resolved? How did the characters solve the conflict? (fiction)	**influence how the events are described?** **❏ How is this text organized? Why do you think the author organized it this way? (nonfiction)** ***Answer the text-dependent questions, if included with the text.**	**did the author use to support his thinking?** **❏ What evidence could the author have added to make the points stronger?**	**added to make the points stronger?** **❏ What evidence did the author use to support his thinking? ü Where in the text does the author show evidence to support the claim?** **❏ What is the author's message?**	include evidence from the text and quote it accurately.
Vocabulary: Identify any words you don't know and use the context, dictionary, or ask an adult to help you understand the meaning.	**Vocabulary:** Continue to identify any unknown words and clarify their meaning.	**Vocabulary:** Try to incorporate new vocabulary into your writing.	**Vocabulary:** Try to incorporate new vocabulary into your writing.	**Vocabulary:** Try to incorporate new vocabulary into your writing.

Fourth Grade Text Reading Schedule

	Text Title(s) and Type	Activities Included*
Week 1	*Service Animals* Nonfiction	Daily Questions
Week 2	*Newest Member of the Class* Fiction	Daily questions
Week 3	*Recycle/ A Ton of Trash* Nonfiction	Vocabulary Questions
Week 4	*Civil Rights Leader: Martin Luther King/* *King's granddaughter, 10, is finding her own* *way as an activist* Nonfiction	Questions Written response
Week 5	Lewis and Clark: American Explorers/ Traveling West Nonfiction	Questions/discussion
Week 6	*Energetic Emily* Fiction *Energy for Life* Nonfiction	Vocabulary Questions
Week 7	Pythons Invade the Everglades All the Pieces Matter Fiction	Questions

*follow close reading schedule as well as included activities

WEEK 1

Service Animals

disabilities – conditions that limit people's ability to do things, such as moving, sensing, or thinking
discrimination – unfair treatment of a person or group based on race, gender, or other differences
mobility – the ability to move around easily and quickly
distractions – things that make it hard to think clearly or pay attention

Ten-year-old Joshua was born blind. Joshua has a special friend named Simon who helps him get around safely. Simon is Joshua's service dog. While Simon is a great companion, he's not a pet. He has been taught by human trainers to keep Joshua safe from traffic and other dangers. Simon also helps Joshua move around. He guides Joshua to avoid objects and lets him know about curbs and steps.

Animals help people in many different ways. However, service animals offer special kinds of help. What exactly are service animals? What kinds of jobs do they do? What kinds of animals can be service animals?

According to the US Department of Justice (DOJ), "Service animals are defined as dogs that are individually trained to do work or perform tasks for people with **disabilities**." The DOJ is involved with service animals because of the Americans with Disabilities Act (ADA). This law, which was passed in 1990, forbids "**discrimination** against individuals with disabilities in all areas of public life." These areas include "jobs, schools, transportation, and all public and private places that are open to the general public. The purpose of the law is to make sure that people with disabilities have the same rights and opportunities as everyone else." New US rules passed in 2010 have added miniature ("mini") horses to the list of service animals. These animals can be in public places with their handler, even if other animals are not allowed.

A guide dog helps a blind man cross a city street.

Guidelines in some US states allow service animals besides dogs and mini horses. Outside the United States, rules about service animals differ from country to country.

Service animals are trained to help people with disabilities live more independent lives. Guide animals, like Simon, help people who are blind or have low vision. Hearing animals help people who are deaf or hard of hearing. Other service animals may help

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wheelchair users or people who have other **mobility** challenges. In addition, people with certain other conditions may benefit from the help of a service animal. These conditions include seizures, allergies, and autism. A service animal helps and lives with one person.

Most any breed of dog can become a service dog. However, some breeds are better suited for this work than others. German shepherds and Labrador and golden retrievers are the most common breeds.

A service dog opens a door for a wheelchair user.

It may take two years of training before a service dog is ready to be placed with a person. These dogs are trained to pay close attention to their handler. They learn to tune out **distractions**. They also learn to perform special tasks related to the help their handler needs. They are never out of control. A special vest lets people know that these dogs are service animals and should not be petted. The training time for mini horses varies with the kind of service they will provide. Once a person and a service animal are matched, the person learns to work with and care for the animal.

Service animals are just one type of assistance animal. The following are *not* the same as service animals.

- Therapy animals are trained to help people other than their handler. They provide comfort and support to people in hospitals, schools, nursing homes, and other places.
- Comfort animals are also called emotional support animals. They provide affection and companionship to people with mental or emotional disabilities. They do not receive special training. A letter from a doctor is often required for a person to take a comfort animal into certain public places.
- Companion animals are pets. They are kept for companionship and are not always well trained.

	Service Animals	Therapy Animals	Comfort Animals
Covered by ADA; can bring animal into public places	✓	✗	✗
Must be able to deal with many different settings	✓	✓	✗
May live with owner, even if the place has a "no pets" policy	✓	✗	✓
Main purpose is comfort and companionship	✗	✗	✓
Trained to help just one person	✓	✗	✗
Provides comfort to many people	✗	✓	✗

Service animals are wonderful companions—and so much more. They help many people with disabilities deal with the challenges of everyday life. They provide comfort and build confidence. They also save lives. For many people, being partnered with a service animal is truly life-changing.

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Name: _____ Date: _____

Week 1: Service Animals

MONDAY: Key Ideas and Details

1 According to the article, what kinds of training do service dogs receive before they are matched with a person? **RI.4.1**

2 Summarize the article from beginning to end in a few sentences. **RI.4.2**

3 According to the article, what happened as a result of the Americans with Disabilities Act? **RI4.3**

TUESDAY: Key Craft and Structure

1 What does the word ***distractions*** mean? How is this word relevant to the topic of the article? **RI.4.4**

2 How is the information in the article organized? **RI.4.5**

3 How do the ADA quotations in paragraph 3 relate to service animals? **RI.4.6**

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Name: _____ Date: _____

Week 1: Service Animals

WEDNESDAY: Integration of Knowledge and Ideas

1. Name something you learned from the graphic that wasn't discussed in the article. **RI.4.7**

2. What evidence in the article supports the author's claim that service animals help disabled people live more independent lives? **RI.4.8**

THURSDAY: Mixed Skills Practice

1. Why does the article mention miniature horses? **RI.4.1**

2. Which breeds of dogs most commonly become service dogs? Why do you think this is so? **RI.4.1**

3. Which kind of assistance animal is right for providing comfort to people in a homeless shelter? How do you know? **RI.4.7**

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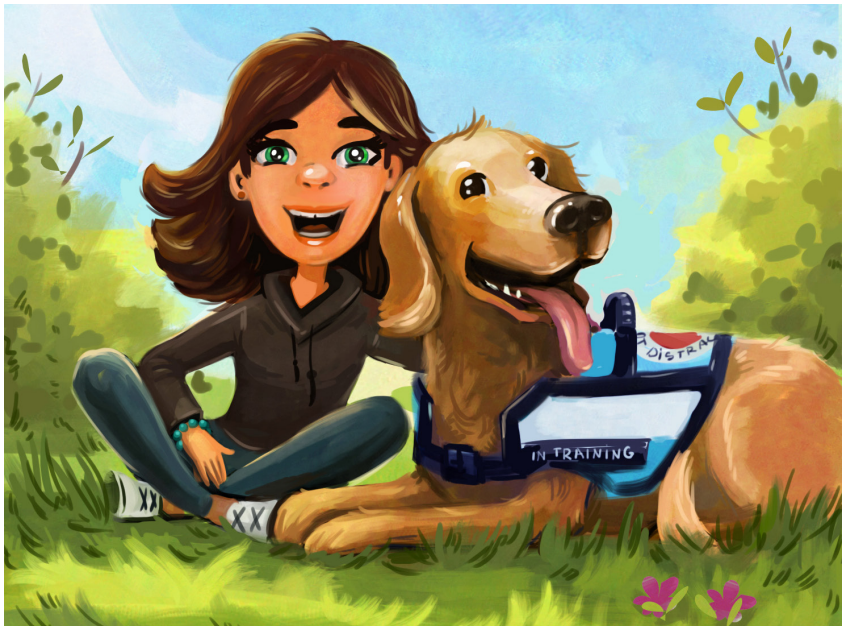
WEEK 2

The Newest Member of Our Class



Today, Mrs. Mayhew wrote "Welcome, Buddy!" on the whiteboard. Another new student in the middle of the year? We got one last week!

"What's Buddy like?" I asked Mrs. Mayhew.

"Focused and helpful, with shaggy hair and a big smile," she chuckled.

"Is Buddy a nickname or his real name?" Emmanuel asked.

"I believe it's his real name, but you'll have to ask Rebecca," Mrs. Mayhew declared.

"Rebecca?" several of us asked together. Rebecca was another new student who'd only come last week and been out of school a lot. I didn't think we should ask Rebecca anything. "How would she know?" I asked in a bewildered voice.

"I'm going to let Rebecca explain that to you when she and Buddy get here," Mrs. Mayhew replied, but she couldn't be persuaded to divulge more.

Mrs. Mayhew started our day as usual, but I think everyone was distracted, waiting for Rebecca and the new kid to show up. I was a bit anxious with anticipation myself.

Just as we were about to get our math books out, the door opened, and a shaggy dog stuck his head in our classroom! There was a mad rush and a clamor as twenty-two students all started to rise from our seats and approach the visitor, but that's when Rebecca appeared. "Sorry we're late, Mrs. Mayhew," she said quietly. "Everyone wanted to see Buddy."

"Buddy??" all of my classmates cried. Buddy was a dog, not a new student!

"Is it Bring Your Dog to School Day or something?" I inquired enviously.

Mrs. Mayhew cleared her throat. "Class, everyone sit down and let Rebecca explain."

Rebecca looked pale and anxious as she stood in front of the class. Buddy sat down at her feet, and she rested her hand on his head. Instantly, she seemed to gain some strength and stood up straighter. "This is Buddy. He is a seizure alert dog, and he's with me because I have a seizure disorder. When I have a severe seizure, I can pass out without warning, and I can even get hurt worse from falling and hitting my head

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or my face, but Buddy can tell when I'm getting close to having a seizure. Doctors think these dogs pick up on changes in my brain activity—things I would never notice. When he warns me, I can lie down in a safe place, and then the seizure is less severe and I don't have other complications. This dog is going to change my life," Rebecca smiled. She was the only one. All the rest of the kids in my class, including me, looked shocked, horrified, or sad. Poor Rebecca!

Rebecca was aware of our expressions, I guess, and I wondered if she'd seen them before on the faces of other students at her old school. Instead of dissolving into embarrassment by our reactions, she smiled confidently. "Don't feel sorry for me! I'm really fortunate that I have Buddy to help me. Lots of kids have medical issues that a dog can't help with, or their families can't afford or find a service dog. Buddy's gone through two years of special training that taught him how to detect oncoming seizures." As Rebecca spoke, she smiled down at Buddy, and he panted up at her, mouth open.

Mrs. Mayhew was right, I thought. *Buddy does have a big smile!* I raised my hand, and Mrs. Mayhew called on me. "I'm glad you have a dog that can help you. You said he's gone through a lot of training. Does he know he know any tricks?"

"Yes, but most of the things he can do are related to helping people. He can bring me a phone so I can call for help, or water so I can take my medicine."

"Does he come with you to school every day?" Carla called out.

"He goes everywhere with me now," Rebecca grinned. Then she pointed at the blue vest Buddy wore. "This is the part no one likes," she sighed. "Buddy's working even when he's just sitting next to me because he's always monitoring for signs of an impending seizure. You can't pet him when he's in the harness, which will be almost the whole time."

That made sense to me. I have a brother, and when he distracts me, I make mistakes. If we distracted Buddy and he made mistakes, Rebecca could get hurt. "We're supposed to keep our hands to ourselves anyway, and not touch classmates. Well, Buddy's the newest member of our class!"

"Well put, Alfonse!" Mrs. Mayhew praised my comment. "Everyone, let's make sure Buddy feels welcome by respecting his space and the work he's doing. Buddy, we're delighted you're here!"

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Name: _____ Date: _____

Week 2: The Newest Member of Our Class

MONDAY: Key Ideas and Details

1. Why is the class surprised when Mrs. Mayhew says that Rebecca will tell them about Buddy? **RL.4.1**

2. What surprising event happened in the middle of the story? **RL.4.2**

3. How does Rebecca feel about having a service dog? Use evidence from the text to support your answer. **RL.4.3**

TUESDAY: Key Craft and Structure

1. What context clues help you understand the meaning of ***anticipation*** as used in paragraph 7? **RL.4.4**

2. How does opening scene set readers up to be surprised by the events that occur in the middle of the story? **RL.4.5**

3. Who is the narrator in this story? Quote evidence from the text that identifies the narrator. **RL.4.6**

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Name: _____ Date: _____

Week 2: The Newest Member of Our Class

WEDNESDAY: Integration of Knowledge and Ideas

1 How does the first illustration help you understand Rebecca and Buddy's relationship? **RL.4.7**

2 How does the second illustration of Buddy support information from the story? **RL.4.7**

THURSDAY: Mixed Skills Practice

1 Summarize this story in three to four sentences. **RL.4.2**

2 Why does the author include the narrator's thoughts about his brother distracting him in this piece? **RL.4.1**

3 Why do you think students in the text looked sad or horrified when Rebecca explained about her issues? How would you feel if you heard your classmate had a similar issue? **RL.4.6**

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A Ton of Trash

A group of fourth graders witnessed firsthand proof that one person's junk is another person's treasure. *Weekly Reader* joined the students on their visit to the Garbage Museum in Stratford, Connecticut, where a giant, multicolored dinosaur molded out of garbage towered above them.

Don Heiny/Weekly Reader

The Trash-o-saurus was made out of a ton of trash, including false teeth, license plates, and tires.

Trash-o-saurus was sculpted out of a ton of trash! That is equal to 2,000 pounds of garbage-the amount of trash each person, on average, threw away each year in the late 2000s. Philadelphia artist Leo Sewell scoured city dumps and created *Trash-o-saurus* out of old junk, from false teeth and license plates to toys, tires, and tennis rackets.

"I think the dinosaur is one of the coolest things I've ever seen," said fourth grader Jahkwe Aquart from Park City Magnet School in Bridgeport, Connecticut. His classmate Julie Pham, 9, agreed. "Instead of throwing away our garbage, we can reuse it."

That is exactly the point. "The museum shows what happens to our trash, how we can reduce

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our trash, and what we can do instead of throwing our trash away," said museum director Sotoria Montanari.

Garbage Trail

Americans created more garbage than ever before in the 2000s. In the early 1900s, most items were packed in containers that could be used again. In the 2000s, most of the food people bought, from cereal to milk, came in boxes and cartons that could be thrown away.

So what happens to trash after it is tossed out? Some trash ends up in **landfills**. In a landfill, garbage gets buried between layers of soil. Because many states have been running out of room for landfills, more and more garbage goes to **waste-to-energy** (or resource-recovery) plants. At these plants, garbage is burned and converted into electricity that people use to power their lights, TVs, and video games.

The Three R's

World Almanac for Kids

Plastic bottles can be recycled at centers like this one

Garbage is a form of solid waste. The Garbage Museum and its recycling plant, which are run by the Connecticut Resources Recovery Authority, provide visitors with ideas to cut down on solid waste. One way is to **reduce**, or make less, trash-by throwing away fewer napkins when you eat, for instance. Another way is to **reuse**, or find new uses for, old items. Paper bags, for example, can be reused to make book covers or wrap gifts.

People also help decrease their solid wastes when they **recycle**. Recycling refers to putting old objects, such as glass, plastic bottles, newspapers, and aluminum cans through a special process so that they can be used again.

Recycling has many benefits. Did you know that recycled plastic soft-drink bottles can be

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made into park benches, carpeting, and backpacks? The more people recycle, the less garbage ends up in landfills or waste-to-energy plants.

Recycling also helps protect **natural resources**, or materials from Earth. To make an aluminum can from scratch, for example, the metal needs to be mined from the ground. That process harms the land and pollutes the air and water. Making aluminum cans from recycled cans uses 95 percent less energy and protects Earth's natural resources. In fact, the energy saved each year from recycled cans could light Washington, D.C., for nearly four years!

As part of their visit, the fourth graders got a look at the museum's recycling center. Here, they discovered that one **bale**, or bundle, of recycled newspapers can save 17 trees! The message seems to have stuck with 9-year-old Arron Smith. "When you recycle, you save trees and animals' homes."

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convert

con · vert

Definition

verb

1. to change into a different form or state.

   This sofa converts to a bed.

   He converted to his wife's religion.

Advanced Definition

transitive verb

1. to transform (something) into another form, substance, or state.

   We can convert the sofa into a bed.

   The gas engine converts the gas into electrical power.

2. to cause to accept different religious or political beliefs or attitudes.

   They went to foreign countries hoping to convert people to their religion.

3. to change (money) into foreign currency of equal value.

   We converted our American money into euros.

intransitive verb

1. to adopt new and fundamentally different beliefs or attitudes, esp. religious or political.

   Before her marriage, she converted to Judaism.

noun

1. a person who has adopted new beliefs, esp. those of a specific religion or political doctrine.

   He is a recent convert to Islam.

Spanish cognate

convertir: The Spanish word *convertir* means convert.

These are some examples of how the word or forms of the word are used:

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1. Commercial farmers **convert** the land so that they can grow fruits, vegetables, and coffee beans.
2. One form of renewable energy is solar energy. Solar energy uses solar panels, which collect sunlight and **convert** it directly into electricity.
3. What happens to old school buses when they can no longer safely carry kids to school? Most go to junkyards to be **converted** to scrap metal.
4. Today's throttles are largely electronic. The pressure the driver applies to the gas pedal is **converted** into an electric signal that is relayed to a computerized electronic control unit.
5. Plants use these three puzzle pieces to make their own food in a process called photosynthesis. Using the energy from the sun, plants **convert** water and carbon dioxide into sugar.
6. In a person with diabetes, the body makes little or no insulin. That is a substance that the body needs to help **convert** glucose, a sugar in food, into energy.
7. Wind can help fly a kite, power a sailboat or spread seeds. Around the world, wind has also become an increasingly popular and inexpensive source of energy that is **converted** into electricity.
8. One of these ideas that Jeff is working on is how to get better solar power. Solar power, Jeff says, is "**converting** the light we get from the sun into usable electrical energy."

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pollute

pol · lute

Definition

verb

1. to make dirty or harmful by mixing in or adding waste material.

The company polluted the river by dumping oil in the water.

Advanced Definition

transitive verb

1. to make dirty, unpleasant, or unhealthy, esp. by infusing with waste material.

The factory emissions polluted the air.

The company polluted the river by dumping its waste there for years.

2. to cause to become immoral or impure; taint.

Excessive violence on television may pollute young minds.

intransitive verb

1. to make water, air, landscape, or the like dirty, unpleasant, or unhealthy, esp. by infusing with waste material.

Those who pollute should pay.

These are some examples of how the word or forms of the word are used:

1. There are many big companies that **pollute** the oceans.
2. Scientists worry that the poisons could **pollute** the ocean water.
3. Cell phone batteries contain chemicals that can **pollute** air and water.
4. Geothermal energy doesn't **pollute** because nothing is burned to make it.
5. Opponents say the drilling would **pollute** the area's land, air, and water.
6. Chemicals from factories, fertilizers from farms, and untreated sewage **pollute** the water supply.
7. Renewable energy is power from sources that can't be used up and do not **pollute** the environment.
8. Those chemicals can **pollute** if they go into a landfill or an incinerator, a facility that burns trash, Thomas says.
9. Wind doesn't **pollute** the environment and is a renewable source of energy that can't be used up like fossil fuels, such as coal, oil, and natural gas.
10. Now more people are using clean energy. Such energy does not **pollute** the air. Two kinds of clean energy are wind power and solar power. Solar means "from the sun."

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recycle re · cy · cle

Definition

verb

1. to put used things through a process that allows them to be used again.

   The city recycles paper, glass, metal, and plastic.

Advanced Definition

transitive verb

1. to treat (discarded items) for reuse or so as to recover reusable materials.

   Don't throw all that paper in the garbage; it can be recycled.

2. to reuse or adapt to a new use.

3. to pass or send through a cycle again.

Spanish cognate

reciclar: The Spanish word *reciclar* means recycle.

These are some examples of how the word or forms of the word are used:

1. Legislators aren't the only people taking aim at e-waste. Environmentalists are urging people to **recycle** their outdated equipment.
2. The message seems to have stuck with 9-year-old Arron Smith. "When you **recycle**, you save trees and animals' homes."
3. Cans, bottles, and newspapers can be **recycled**. That means these objects are put through a special process so they can be used again.
4. Fifth graders at Carolina International School (CIS) have a goal this Earth Day [2007]-to throw away as little trash as possible during lunch. To get their message across, students will encourage their peers to **recycle**.
5. People will **recycle** paper, bottles, and cans. When something is recycled, it is made into something new. Volunteers collected more than 70 million plastic bottles last year. The bottles were recycled, and a company used them to make backpacks for kids.

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Name: _____ **Date:** _____

1. The author wrote this

A. to explain the negative consequences to recycling.

B. to get towns to expand their recycling centers.

C. to get the reader to reuse, reduce and recycle.

D. to invite the reader to the Garbage Museum.

2. The following is an example of reducing:

A. bringing newspapers to a recycling center.

B. using plastic bags as small garbage bags.

C. using less water when you shower.

D. all of the above.

3. The following is an example of reusing:

A. using fewer napkins when you eat.

B. using less water when you brush your teeth.

C. bringing cans back to a recycling center.

D. washing zip top bags after use so they can be used again.

4. People made more trash in the 2000s than before. This is because

A. food had more packaging than in the early 1900s.

B. there were more people than in the early 1900s.

C. there were more stores than in the early 1900s.

D. landfills were bigger than in the early 1900s.

5. Give an example of recycling.

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R-E-C-Y-C-L-E

"One man's trash is another man's treasure!" Have you ever heard this saying? When people make treasure out of trash, they are reducing, reusing, and recycling. These actions are called the three "R's." The three "R's" are ways to lower how much waste is thrown away. This helps save natural resources. **Reducing** means to use less. People can use less by bringing reusable bags to the grocery store. This saves them from using the store's plastic or paper bags. Companies can use less by making plastic bottles that use less plastic than others. Companies can also use less by sending bills to their customers through email instead of paper mail. This saves paper. **Reusing** means finding new ways to use old things instead of throwing them out. People can reuse all kinds of things, such as old pasta or soup jars. Other foods can be stored in these jars after they are emptied. Companies can reuse old furniture when they change offices instead of buying new furniture.

Reducing and reusing are two easy ways to help protect the environment. You can practice both of these "R's" in your own home. The third "R," recycling, is a little different! **Recycling** means to turn trash into new material. You can start the recycling process in your home, but you can't finish it there on your own. Recycling starts in your home or school, but is finished at a recycling center.

Do you recycle old cereal boxes at home? If so, do you know where those boxes go after they leave your recycling bin? Let's take a journey to find out! First, the items are taken to nearby recycling spaces. Next, they are put on conveyor belts. Each recycling space has a different way of sorting the items. Some use machines, some use people, and some use a combination of both to sort the items. Let's visit a space that uses both people and machines to sort items. First, workers begin to sort the items that are rolling down the conveyor belt by hand. Trash and certain types of cardboard are the first things that are pulled out. Cardboard goes into its own separate pile. Trash is taken to a landfill. Then, the recycling machine takes over. Strong fans blow away the lighter paper, metal, and plastic items. The glass items are heavy so they are not blown away by the fan. They are moved to a separate pile. The paper, metal, and plastic travel up a steep conveyor belt. Paper items keep moving into their own pile. Powerful magnets grab the heavier metal items from the conveyor belt. Then, the factory workers step back in. Workers sort the leftover plastic items by hand. After all of the recyclables have been sorted, strong machines smash the different piles. This turns everything into small cubes called bales. The bales are then sold to different companies that make recycled goods. For example, Papa John's Pizza might buy some bales to make pizza boxes.

Did that sound like an easy process? It is actually not so simple! Most recycling spaces can only recycle certain items. It is important that the bales are made out of similar items. It is not good if the wrong types of plastic, paper, or metal get mixed together! Do you know what happens if you recycle the wrong kind of cardboard or plastic? It could ruin the whole bale of recycled goods. Think about it this way – what would happen if you threw a bunch of pizza ingredients into a cake mix? Pizza and cake are tasty on their own, but they are not supposed to be mixed together!

©Teaching is the Sweetest Thing

R-E-C-Y-C-L-E

You might be surprised to hear the list of items that cannot be recycled at your local space. Plastic bags can't be recycled at most recycling spaces. Pizza boxes, plastic bottle caps, Styrofoam, and brightly colored paper are also not usually recyclable. These items could ruin bales if they are not removed during the sorting process. You might have to mail certain items to a special recycling space that makes those special types of bales. Be sure to call your local recycling center or check its website to see which types of items you are allowed to send. Many spaces put labels on their recycling bins to help remind people what types of items can be recycled.

Have you changed your mind? Does recycling seem like a lot of work? Is it really worth the extra effort? The answer is yes! Recycling is very helpful to the environment. For starters, recycling has created lots of jobs. Many businesses have been started in order to help with the process. Recycling companies make over $230 billion each year. That's a lot of money! These new businesses have helped boost the economy in many communities. Recycling also cuts down on the amount of waste that is sent to landfills. **Landfills** are places where trash is dumped and then covered up by soil. The trash that is dumped in landfills stays put for a very long time. Eventually, we will run out of space on the planet for landfills. This is why recycling is important! Instead of sending your waste to a landfill, recycle your waste. Last but not least, recycling helps protect the environment for the future. It saves natural resources and cuts back on pollution. Recycling is helpful for people and the environment!

FAST FACT: Some sorting machines can sort over 300 tons of waste in one day!

FAST FACT: Over 60% of things people throw away could actually be recycled.

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Name _____

TEXT-BASED EVIDENCE **QUESTIONS**

R-E-C-Y-C-L-E

Directions: Answer these questions after you read the passage. Remember to begin your answer by restating part of the question, use direct evidence from the text, and explain your thinking.

KEY IDEAS & DETAILS

1. According to the first paragraph of the text, what are the three "R's?" **RI.1**

2. Describe how people can reduce or reuse waste at home. **RI.3**

3. Describe how companies can reduce or reuse waste. **RI.3**

4. Explain why only certain items can be recycled. **RI.3**

5. Summarize the recycling process that takes place at many recycling facilities. **RI.2**

CRAFT & STRUCTURE

6. What is a "landfill?" **RI.4**

7. How is the passage organized? (Chronological, cause/effect, comparison/contrast, description, problem/solution). Use evidence from the text to explain your answer. **RI.5**

INTEGRATION OF KNOWLEDGE & IDEAS

8. What is the author's message about the importance of recycling? Use evidence from the text to support your reasoning. **RI.8**

Name:

Date:

800L

Civil Rights Leaders: Martin Luther King Jr.

Biography.com and A+E Networks, adapted by Newsela staff
Grade Level 5. Word Count 591

Martin Luther King Jr. Wikimedia Commons

Number the paragraphs and read the article carefully, taking notes in the margin about what you have read.

Make a prediction based on the picture.

Synopsis: Martin Luther King Jr. was born on January 15, 1929, in Atlanta, Georgia. He was a Christian minister and civil rights activist. He fought for the equal treatment of African-Americans in the South. He received the Nobel Peace Prize in 1964. King was killed in April 1968. He is remembered as one of the greatest African-American leaders in history.

Early Years, Education And Spiritual Growth

King was born on January 15, 1929, and was originally named Michael King Jr. His parents were Michael King Sr. and Alberta Williams King. King and his siblings grew up in a secure and loving family.

King entered school at age 5. He skipped two grades in high school. He started college in 1944, when he was 15 years old. King was a popular student but unmotivated and not serious about school.

In 1948, Martin Luther King Jr. attended the Crozer Theological Seminary in Chester, Pennsylvania. He graduated first in his class in 1951 and was elected student body president.

While working on his doctorate, King met Coretta Scott, a singer and musician. They were married in June 1953 and had four children. In 1954, King became the pastor of the Dexter Avenue Baptist Church of Montgomery, Alabama.

Name: Date:

800L

Montgomery Bus Boycott

On December 1,1955, Rosa Parks boarded a bus to go home from work. In the South, public transportation was segregated, meaning that blacks and whites had to sit in separate sections. When white passengers boarded, the bus driver demanded that Parks and several other African-Americans give up their seats. Three other African-American passengers moved. Parks remained seated. The driver asked her again to give up her seat and again she refused. She was arrested and taken to jail.

Led by King, the African-American community boycotted Montgomery and refused to ride the bus. For more than 380 days, African-Americans in Montgomery walked to work and were threatened and harassed. In early 1957, the city of Montgomery gave in and ended segregation on public buses.

"I Have A Dream"

Through the late 1950s and early 1960s, King led protests and marches against all kinds of segregation. In the spring of 1963, he organized a protest in downtown Birmingham, Alabama. It turned violent. Police came at the protestors with dogs and sprayed them with fire hoses. King and many others were arrested. From his jail cell, King explained that nonviolent protest is meant to cause a crisis. It forces people to face their problems and deal with them.

On August 28, 1963, King's huge demonstration at the nation's capital drew more than 200,000 people. It would be called the March on Washington. There King made his famous "I Have a Dream" speech. He spoke about his belief that someday all men could treat each other like brothers, regardless of race.

King's actions hugely influenced Americans' opinions. All over the country people began questioning the unfair treatment of African-American citizens. In 1964, the Civil Rights Act outlawing discrimination in public places was passed. That same year, Martin Luther King received the Nobel Peace Prize.

Death And Legacy

In 1968, King was shot and killed in Memphis, Tennessee. His death caused riots across the country. In 1969, his killer, James Earl Ray, was sentenced to 99 years in prison.

Martin Luther King Jr. changed how African-Americans were treated in America. He is the best known African-American leader of his time. He was honored with a national holiday. Many schools and public buildings have been named after him. King was deeply committed to social justice and change through peaceful protest.

Name:
MLK Jr.– 800L Date:

Directions: Answer these questions as you read through the article.

1. Number the paragraphs. How many paragraphs are there? _____

2. What do you think is another word for synopsis?_____

3. Why is Martin Luther King Jr. still remembered and honored today?

_____

_____

4. Think of another possible subtitle for the section "Early Years, Education and Spiritual Growth".

_____

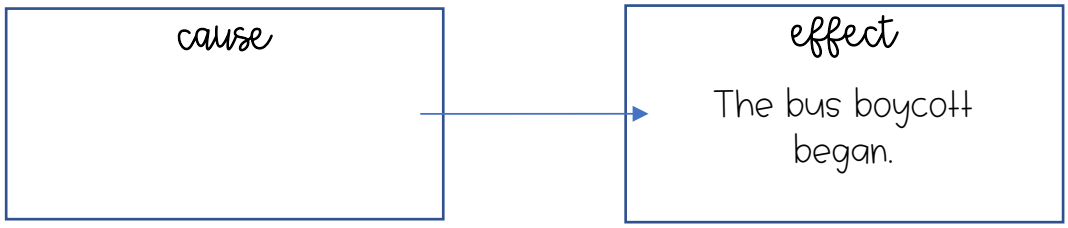
5. Find a sentence in the first section that shows Martin was different from others.. Underline it.

6. What does the word <u>unmotivated</u> mean?

_____

7. Find a sentence tin the first section that shows Martin moved past his lack of motivation. Circle it.

8.What event started the Montgomery Bus Boycott?



9. Did the bus boycott last less than or more than a year?

_____

10. What did Dr. King refer to that, "forces people to face their problems and deal with them"?

_____

11. What do you think the word <u>regardless</u> means?

_____

12. What is one way we know that Dr. King's actions were starting to make people take notice?

_____

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Comprehension Questions/Activity

Open-Ended and Multiple-Choice (STAAR-aligned) Questions

+

Written Summary Options

+

3-2-1 Chart

There are two summary options depending on what you feel suits your students' needs. Option 1 has a space for the students to draw a picture and include a caption and summarize the article. Option 2 has space for only written words. Both are formatted two per page for less paper waste.

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Name:

open-ended questions

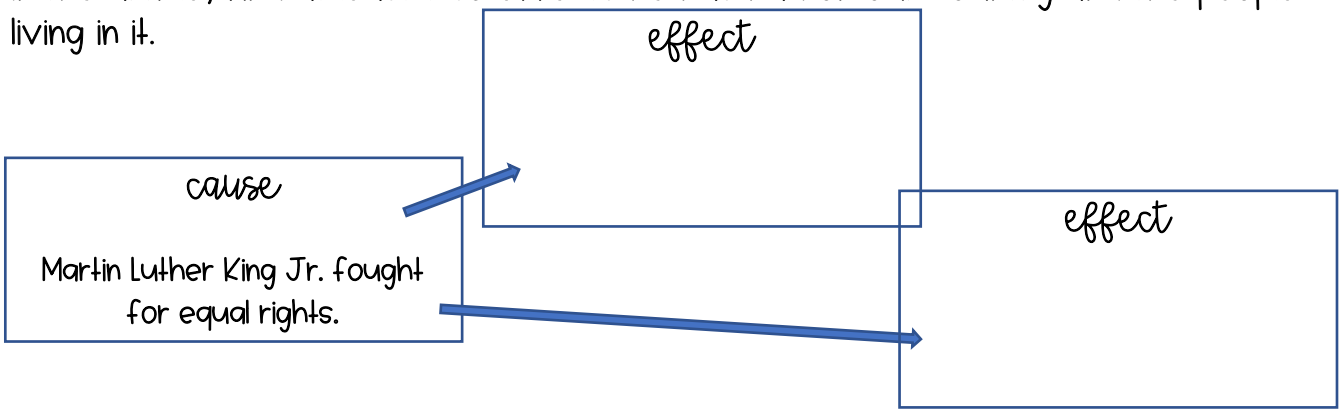
800L – MLK Jr.

Comprehension Questions – use the text in order to answer these questions correctly.

1. How old was Martin Luther King Jr. when he died?

2. What two major events from 1964 were discussed in the article?

3. Martin Luther King Jr. is described as being an influential figure in American history. In the article, find at least two effects he has had on our country and the people living in it.



4. How has Martin Luther King Jr. been honored since his death?

5. Think about how Dr. King is described in the article. Come up with three words to describe him and find the sentence(s) which helped you prove that word.

Character Trait	Text Evidence

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Name:

multiple-choice questions

800L – MLK Jr.

Comprehension Questions – use the text in order to answer these questions correctly.

1. **Look at the dictionary entry for the word <u>demonstration</u>.**

Demonstration */demən'strāSH(ə)n/* ***noun***   **1**. The process of showing **2**. The outward showing of feeling **3**. An exhibition and explanation of something **4**. A public meeting or march to protest

Which definition best fits the way the word <u>demonstration</u> is used in paragraph 9?

A. Definition 1
B. Definition 2
C. Definition 3
D. Definition 4

(5.2E)

2. **Based on the information in the section titled "Early years, Education, and Spiritual Growth" what can the reader infer about Martin Luther King Jr.?**

A. He knew from an early age that he wanted to fight injustice and promote peace.
B. He excelled at everything he did academically and never experienced trouble in school.
C. He became a pastor because it was the only thing he found he was good at.
D. He knew how to push through difficult times and overcome them to be successful.

(5.11E)

3. **Which sentence from the selection shows that Martin was highly intelligent and capable and not just popular?**

A. King entered school at age 5.
B. In 1948, Martin Luther King Jr. attended the Crozer Theological Seminary.
C. He started college in 1944, when he was 15 years old.
D. King was a popular student but unmotivated and not serious about school.

(5.7Fig19D or 5.11Fig19D)

4. **Which of these ideas is supported by information in the section titled "I Have a Dream"?**

A. King believed that nonviolent protest was the best option unless others became violent first.
B. King was unafraid of the consequences of speaking out for justice and equality.
C. King knew that he would be awarded the Nobel Peace Prize for doing this work.
D. King was aware that all of his protests would turn violent at some point.

(5.11Fig19D)

5. **Which word or words from paragraph 7 helps the reader understand the meaning of the word <u>boycott</u>?**

A. threatened and harassed
B. refused to ride
C. ended segregation
D. walked to work

(5.2B)

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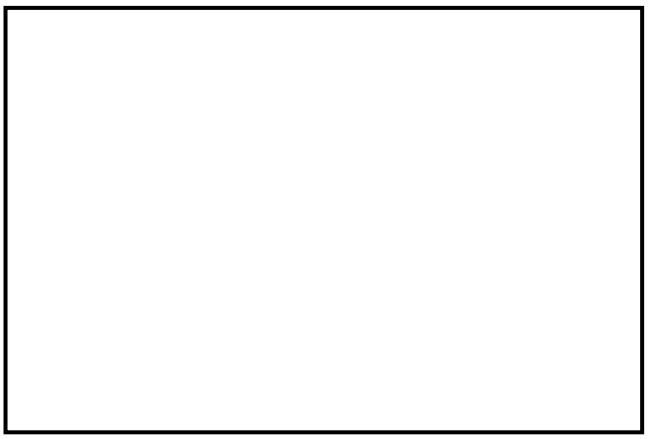
Name _____

Article: _____



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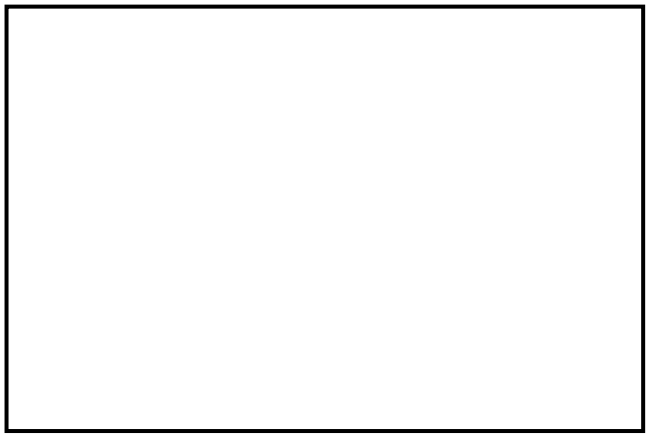
Name _____

Article: _____



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Name _____ Article: _____

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Name _____ Article: _____

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Name: Date:

Article Title: _____

3 things you learned	2 interesting facts or 2 questions you have	1 opinion you have

Name: Date:

Article Title: _____

3 things you learned	2 interesting facts or 2 questions you have	1 opinion you have

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King's granddaughter, 10, is finding her own way as an activist

By Shayna Orens, Newsela on 02.28.19
Word Count **1,009**
Level **MAX**

Image 1. Yolanda Renee King and her father, Martin Luther King III, attend the End Gun Violence Together Rally at Union Market on February 11, 2019, in Washington, D.C. Photo: Tasos Katopodis/Getty Images for TOMS Shoes

When Yolanda Renee King addressed the crowd at March For Our Lives in Washington, D.C., last March, she was nervous. Then 9 years old, Yolanda had only found out she was speaking earlier that morning.

"I was so nervous that I could hear my own heart beating when I walked on the stage," Yolanda recalls in an interview with Newsela.

Onstage, however, the fourth-grader appeared confident and poised as she called on the audience to repeat after her: "Spread the word, have you heard? All across the nation, we are going to be a great generation."

Then, with a confidence that seemed to exceed her years, she added, "Now I want you to say it like you really mean it."

This article is available at 5 reading levels at https://newsela.com.

Yolanda's simple, yet powerful invocation quickly went viral, and her speech has since been viewed over 400,000 times on YouTube. She seemed to take it in stride.

"I thought, oh maybe this is just another speech — I didn't know it would go so viral so fast!"

Yolanda, whose favorite subject in school is history, has quite a bit of history in her own family. She's Martin Luther King Jr.'s granddaughter. Her father is Martin Luther King III, the oldest son of Martin Luther King Jr. and Coretta Scott King.

"I Have A Dream That Enough Is Enough"

Her passion for ending gun violence, though, did not begin with March for Our Lives. Back in 2016, Yolanda and her parents were invited to visit President Barack Obama in the Oval Office, where a statue of her grandfather sat. Yolanda's parents asked her to prepare a question for the president.

"They said we could talk about it, but I already knew my question," Yolanda recalled. "I asked, 'Mr. President, what are you going to do about the guns?'"

Yolanda has spent many hours poring over videos of her grandfather's speeches. She gave a nod to her personal favorite, the "I Have a Dream" speech, in her own remarks last March.

"I have a dream that enough is enough!" Yolanda declared at March for Our Lives. "And that this should be a gun-free world, period."

She's carrying forward her grandfather's legacy, but doing so in a way that reflects new challenges faced by her own generation. Youth have been the driving force behind a number of social movements in recent years, from Black Lives Matter to the fight against climate change. The aftermath of the tragedy in Parkland, Florida highlighted the power of young people to change society, even when they are too young to vote.

"Ourselves And Our Neighbors"

Gun violence isn't the only issue Yolanda is passionate about. In August, she traveled to San Diego, California, to visit the U.S.-Mexico border to mark the 55th anniversary of Martin Luther King Jr.'s "I Have a Dream" speech.

Yolanda, who attends a dual-immersion school in Atlanta, Georgia, addressed the crowd in fluent Spanish, and later gave an interview with the Spanish-language network Univision.

"Lots of people were surprised," Yolanda recalls. Her mom, Andrea Waters King, added that the attendees were both surprised and "very honored."

The event took place at a time of heightened tensions around the issue of immigration. The King family highlighted Martin Luther King Jr.'s unwavering belief in equal rights for all.

This article is available at 5 reading levels at https://newsela.com.

"My father made clear that this didn't just include ourselves but also our neighbors," Yolanda's father said at the event.

Yolanda also wants to call attention to poverty and the need for quality education for all. For the Martin Luther King Jr. holiday last month, Yolanda traveled to Washington, D.C., with her family and spent the day serving the city's homeless population.

"We think that it's a day of service," Yolanda said of the King holiday. "So while we were there we went to a breakfast and laid a wreath, and then for our service project we went to a place that helps feed the homeless. Since it was really cold that day, we helped pass out scarves and mittens and hats."

Now in fifth grade, Yolanda is currently working on an education project.

"Education is an important issue," she explains, adding that access to quality schools gives people the tools they need to make a difference.

"If They Can Do It, Then I Can"

Despite her young age, Yolanda is using her platform to make a difference and believes anyone else can do the same, no matter who their parents or grandparents are.

"For people who feel like they don't have a voice, they do have a voice," she explains. "When you have a voice it doesn't actually mean you have to speak physically. You can help programs in your community or your school — whatever you feel needs help."

She also believes in the power of a tool that wasn't available to the activists in her grandfather's time — social media.

"We all, as a community and a society, we need to connect. With social media, we can use that to connect with people and help with activism and communicate in a good way," she said. "We can use it for good."

How does a 10-year-old working on tough issues stay inspired? Yolanda says she remembers her grandfather, and the civil rights activists who fought alongside him.

"In the civil rights movement, it inspires me that even though it was hard, men and women kept on going and going," she said. "If they can do it, then I can, too. So I just keep on going and just do it because I'm really passionate about this."

This article is available at 5 reading levels at https://newsela.com.

Quiz

1 Which sentence from the article shows Yolanda Renee King's MAIN opinion about gun control?

(A) "I was so nervous that I could hear my own heart beating when I walked on the stage," Yolanda recalls in an interview with Newsela.

(B) "I thought, oh maybe this is just another speech — I didn't know it would go so viral so fast!"

(C) "I asked, 'Mr. President, what are you going to do about the guns?'"

(D) "I have a dream that enough is enough!" Yolanda declared at March for Our Lives.

2 Read the conclusion below.

Yolanda Renee King is passionate about many different issues that affect people today.

Which sentence from the article provides the BEST support to the statement above?

(A) Yolanda's simple, yet powerful invocation quickly went viral, and her speech has since been viewed over 400,000 times on YouTube.

(B) The aftermath of the tragedy in Parkland, Florida highlighted the power of young people to change society, even when they are too young to vote.

(C) Yolanda also wants to call attention to poverty and the need for quality education for all.

(D) With social media, we can use that to connect with people and help with activism and communicate in a good way," she said.

3 Which sentence from the article would be MOST important to include in a summary of the article?

(A) When Yolanda Renee King addressed the crowd at March For Our Lives in Washington, D.C., last March, she was nervous.

(B) Yolanda, who attends a dual-immersion school in Atlanta, Georgia, addressed the crowd in fluent Spanish, and later gave an interview with the Spanish-language network Univision.

(C) For the Martin Luther King Jr. holiday last month, Yolanda traveled to Washington, D.C., with her family and spent the day serving the city's homeless population.

(D) Despite her young age, Yolanda is using her platform to make a difference and believes anyone else can do the same, no matter who their parents or grandparents are.

4 Read the list of details from the article.

1. *She gave a nod to her personal favorite, the "I Have a Dream" speech, in her own remarks last March.*
2. *"We think that it's a day of service," Yolanda said of the King holiday.*
3. *Yolanda says she remembers her grandfather, and the civil rights activists who fought alongside him.*
4. *"If they can do it, then I can, too. So I just keep on going and just do it because I'm really passionate about this."*

What CENTRAL idea does this evidence support?

(A) Yolanda has been inspired by the work of her grandfather, Martin Luther King Jr.

(B) Yolanda views the Martin Luther King Jr. holiday as a time to serve and help others.

(C) Yolanda incorporates Martin Luther King Jr.'s speeches into the speeches that she gives.

(D) Yolanda believes that her grandfather, Martin Luther King Jr., wanted equal rights for everyone.

Name: _____ Class: _____

Lewis and Clark: American Explorers

By Barbara Radner
2005

The Lewis and Clark Expedition, also known as the Corps of Discovery Expedition, was the first effort by Americans to explore what is now the western United States. President Thomas Jefferson had just completed the Louisiana Purchase in 1803, in which the United States bought a great deal of land from the French. He wanted American travelers to map and characterize the newly acquired territory and establish an American presence there. As you read, identify the difficulties that Lewis and Clark faced on their journey, and how they overcame them.

[1] More than 200 years ago, in 1804, two explorers made an important journey. They were named Meriwether Lewis and William Clark.[1] Today, people know a lot about the places they visited, but 200 years ago there were no maps of that part of the United States. They would travel by boat most of the way and they would make the first maps of that part of our country. They were going to trace where a great river went. The river they were mapping is a very big one called the Missouri River.[2] They wanted to find out where it went. They hoped it would take them to the ocean.

"3113 Lewis and Clark with Sacagawea" by Bill McChesney is licensed under CC BY 2.0

They took many people with them to help with the exploration. There were more than 40 people on the trip. They also carried many supplies, including a lot of food. They hoped they would find food along the way, but this was long ago and they did not know what the territory would be like. The explorers had three boats to carry them and their supplies. It was summer when they started on this long trip.

They traveled slowly, each day traveling a short distance because they had to row their boats on the river. They would only travel a few miles every day. They traveled for months and were still far from their destination. In winter it was difficult to travel, so they camped along the river. There they would wait for spring when traveling would be easier. Snow and ice made it very hard to travel in winter.

Native Americans helped them along the way. They helped them get food, and they showed them where places were. The explorers had never been to this area before, so they were not sure where to find food or even where the river went. The Native Americans had lived there for many years, so they knew the area and how to survive there, even in the hard winter.

1. Lewis and Clark were friends and officers in the army. The two men were accompanied by a group of U.S. Army volunteers.
2. The Missouri River is the longest river in North America. It runs through Montana, North Dakota, South Dakota, Nebraska, Iowa, Kansas, and Missouri.

[5] A Native American woman named Sacajawea[3] helped them travel. She became their guide, and she traveled with them for months. It was hard work for everyone, including Sacajawea. The explorers needed her help to find their way to the West. They wanted to find out how to get to the ocean.

As they traveled, they made maps. Their maps showed the way the river went. It passed through grasslands, and then they were in mountains. When they got to the mountains, they had to leave their boats and walk.

It took more than a year for the explorers to get to the ocean. When they got there they had made maps that would help many people. But they had to bring the maps back. It had taken more than a year to make this first part of the trip. It also took a long time to get back. When the explorers came back, in 1806, they had been gone two years, and people said they were heroes. They would not make such a great journey again. They had done their job.

Their maps would help people settle in the new land. Long after their trip, people would build roads to the west. They would travel quickly by car. Today people can travel their route by plane. If you look out the window from the plane you will see those high mountains, you will see what a difficult journey it was.

"Lewis and Clark: American Explorers", © 2005, Barbara Radner. Reprinted with permission, all rights reserved.

3. Sacajawea (1788-1812) was a Native American woman from the Lemhi Shoshone tribe who helped the Lewis and Clark expedition by guiding the men through unfamiliar territory, helping them communicate with other native populations, and explaining the environments they traveled through.

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which of the following best identifies the central idea of this article?
    A. Lewis and Clark set out on their journey with hopes of becoming famous.
    B. Lewis and Clark made an important trip west to help create one of the earliest maps of the United States.
    C. The only goal of Lewis and Clark's journey was to discover the location of the Missouri River and where the river ended.
    D. Before they began their journey, Lewis and Clark used maps of the western United States to decide the best route to take.

2. PART B: Which phrase from the text best supports the answer to Part A?
    A. "They wanted to find out where it went. They hoped it would take them to the ocean." (Paragraph 1)
    B. "They traveled slowly, each day traveling a short distance because they had to row their boats on the river." (Paragraph 3)
    C. "The Native Americans had lived there for many years, so they knew the area and how to survive there, even in the hard winter." (Paragraph 4)
    D. "It took more than a year for the explorers to get to the ocean. When they got there they had made maps that would help many people." (Paragraph 7)

3. How does the following phrase contribute to the development of a main idea in the passage: "200 years ago there were no maps of that part of the United States" (Paragraph 1)?
    A. It shows that Lewis and Clark's journey would not have been possible without maps.
    B. It shows that nobody in the entire country knew where the Missouri River ended.
    C. It shows that Lewis and Clark were the first people to live in western America.
    D. It shows that Lewis and Clark were on a journey to create maps of an unknown area.

4. What is the author's main purpose in writing the article?
    A. to show readers that Native Americans were not very involved in making Lewis and Clark's journey successful
    B. to teach readers the importance of Lewis and Clark's difficult journey
    C. to show readers that very little has changed in America over time
    D. to help readers think about how America would be different if Lewis and Clark had not completed their journey

5. How does the author describe the relationship between the American explorers and the Native Americans they met? Cite evidence from the text in your response.

Discussion Questions

Directions: Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.

1. Would you have participated in this expedition if you had been alive in the 1800s? Do you think the thrill of discovery would have outweighed the dangers and risks associated with the trip?

2. Do you think that Lewis and Clark were heroes? Why do you think America regarded them as heroes when they returned and still regards them as heroes today?

3. How do you think an expedition to explore another country or another part of the United States would be different if it were made today? What sort of advances in technology would make it easier?

4. A primary purpose of the journey was for the explorers to make detailed maps of the American West to bring back to the government. Why do you think this was so important?

5. The author emphasizes how differences between America today and the America of the 19th century made Lewis and Clark's journey difficult. In the context of this article, how has America changed over time? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.

COMMONLIT

Name: _____ Class: _____

Traveling West

By Barbara Radner
2005

During the 19th century in America, the idea of "manifest destiny" became very popular. Under this idea, many Americans believed that they were meant to expand throughout the North American continent. The idea of traveling westward to reach new land for farming, as well as to bring American customs and practices to newly acquired parts of the country, became very popular. As you read, take notes on the reasons why Americans moved westward during the 1800s and the struggles that they faced along the way.

[1] Long ago, when people settled the United States, most lived in the East, and it was hard to travel west. There were no planes, trains, or automobiles.[1] People traveled by wagon or boat, and it took many days to reach a destination. Although it was difficult, in the 1840s, many people traveled far across the United States from the East to the West. They were pioneers.[2] They would settle in the western part of the country after a challenging journey to a new life.

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Getting to the West was very difficult because there were no roads and there were many obstacles[3] to travel. People traveled in groups, and each family would buy a covered wagon, which is a big wooden wagon with a kind of tent on it. It was small, about the size of an automobile, but it would be home for the whole family while they traveled to their new home. Each family would pack the tools and supplies they needed to build a new life in the West. They would have to fit all they took in their wagon, so they would bring only the items that were essential.[4] It was dangerous to try to travel west without protection, so families would travel together, combining their wagons into what was called a wagon train. It was a group of wagons all going the same way. To prepare, they would meet with other families to plan their trip, choosing a route based on the travels of others. When the families started the trip, they did not know each other, they only had in common that they were leaving the East to start a new life in the West. They met when the trip began, and they would spend more than a year together, so they got to know each other well. Sometimes they would borrow tools from each other, and sometimes they shared food. When the wagons encountered[5] a problem, such as a storm that caused wagons to stick in muddy holes, they would solve it together.

It would take more than a year to reach the West, and many things happened along the route. The families sometimes had babies along the way, which delayed the progress as the wagon train would stop for a few days to help the mother with the baby. Then they would keep going, persisting[6] whatever the weather, because they knew they had a long way to travel and could not delay long.

1. cars
2. **Pioneer** ***(noun):*** someone who is one of the first people to do something, such as move to and live in a new area
3. **Obstacle** ***(noun):*** something that blocks one's way or prevents progress
4. **Essential** ***(adjective):*** absolutely necessary
5. **Encounter** ***(verb):*** to continue firmly in spite of difficulty, opposition, or failure

When the wagon train got to the West, the families would settle there, building homes, starting farms. They would create communities, and instead of being partners in a trip they were collaborators[7] in community. Those communities would grow into towns, and then some would expand into cities, from a wagon train to a metropolis.

[5] In the next century, people built a railroad that crossed the United States. By 1900, there were many more people in the West, and thousands of people came west by train. A trip that had taken months now took passengers a few days of comfortable transit. The railroad brought many changes, and the pioneers became legends as the country developed into the nation of today.

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6. **Persist** ***(verb):*** to continue firmly in spite of difficulty, opposition, or failure
7. **Collaborator** ***(noun):*** a person who works with others on a project or task

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which of the following best identifies the central idea of this article?
    A. Many people traveled West to escape the dangers that they faced in the East.
    B. The Americans who first traveled to the West to seek out a better life paved the way for the many people who followed.
    C. The risks taken by people traveling West were dangerous and unnecessary.
    D. Traveling to the West was difficult and time-consuming in the 1840s, just as it is today.

2. PART B: Which phrase from the text best supports the answer to Part A?
    A. "Although it was difficult, in the 1840s, many people traveled far across the United States from the East to the West." (Paragraph 1)
    B. "It would take more than a year to reach the West, and many things happened along the route." (Paragraph 3)
    C. "They would create communities, and instead of being partners in a trip they were collaborators in community." (Paragraph 4)
    D. "...and the pioneers became legends as the country developed into the nation of today." (Paragraph 5)

3. PART A: Which of the following most closely matches the definition of the word "metropolis" as it is used in Paragraph 4?
    A. a society that contains mostly families
    B. an active, bustling city with a large population
    C. a city that does not include new technologies
    D. a deserted or empty piece of land

4. PART B: Which phrase from paragraph 4 of the text best supports the answer to Part A?
    A. "they were collaborators in community"
    B. "communities would grow into towns"
    C. "some would expand into cities"
    D. "from a wagon train"

5. According to the text, how did the journey West affect the families that traveled in wagon trains?

Discussion Questions

Directions: Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.

1. Would you have participated in this type of voyage if you had been alive in the 1840s? As mentioned in the text, there were certain risks associated with this type of travel, such as a lack of easy access to medical care. Do you think the danger would have been worth the adventure?

2. What do you make of the fact that families often traveled together, which helped them get to know each other and forced them to work together to fix problems? Do you think that encouraged a greater sense of community among the travelers?

3. Based on the text and your knowledge of historical events, how did the American West develop over time? What factors contributed to these changes?

4. Why do you think some Americans felt the urge to travel to the west and be the first to settle there? What was attractive about the idea of being a pioneer? Do you think this idea is unique to Americans, or is it shared by all people?

5. The author emphasizes that it used to “take more than a year to reach the West” (Paragraph 3), whereas nowadays people living in the eastern United States can make the trip in a few hours by plane. In the context of this article, how has America changed over time? How have technological innovations led to those changes? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.

Energetic Emily

by ReadWorks

Emily, as usual, had been up since dawn. This morning, she skipped around the kitchen, laying out forks, knives and napkins for breakfast to help her dad. She pushed the "on" button on the coffee machine. She pulled the bread and eggs out of the refrigerator. And then she waited.

Emily's dad was a writer who worked from home. Upstairs, she heard his alarm go off for the third time. Finally, he plodded downstairs to the kitchen.

"Good morning, sunshine," he said, and smiled his groggy morning smile.

Emily was ready to get cooking. She grabbed two slices of bread. Then, getting a running start, she ran and slid across the slippery kitchen floor. As she slowed to a halt in front of the toaster, she deftly double-dunked the slices into their slots.

"Woo!" she yelled, stealing a glance at her dad to see if he'd glimpsed her smooth move. "And the crowd goes wild!"

Emily's dad smiled and shook his head as he poured his coffee.

"I'm gonna call you 'Energetic Emily,'" he said. "That's your new nickname now."

"Why?" Emily asked.

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"Because you have a lot of energy!" he said. "That's what energetic means."

"Oh."

"Where do you get all of that energy, anyway?" he asked. "Certainly not from me. In fact, I wish you could give me some of your energy, right in here." He pointed to his steaming coffee cup.

Emily thought for a moment. "I don't know where I get it. What is energy, anyway?"

"Good question," said her dad. "Let's look up the definition." He pulled out his phone and typed in the word.

"Energy," he read. "There are a few definitions. There's the physical or mental strength that allows you to do work." He looked at the forks and knives arranged neatly around the table. "Check. You've got that. Then, there's natural enthusiasm and effort." He smiled at her again. "Yep, you've got that, Miss Toaster Olympics Champion." Emily giggled. "And there's the usable power that comes from heat or electricity." He pointed to the toaster. "Like the kind that's toasting our bread right now."

Emily paused to take this in. "So are they all the same thing? The energy that powers the toaster and the energy that powers my *amaaazing* toaster tricks?"

"I don't think so," said Emily's dad. "But maybe you'd better check with Mrs. Nelson. And report back to me. I want to know if I can plug you into the wall and power myself up for the day."

Mrs. Nelson was Emily's fifth-grade teacher. That morning, Emily stopped by her desk on the way to recess.

"Mrs. Nelson, where do you think my energy comes from?"

Mrs. Nelson looked confused. "Your energy?"

"Yes. My dad wants to know."

Mrs. Nelson threw back her head and whooped with laughter. "Ahhh-hahaha! I bet he does," she said. "We'll talk about this later in the year, but I'll give you a hint for now: it comes from your food."

Later, in the lunchroom, Emily asked Mrs. Jacobs, the lunch-lady, what this meant.

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"Well," said Mrs. Jacobs, "I know that all food has calories, and calories are a way to measure energy, the same way we use inches to measure length." She shrugged. "But I don't know how all that energy ends up in our food in the first place. I guess you'd have to ask a farmer!"

As luck would have it, Farmer George came to the park near Emily's house every Thursday afternoon to sell his tomatoes and apples. And today was Thursday.

Her dad liked Emily's idea of going to interview Farmer George about energy. "You're quite the investigative journalist, Emily!" he said.

Farmer George was also delighted by Emily's question. "Burning calories of energy is what keeps us all moving. We couldn't live without them!" he said. "And my plants work hard to make those calories for you."

"Plants make energy? But *how*?" Emily asked, growing impatient. "I've been asking people all day!"

"Why, they use the best things on Earth," Farmer George said. "Sunshine, fresh air and water."

"But, how?"

"Well, plants are one of nature's energy factories. When the sun hits the leaves of say, a tomato plant, that tomato plant starts up like a machine. It takes in carbon dioxide from the air and water from the ground, and mixes them together. The heat from the sun helps to cook this all up into sugar. And that sugar is then stored in the plant for us to eat. Some plants store more calories than others, but they can all give you energy in the form of sugar." Farmer George paused. "There's more to it than this, but that's the simple version. Does that answer your question?"

Emily thought for a moment. "So, when I eat your tomatoes, I'm eating ... plant-made energy created by the sun, the air and water?"

"You got it."

Emily turned to her dad.

"So all you have to do to get my energy is to eat your vegetables, Dad!"

Emily's dad laughed. "I wish it were that easy, Emily. But still, I think that's probably very good advice."

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interview in · ter · view

Definition

noun

1. a meeting between a person who has applied for a job and the person who is offering the job. The person who wants the job must answer questions about his or her experience and qualifications.

   She applied for six jobs and got three interviews.

2. a conversation in which someone asks questions of a person in order to learn more about that person.

   This magazine often publishes interviews of movie stars.

   Sasha spent a long time preparing for his naturalization interview.

verb

1. to have an interview with or of.

   The supervisor interviewed several people for the open position.

Advanced Definition

noun

1. a meeting between a job applicant and a prospective employer, usu. to determine the applicant's qualifications.

   She didn't think her interview went well, but she still got the job.

2. a conversation between a reporter and a person who will be the subject of the report, or the published report itself.

   The senator has refused to give any interviews since the outbreak of the scandal.

   She was the only journalist to conduct an interview with the accused spy.

3. an inquiry of a person by one who is conducting a survey.

transitive verb

1. to conduct an interview with or of.

   The author interviewed numerous camp survivors for his recent book.

intransitive verb

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1. to meet with a prospective employer about a job.

I've been interviewing a lot recently but I haven't received any job offers.

Spanish cognate

entrevista: The Spanish word *entrevista* means interview.

These are some examples of how the word or forms of the word are used:

1. I'm a hard-nosed reporter. I ask all the tough questions. I intimidate crooks. I warm over the coldest sources. I get the impossible **interviews**. My stories are gripping, and to my editor's delight, I always file them on time.
2. Ariel Chang **interviewed** her grandfather, Andy Chang, who had to flee the Japanese.
3. Castro turned the small island nation into a communist state, with all property belonging to the government. Molly Rossi **interviewed** her grandmother, Monica Rossi, who was traveling in Cuba during the revolt.
4. After the Japanese bombed Pearl Harbor on Dec. 7, 1941, the U.S. Army forcibly rounded up thousands of Japanese Americans from Hawaii and the West Coast and put them in internment camps. Akari **interviewed** her grandmother, Lilly Yuriko T. Hatanaka, who was 17 years old at the time.
5. Every issue of the magazine includes a long **interview** with Chung and another artist. Chung asks the artist all about their lives. "Who are your heroes?" he asks. "How do you find the time to paint?"
6. On June 15, 1991, Mount Pinatubo erupted on Luzon, an island in the Philippines. The volcano left behind a deadly blanket of lava and volcanic ash. Casey Kline **interviewed** her mother, Cora Kline, who lived on Luzon.

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investigate in · ves · ti · gate

Definition

verb

1. to look at closely so as to get information and learn the facts.

The police are investigating the crime.

Advanced Definition

transitive verb

1. to systematically examine or search into.

The police are investigating the crime.

By investigating the cause of the disease, scientists hope to find a cure.

intransitive verb

1. to make a full inquiry.

We don't know the answer to that question yet, so we'll have to investigate.

Spanish cognate

investigar: The Spanish word *investigar* means investigate.

These are some examples of how the word or forms of the word are used:

1. Chemistry is the science that studies the substances that make up the universe. Chemists **investigate** properties of substances to find out what they are made of and how they change under different conditions.
2. Eventually the governor of the people got involved. His name was Li Bing and he was very smart. Li Bing investigated the problem. When someone **investigates** a problem it means that they look for the cause of the problem. The cause of a problem is the place where the problem starts.
3. "We were **investigating**," said Sally. "Investigating what?" asked her mother. Angelica decided to go along with the ruse, though she wasn't sure why. For some reason, she could tell that Sally didn't want her mother to know that she had played a joke on her friend. "Someone once told us that if you were to dig a hole into the earth, straight down, you would end up in Australia," said Angelica.
4. Suddenly, Daniel felt his stick hit something that wasn't a rock or a leaf. He knelt down to **investigate**. He found a small, light-blue egg in between the fallen leaves. He looked up and saw a bird's nest sitting on a branch. The egg must have fallen, he thought.
5. It was an easy mystery; the paint on the victim matched the paint on the suspect. If she'd been the bad guy in a book, though, there would have been a whole lot more **investigation**. Today, someone actually witnessed her crime, and thus her story was pretty boring.

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natural nat · u · ral

Definition

adjective

1. of or produced by nature.

   The forest is the natural home of many animals.

   She uses only natural ingredients in her cooking.

2. not pretended or forced.

   Your smile looks more natural in this photograph.

Advanced Definition

adjective

1. of, pertaining to, produced by, or existing in nature.

   The zoo hopes to return the large cat to its natural habitat in the forest.

   Honey is a natural sweetener.

2. according to or resulting from human nature or innate human capability.

   It is natural to feel anger when one is offended or hurt by others.

   She has a natural talent for gymnastics.

3. true or spontaneous; not affected, pretended, or forced.

   Your smile in this photograph doesn't look natural.

4. without artificial modification; unadulterated.

   natural foods

5. expected; ordinary.

   Pain is a natural consequence of disease.

6. relating to the sciences that deal with the phenomena of nature.

7. based on what is considered inherently right or moral.

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natural rights

8. related by birth or blood.

natural parents

noun

1. one who is considered to be gifted or inherently suited for a particular activity.

As a musician she's a natural.

Spanish cognate

natural: The Spanish word *natural* means natural.

These are some examples of how the word or forms of the word are used:

1. Also, biking doesn't cause air pollution or use up any **natural** resources.
2. Tiger cubs are cute. It's easy to see why people would want to keep them as pets. But the cuddly cubs grow up to be **natural**-born killers. It's their nature.
3. When you get the hiccups, a muscle in your throat starts contracting. It rushes air into your lungs. After air rushes in, the sudden closing of the valve at the top of your lungs causes the "hic" sound. This happens to us all throughout our bodies all the time. It's a **natural** bodily function.
4. The Arctic is a habitat, or place in **nature** where many animals live. The walrus, polar bear, and snowy owl are a few of those animals. They have different ways to survive the cold.

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Name: _____ **Date:** _____

1. Why is Emily's nickname "Energetic Emily"?

A. She gives her dad energy.

B. She has a lot of energy.

C. She is interested in energy.

D. She knows a lot about energy.

2. Emily asks questions throughout the story. What motivates Emily's questions to Mrs. Nelson, Mrs. Jacobs, and Farmer George?

A. She wants to know what calories are.

B. She wants to know how plants grow.

C. She wants to know where energy comes from.

D. She wants to know where food comes from.

3. The word "energy" has different meanings. What evidence from the passage supports this conclusion?

A. Emily's dad wishes he could have some of Emily's energy.

B. Emily gets an answer to the question, "Where does energy come from?"

C. Emily's dad tells her to ask her teacher about energy.

D. Emily's dad reads three definitions of energy from the dictionary.

4. How can Emily best be described?

A. curious

B. lazy

C. tired

D. kind

5. What is this passage mostly about?

A. how to make breakfast

B. the purpose of questions

C. energy and where it comes from

D. how food gives us energy

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6. Why does the author have Emily asks so many questions about energy?

A. so that the reader will become confused

B. to tell the reader something they probably know

C. to teach the reader facts about energy

D. to make sure the reader is paying attention

7. Choose the answer that best completes the sentence below.

Emily asks Mrs. Nelson and Mrs. Jacobs where she gets her energy. _____, she learns the answer from Farmer George.

A. For example

B. In contrast

C. Currently

D. Finally

8. What are calories?

9. What three things do plants use to make energy?

10. Explain how eating vegetables gives you energy.

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Energy for Life

by ReadWorks

ENERGY IS THE KEY

We use a lot of energy to live. Whether we're playing, studying or eating, energy makes these activities possible. We also use energy for production-to run machines, for instance. Much of this energy comes from fuels like oil, coal or natural gas. These fuels are used to make the blacktop and basketballs at recess, as well as generate the electricity for the lights all around you. Think of all the energy required to plant, grow, harvest, transport and cook your lunch, and you can start to understand that energy is a key to life!

NATURAL, BUT NOT FOREVER

Fuels like natural gas, oil and coal are important natural resources. They are known as fossil

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fuels and take millions of years to form. We've used them for hundreds of years, and they've powered everything from planes and trains to cars and computers. Unfortunately, fossil fuels are non-renewable forms of energy. Our power plants burn them faster than nature makes them, and when they are burned, power plants create emissions harmful to the environment.

To use fossil fuels, we first need to get them out of the earth with technologies like oil rigs, coal mines and natural gas wells. The drilling, mining and pumping of these natural resources often requires very large operations. These procedures result in producing the important energy we need, but they need fossil fuels themselves to operate and can often negatively impact the land where these fuels are found.

POWERING THE FUTURE

Fortunately, there are forms of renewable energy out there. They also come from nature and don't harm the environment as much as fossil fuels. Furthermore, they aren't consumed to produce energy, so we can use them again and again. One form of renewable energy is solar energy. Solar energy uses solar panels, which collect sunlight and convert it directly into electricity.

Another form of renewable energy is wind energy. Like an extremely large pinwheel, wind turbines have blades that rotate when the wind blows, and this movement generates electricity. Some solar and wind energy power plants are connected to batteries so they can supply electricity even when the sun isn't shining or the wind isn't blowing.

One form of renewable energy that has been around for a very long time is hydropower. Hydropower is energy produced by falling and running water. Hydropower technologies can be as simple as a watermill on a stream or as complex as a hydroelectricity dam. Hydropower is a great source of renewable energy: in Washington state (in the USA), for instance, it produces approximately 75% of the entire state's energy!

THE RIGHT PLAN

Using renewable energy is a good way to reduce our dependence on fossil fuels, though renewable energies have some negative impacts on the earth as well. Solar power plants are usually built in deserts where sunshine is reliable and strong, but the desert land that is disrupted for the construction and operation of these power plants is actually rich with plant and animal life.

Wind energy power plants are called wind farms and require a lot of land. Though each turbine only takes up a small area of land, wind farms can easily have hundreds or thousands of turbines. With that many turbines together, their presence can easily affect birds, bats and

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other wildlife in the area.

Hydropower plants can generate a lot of energy and electricity, but their existence can dramatically alter the environment around them. Many hydropower plants use dams to create the electricity. Fish can be easily blocked by a dam and prevented from swimming to important spawning grounds. Dams can also fail and cause massive flooding. Also, in the event of a drought, the electricity produced could truly be limited to a trickle!

However, by carefully planning the locations of renewable energy power plants, their harmful impact to the planet can be minimized and their renewable and sustainable benefits maximized.

LOOKING FORWARD

Almost everything we do requires some sort of energy. It's important to understand where our energy comes from, how it is produced and what effect each type has on our environment. As technology improves, we can balance the use of non-renewable fossil fuels with renewable energy for a healthier planet.

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dependence de · pend · ance ; de

Advanced Definition

noun

1. the condition of being reliant on another for help, or to provide what one needs.
2. reliance; trust.
3. that which is relied upon.
4. the state of being conditioned or contingent upon something.
5. the state of being controlled or subjugated.

Spanish cognate

dependencia: The Spanish word *dependencia* means dependence.

These are some examples of how the word or forms of the word are used:

1. Pets are **dependent** on their owners for everything: food, companionship, and hygiene (cleanliness). Do you have enough time to devote to taking care of a pet?
2. The balloon has no propeller or engine, so Rodriguez can't change direction on his own-he's entirely **dependent** on the wind. The only thing he controls is altitude. He does this by changing the properties of two invisible gases: air and propane.
3. New technologies for tapping trees are always being developed so producers can extract more and more sap. However, some things are beyond their control. The amount of sap that a maple producer is able to collect in any given year is largely **dependent** on the weather.
4. The plan will allow India to reduce its **dependence** on fossil fuels, such as oil and coal. Fossil fuels are formed in Earth from plant and animal remains over millions of years. In addition, the United States and India will work together to develop new technologies for producing clean and safe energy.
5. Orchids and the insects that pollinate them are one of the most amazing examples of evolution. They are completely **dependent** on each other for survival, and scientists don't know which one came first. Most likely they evolved together.
6. A large number of different species (a great biodiversity) is one indicator of an ecosystem's health. Remarkably, biodiversity is not necessarily **dependent** upon the size of the ecosystem; some of the richest ecosystems in the world exist within narrow boundaries (sections of the Amazon rainforest, for example, and the Galapagos Islands).
7. Over the next thousand years, the people of the Southwest settled down gradually. They stopped living in caves and shallow pits, and began building homes. They moved from a strictly huntergatherer culture to one increasingly **dependent** on agriculture, growing beans and domesticating animals like turkeys. The more they farmed, the more water they needed, and they built dams, walls and other basic irrigation systems.
8. Bound feet forced women to hobble around and take extremely small steps. Many men found this shuffling sort of walk very attractive. Yet as a result of their compromised feet, women rarely participated in social or political life, often becoming very **dependent** on their husbands and families. Even this was seen as a virtue, for a woman who stayed at home was considered chaste and faithful to her husband.

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generate gen · er · ate

Advanced Definition

transitive verb

1. to cause to be brought into being.

   The human body generates heat.

   The farm uses a windmill to generate its own electricity.

   The news generated a great deal of excitement.

   Establishment of the factory will generate more jobs in the area.

   The lottery generates significant revenue for the state.

2. to beget (offspring).

   Laboratory mice exposed to the chemicals were no longer capable of generating offspring.

Spanish cognate

generar: The Spanish word *generar* means generate.

These are some examples of how the word or forms of the word are used:

1. Many people in America are unfamiliar with life without electricity, but in Savannah's community people keep battery-powered flashlights and oil lamps stored in case the lights go out. Some people also use a generator-a machine that **generates** electricity from gasoline-whenever there are emergencies. Savannah's family uses a wood stove during winter storms for cooking and warmth.
2. If you're walking in the woods and you see a bear, your brain, having received the image of the bear through the eye's optic nerve, may start producing chemical compounds called hormones. Amongst other things, hormones affect moods and many behaviors. In this case, the brain will likely produce a hormone that **generates** the feeling of fear.
3. Similarly, a tsunami could be **generated** by a giant meteor splashing into the ocean from outer space. Or a volcanic eruption in an underwater volcano. And yet the most common causes of tsunamis remain underwater earthquakes.
4. Can you imagine such a thing as "preGearth" space? It's a pretty heavy concept. But imagine the part of the universe where the earth would soon be, but wasn't yet. There, when the hot

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gases and particles were pulled together by gravity to create the early earth, immense heat was **generated**, and the resulting planetary core continues to cool to this day, radiating heat outward.

5. One of the reasons hydropower is preferred over most other methods people can use to **generate** energy is because it is clean and safe, though it does have its drawbacks.

6. And so it was that all of the men were crowded into the room watching a long grey cable. An air conditioner hummed in the background, fighting against both the heat outside, and the heat **generated** by the massive machine in the room.

7. Waves can be caused by many things, both natural and manmade. Tides can be caused by the moon, which has an influence on the ocean's motion. Waves are also frequently caused by weather. For example, winds **generated** by a hurricane can create waves.

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renewable re · new · a · ble

Advanced Definition

adjective

1. able to be revived, regenerated, or restored to an original state or condition.

As bamboo grows fast, it is a highly renewable resource.

This license is good for three years and is not renewable.

These are some examples of how the word or forms of the word are used:

1. Solar energy is a clean form of energy, as is wind energy, captured by turbines and windmills and channeled into grids. These are both alternatives to fossil fuels, which pollute the environment. Wind and solar energy are both **renewable** and clean.
2. Since the task is to build a sustainable building, we should consider sustainable energy sources. It might be easier to use non-**renewable** energy (which is considered less sustainable than renewable energy), because it's often more readily available. However, our task is to create a sustainable building, so we need to find sustainable energy sources. Solar panels could be an option, if we are building in a sunny area.
3. Half a percent of the water is too far underground to be reached, which leaves about half a percent of fresh water for all the people and animals on Earth. Fresh water does not have any salt in it. Earth's fresh water supply is **renewable** only by precipitation, such as rain, sleet, or snow.
4. Believe it or not, soil is actually a valuable and **nonrenewable** resource, as it contains nutrients and minerals crucial for agricultural productivity. It takes thousands and thousands of years to build up enough soil in a region for the land to be productive, but erosion can wear it away much faster than that, especially at the rate it has been occurring in recent decades.
5. Fossil fuels are coal, oil, and natural gases that were created millions of years ago. Fossil fuels are not a **renewable** energy source; once they are used up, they are gone forever.
6. Luckily, there are some **renewable** energy sources we can use, that we can keep using. Unlike non-renewable fossil fuels, they will not run out. Three forms of renewable fuels are solar (coming from the sun) energy, water energy and wind energy.
7. Fossil fuels are gradually being used up. To conserve them, scientists are looking to **renewable** energy sources. Renewable energy is power from sources that can't be used up and do not pollute the environment. Water, wind, and solar power are types of renewable energy.

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Name: _____ **Date:** _____

1. What do people use energy for?

A. People use energy to cause massive floods.

B. People use energy to create more oil and coal.

C. People use energy to play, study, and live.

D. People use energy to minimize sustainable benefits from the sun.

2. What does the passage compare and contrast with fossil fuels?

A. The passage compares and contrasts playing, studying, and eating with fossil fuels.

B. The passage compares and contrasts coal mines and natural gas wells with fossil fuels.

C. The passage compares and contrasts Washington State with fossil fuels.

D. The passage compares and contrasts forms of renewable energy with fossil fuels.

3. Humans use energy from several different sources.

What evidence from the passage supports this statement?

A. People use energy to play, study, eat, make basketballs, and generate electricity.

B. People use energy from natural gas, oil, coal, the sun, wind, and water.

C. Wind turbines can affect birds, bats, and other wildlife around them.

D. When a dam that produces hydropower fails, it can cause massive flooding.

4. What is true of all types of energy discussed in the passage?

A. They are all non-renewable.

B. They are all renewable.

C. They all have some negative impacts on the earth.

D. None of them has any negative impacts on the earth.

5. What is this passage mainly about?

A. the importance of energy and where energy comes from

B. watermills, dams, and other forms of hydropower

C. planting, growing, harvesting, transporting, and cooking food

D. the different ways children play and study

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6. Read the following sentences: "Fortunately, there are forms of **renewable** energy out there. They also come from nature and don't harm the environment as much as fossil fuels. Furthermore, they aren't consumed to produce energy, so we can use them again and again."

What does the word **renewable** mean?

A. harmful to the environment
B. able to be used more than once
C. produced by falling and running water
D. made in the United States of America

7. Choose the answer that best completes the sentence below.

Wind is a form of renewable energy; _____, oil is not renewable.

A. for example
B. particularly
C. soon
D. on the other hand

8. Where does hydropower come from?

9. What effects does hydropower have on the environment?

10. The passage states that it is "important to understand where our energy comes from, how it is produced and what effect each type has on our environment." Explain why understanding these things is important, using evidence from the passage.

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Pythons Invade the Florida Everglades

by ReadWorks

When Tommy Owen, a tour guide in the Everglades National Park, saw the animal, he immediately went after it. Owen was giving a tour of Florida's famous national park wetlands. He and a group of tourists were floating in a boat through the shallow water that makes up the Everglades. One of the women in the boat he was steering saw a snake in the water. She got Tommy's attention and pointed the snake out to him. When Tommy saw the snake, he acted fast. He reached into the water and grabbed the animal by the head. He got a good grip and didn't let go. Tourists in the boat were worried when the snake wrapped itself around Tommy's arm. After several minutes, he got control of the animal and removed it from the water. The snake was a ten-foot-long Burmese python. It was a snake not native to Florida and, quite simply, it didn't belong there.

* * *

The Florida Everglades teems with life. Situated at the southern end of the state, between Lake Okeechobee and the Gulf Coast, the Everglades is the largest wilderness east of the Mississippi River. Migratory and wading birds tiptoe through marshy grasslands. Orchids and ferns dot the hardwood forests. Alligators lounge in the shallows and on muddy riverbanks. Mangrove leaves rustle in the wind as the brackish water laps at their roots.

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All of this life is made possible by the presence of water. The Everglades is a natural region of subtropical wetlands**.** Water flows from the Kissimmee River into the wide, shallow Lake Okeechobee. From there the lake drains south, into the Everglades marsh and the Florida flats. The Everglades is sometimes called the "River of Grass" after a book of the same name by author Marjory Stoneman Douglas. The phrase illustrates the fact that the Everglades is basically a very wide and shallow river.

The Florida Everglades once covered 11,000 square miles across the southern end of the state. Wetlands are an important ecosystem. For centuries, however, humans thought of wetlands as unhygienic swamps. Draining the Everglades was suggested in the late 19th century. As soon as Florida became a state in 1845, its legislature asked permission from Congress to drain the Everglades. Canals were dug to remove or redirect the water. Land that dried out was reclaimed for agriculture or building purposes. This reclamation allowed for significant development in south Florida. Sugar farmers moved into the area and prospered. The city of Miami took root.

Approximately 50% of the Everglades was reclaimed for agricultural or urban use. Much of the northern area was polluted with phosphorus. This phosphorus was agricultural runoff from the farms near the Everglades.

Concerned Floridians began advocating for saving the area in the 1930s. Their efforts paid off in 1947 when Congress created the Everglades National Park. Starting in the late 1970s, environmental concerns at both the national and international levels refocused attention on the Everglades. The area was designated as one of the world's most important wetland areas.

Since then efforts have been underway to safeguard the park and return the Everglades to health. Water levels are monitored, as are nutrient levels in both water and soil samples.

Much of the conservation project was designed to reverse-engineer the canal system that was built in the 19th and mid-20th centuries. By the mid-2010s, ecological indicators showed some improvements. For example, the crayfish population was up. Wading and migratory birds improved their nesting habits.

Despite conservation efforts, the Everglades ecosystem began facing another threat in the early 2000s.

* * *

Burmese pythons were breeding in the Everglades, and they reached numbers that designated them as an invasive species. They were classified as an invasive species when their population swelled to a large size.

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Pythons are eating machines. They can eat animals of different sizes, from mice to deer. They especially enjoy dining on small mammals and birds. Studies have shown that since the appearance of Burmese pythons in the Everglades, the numbers of small mammals in the area dropped significantly. This population loss was not observed in areas where the Burmese python had not established itself.

The Burmese python is native to tropical and subtropical zones in Southeast Asia. In their native habitat, Burmese pythons are nocturnal carnivores. When they live close to human habitations, Burmese pythons eat rats, mice, and rabbits that are attracted to human dwellings and farms. They can also eat small farm animals like chickens. When they live away from human habitations, Burmese pythons eat birds and small wild mammals. The Burmese python is a solitary animal. It kills by constricting its body around its prey. Python eggs and hatchlings are a food source for other animals. In the wild, Burmese pythons grow to be on average 12 feet long. (Habitat loss and the exotic pet trade in Asia are depleting the Burmese python's numbers in the Asian wild.)

The first Burmese python was found in the Florida Everglades in 1979. It's presumed the animal was originally kept as a pet and then released by its owner. It was removed, but that wasn't the last of Burmese pythons in south Florida. It's thought that numerous Burmese pythons escaped pet stores and cages damaged in Hurricane Andrew in 1992. Since then, the numbers of Burmese pythons grew at a fast rate. The escaped Burmese pythons weren't the only cause of the most recent population increase of Burmese pythons.

In the United States the Burmese python was a popular exotic pet. Docile and beautifully patterned in brown and gold diamond shapes, these snakes could be purchased at pet stores or reptile shows. Owners kept them in cages or tanks and fed them rats or mice. Most people bought Burmese pythons when they were small. Burmese pythons grow very quickly. For many pet owners, the pet Burmese pythons became too big to manage. So they released them into the wild.

When the Burmese python was designated as an invasive species, many agencies and individuals began trying to put a stop to the python invasion. The National Park Service started a program to study these animals in the Florida Everglades. Park Service scientists implanted tracking devices into seventeen large pythons that were later re-released into the wild. They provided scientists with information regarding python behavior.

In January 2013 to February 2013, the Florida Fish and Wildlife Conservation Commission ran a contest called the 2013 Python Challenge. The Commission issued permits to hunt the snakes within state wildlife-managed areas of the Everglades. Sixty-eight Burmese pythons were captured.

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Later in 2013, Jason Leon was driving in a rural area near Florida City when he spotted a Burmese python's head protruding from the brush. The man was a biologist, and he was familiar with pythons. He approached the snake and pulled it out of the bush. The animal was bigger than he expected. After a struggle with the animal, Leon killed it. The Burmese python was 128 pounds and longer than 18 feet. Leon contacted the Florida Fish and Wildlife Conservation Commission, which agreed to pick up and examine the snake. The snake was found to be the largest ever in the state of Florida.

The state later issued a statement:

> Jason Leon's nighttime sighting and capture of a Burmese python of more than 18 feet in length is a notable accomplishment that set a Florida record. The Florida Wildlife Commission is grateful to him both for safely removing such a large Burmese python, and for reporting its capture.

Despite these efforts, the population of Burmese pythons continued to grow. The Florida Fish and Wildlife Conservation Commission held another contest in 2016 called the 2016 Python Challenge.

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All the Pieces Matter

by A.P. Raj

Jason stared at the whiteboard at the front of the classroom, trying to make sense of what he saw there. Mr. Freamon had drawn a complicated diagram of all the creatures living in the nearby Ho Tep Wildlife Reserve. Every type of living thing, from trees and insects to mammals and birds, was written down and circled on the board. Arrows snaked around the board, connecting the circles, showing which creatures depended on which other creatures to survive.

Though he had been hiking out in Ho Tep plenty of times, Jason had never given much thought to the animals and other wildlife he had seen out there. He'd never thought about how the amount of rainfall affected the amount of moisture in the soil, which affected how well plants could grow, which affected the ability of the animals that ate those plants to survive. It was enough to make his head swim a little.

Jason wasn't the only one who was confused. Mr. Freamon could tell that his students were all struggling to make sense of the mess of connections drawn out on the board. He smiled and stopped drawing for a moment to speak to the class.

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"Take a deep breath," Mr. Freamon said. "You don't need to memorize what's on the board. If you're going to take away one thing from this lesson, let it be this: All the pieces matter. Every ecosystem on Earth depends on a delicate balance among all of the different forms of life within it."

Adriana raised her hand and asked why that was.

"Well," Mr. Freamon said, "in any ecosystem, all of the creatures within it are competing for the same resources: food, water and shelter-the basic needs of every living thing. There's only so much to go around, so creatures have to compete with other creatures to get what they need. And since they all go about it in a unique way, all of the creatures in an ecosystem end up depending on one another. Let me give you an example.

"Remember that video we watched last week? With the wolves killing the elk at Yellowstone National Park?"

Everyone nodded.

"And how many of you thought that the wolves were mean for killing those elk?"

About half the students raised their hands, but Jason kept his hand down. Wild animals will do what they do, he thought. The idea of meanness never enters into it. They act on instinct.

"Consider this, then," Mr. Freamon continued. "Without the wolves in the park to keep the elk population in check, the elk would have eaten all of the aspen and willow in the park. Not only would those plants be gone, but the other animals that depend on them to survive, would have been out of luck too. All the pieces matter."

After class that day, Jason went home and looked up "ecosystem resilience" on the Internet. He found a lot of interesting links about different ecosystems that had changed rapidly because one of the pieces had been taken out of the puzzle, as Mr. Freamon would have put it.

In Africa, people hunted lions and leopards and reduced their population, leading to higher populations of a certain type of baboon. That had led, somehow, to higher rates of parasites in baboons and people. And along some coasts, human activity had reduced the sea otter population. The sea otters ate sea urchins that ate kelp from massive kelp forests. Without the sea otters to keep them in check, the kelp started to disappear.

The whole idea was starting to make sense to Jason. It was basically like dominoes-all the pieces lined up, and if you knocked one down, it would knock down the next one, which would

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knock down the one after that, until they all went down. Of course, it was a lot more complicated than that, but that was the basic idea.

The next time Jason went to Ho Tep Wildlife Reserve, on a camping trip with his dad, he made a point of observing the wildlife. He spent twenty minutes watching a copperhead snake slither across the forest floor, wondering about its role in the larger system. Through his binoculars, he watched a robin build its nest near the top of an oak tree. He imagined the robin catching insects to bring back to the nest to feed her chicks. He thought about how the roots of the tree reached way down into the soil to drink the moisture there. It really was fascinating how everything fit together.

Later, when he was back at school, he asked Mr. Freamon about the ecosystem at Ho Tep. He mentioned how he thought about the trees and how they were rooted in the soil.

"It's funny you should mention that, Jason," Mr. Freamon said. "You know, without those trees to anchor the soil, Ho Tep would still be a desert, like it was thousands of years ago."

"You mean Ho Tep hasn't always been a forest?"

"No, it hasn't. For a long time it was a desert-a totally different ecosystem. But over time, things changed," Mr. Freamon said.

"What things?" Jason asked.

"Weather patterns, for one. There probably wasn't a lot of rain falling on that area for a long time. But as that changed, there was more moisture in the soil. Enough for flowering plants to begin to take root, and eventually trees," replied Mr. Freamon.

"And once there are trees, there's shelter for birds and other animals," Jason said.

"Exactly right," Mr. Freamon said. "You've got the idea."

"Does that mean that we can deliberately change an ecosystem? Turn a desert into a forest, or something like that?"

Mr. Freamon smiled. "Well, it isn't that simple. Nature has a way of changing itself, but it takes a very long time, and it doesn't have an end goal in mind. Ecosystems fall apart, and then eventually find a new way to rebuild. But that's not quite the same as planning out a change.

"There are so many variables to consider- not only things like trees and birds, but the bacteria and other creatures you can only see with a microscope. Not to mention, we haven't exactly figured out how to change the weather."

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"So we've never changed an ecosystem?" Jason asked.

"Oh, I wouldn't say that," Mr. Freamon said. "We've changed plenty of ecosystems all right. Except when humans change an ecosystem, it's usually not deliberate. Usually it's because clearing out land to build things drives out other creatures."

"Well, it's like you always say: humans are a part of nature too, right?"

"Exactly right, Jason," Mr. Freamon said. "That's exactly right."

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Use the article "Pythons Invade the Florida Everglades" to answer questions 1 to 2 .

1. What kind of animal had a population increase in the Florida Everglades in the early 2000s?

2. What effect has the release of these animals have on the number of small mammals in the Everglades? Support your answer with evidence from the text.

Use the article "All the Pieces Matter" to answer questions 3 to 4.

3. What caused higher populations of a certain type of baboon in Africa?

4. What effect has the higher population of this type of baboon had on baboons and people? Support your answer with evidence from the text.

Use the articles "All the Pieces Matter" and "Pythons Invade the Florida Everglades" to answer questions 5 to 6.

5. Think about the process of cause and effect involving Burmese pythons in the Everglades. How is it similar to the changes in Africa described by "All the Pieces Matter"?

6. Explain why understanding the process of cause and effect might be important to someone studying the environment. Support your answer with evidence from the articles.

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Round 'Em Up!

1 Solve the problems below. Show all your work.

7,538	635	2,648	5,538
– 724	202	+ 4,397	– 1,263
	+ 169		

2 Round the numbers below to the nearest ten. When you round to the nearest ten, look at the number in the ones place. If it is 5 or higher, round up to the next highest ten. If it is less than 5, keep the number in the tens place the same.

ex a 63 60	**ex b** 186 190	**a** 47	**b** 52
c 35	**d** 94	**e** 122	**f** 856
g 267	**h** 993	**i** 1,247	**j** 2,052

3 Round the numbers below to the nearest hundred. When you round to the nearest hundred, look at the number in the tens place. If it is 5 or higher, round up to the next highest hundred. If it is less than 5, keep the number in the hundreds place the same.

ex a 163 200	**ex b** 627 600	**ex c** 82 100	**a** 203
b 254	**c** 822	**d** 439	**e** 67
f 153	**g** 764	**h** 449	**i** 657

CHALLENGE

4 Write two different numbers that round up or down to each number shown.

ex 400 438 384	**a** 20	**b** 80
c 100	**d** 300	**e** 700

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Centimeters, Decimeters & Meters

The information below will help you solve Problems 1–3.

- There are 10 centimeters in 1 decimeter.
- There are 10 decimeters in 1 meter.

1a Luis and Sara measured their heights in centimeters. Luis was 132 cm tall, and Sara was 148 cm tall. What is the sum of their heights in centimeters? Show your work.

b What is the sum of their heights in decimeters? Show your work.

2 The snail crawled 1 meter in the morning, 4 decimeters after lunch, and 60 centimeters before falling asleep. How far did the snail crawl altogether? Express your answer in centimeters, decimeters, and meters. Show your work.

a The snail crawled _____ centimeters.

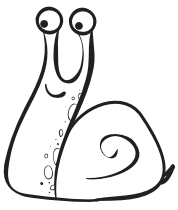
b The snail crawled _____ decimeters.

c The snail crawled _____ meters.

CHALLENGE

3a Sidney Snail crawled two and a half meters in a half hour. Sherman Snail crawled 487 centimeters in an hour. Who crawled farther, Sidney or Sherman? How much farther? Show your work.

b Which snail was faster? Explain your answer.



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Multiplication & Division Facts

1 Solve the problems below.

8 × 3 = ____	4 × 4 = ____	7 × 6 = ____	5 × 6 = ____	3 × 8 = ____	2 × 9 = ____	0 × 1 = ____
1 × 8 = ____	6 × 6 = ____	9 × 4 = ____	10 × 4 = ____	5 × 3 = ____	7 × 9 = ____	6 × 8 = ____

63 ÷ 7 = _____ 42 ÷ 7 = _____ 36 ÷ 4 = _____ 20 ÷ 5 = _____

16 ÷ 8 = _____ 18 ÷ 3 = _____ 6 ÷ 3 = _____ 14 ÷ 2 = _____

2 Fill in the missing numbers.

6 × 3 = ☐	4 × 5 = ☐	5 × 7 = ☐	8 × 4 = ☐	8 × 8 = ☐
3 × ☐ = 6	2 × ☐ = 10	☐ × 5 = 15	☐ × 8 = 40	9 × ☐ = 72

CHALLENGE

3 Use words and/or numbers to show how you could use the answer to 4 × 8 to solve 4 × 16.

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Area & Perimeter Story Problems

You can make sketches to help solve the problems below. Remember to include the units of measurement in your answers. Show all of your work.

1a The classroom rug is 9 feet long and 8 feet wide. What is the total area of the rug?

b What is the perimeter of the rug?

2a Chrissy is going to make a big painting on a piece of wood that is 4 feet wide and 7 feet long. What is the total area of the piece of wood?

b What is the perimeter of the piece of wood?

3 The school playground measures 465 feet by 285 feet. What is the perimeter of the playground?

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Expanded Notation & Fact Families

1 Complete each equation by writing a number in standard form.

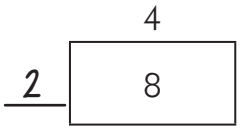
ex 17,508 = 10,000 + 7,000 + 500 + 8	**a** _____ = 20,000 + 400 + 50 + 6
b _____ = 30,000 + 2,000 + 100 + 10 + 2	**c** _____ = 7,000 + 40 + 6
d _____ = 90,000 + 6,000 + 30 + 5	**e** _____ = 60,000 + 3,000 + 7
f _____ = 10,000 + 3,000 + 800 + 50 + 5	**g** _____ = 50,000 + 300 + 5

2 Fill in the missing number in each equation.

ex 40,000 + 6,000 + 50 + 8 = 46,058	**a** 41,092 = 40,000 + _____ + 90 + 2
b 50,000 + 1,000 + _____ + 50 + 4 = 51,354	**c** 17,035 = 10,000 + _____ + 30 + 5
d 96,035 = 90,000 + 6,000 + _____ + 5	**e** 20,000 + _____ + 50 + 6 = 20,456
f 2,000 + 500 + _____ + 7 = 2,567	**g** 20,408 = 20,000 + _____ +8

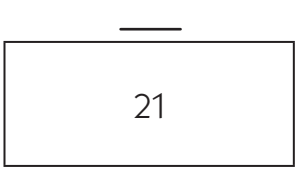
3 Fill in the missing information for each rectangle. Then write the multiplication and division fact family that goes with the rectangle.

example



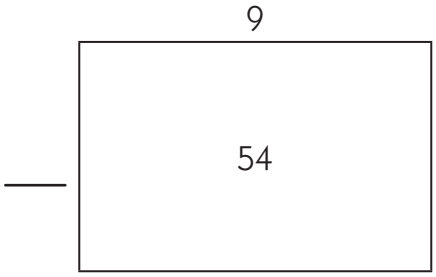
2 × 4 = 8
4 × 2 = 8
8 ÷ 4 = 2
8 ÷ 2 = 4

a



_____ × _____ = _____
_____ × _____ = _____
_____ ÷ _____ = _____
_____ ÷ _____ = _____

b



_____ × _____ = _____
_____ × _____ = _____
_____ ÷ _____ = _____
_____ ÷ _____ = _____

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Number Riddles

1 Draw a line to show which number matches each description. The first one is done for you.

example This number has a 2 in the thousands place.	46,305
a This is an even number with a 6 in the hundreds place.	32,617
b This number is equal to 30,000 + 4,000 + 80 + 2.	45,052
c This number is 1000 less than 46,052.	19,628
d This is an odd number with a 6 in the thousands place.	34,082

2 Write each number in words.

example 17,329	seventeen thousand, three hundred twenty-nine
a 33,072	
b 86,105	
c 74,629	

CHALLENGE

3 Write an even number that has a 7 in the hundreds place, has an odd number in the thousands place, and is a multiple of 10.

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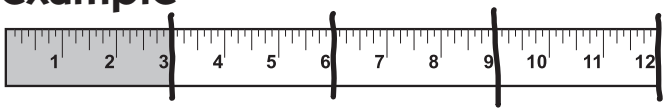
Fractions of a Foot

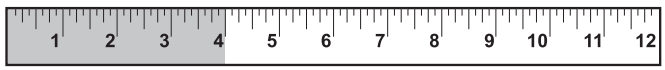
1 Write two names for each fraction of a foot. You can draw on the rulers to help.

example



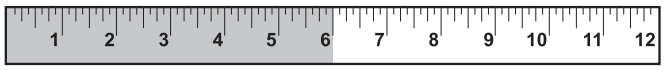
$\frac{3}{12}$ _____ $\frac{1}{4}$ _____

a



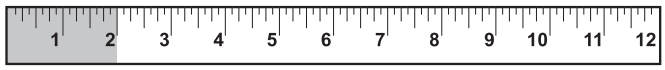
_____ _____

b



_____ _____

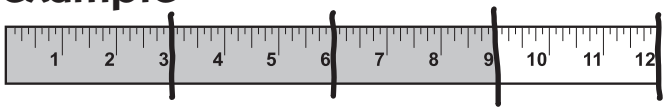
c



_____ _____

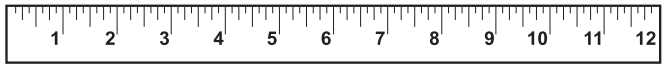
2 Shade the ruler to show each fraction of a foot. Then write another name for the fraction. You can draw lines to divide the rulers into equal parts.

example



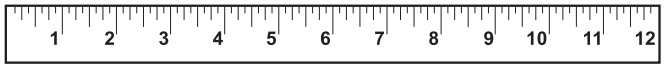
$\frac{9}{12}$ _____ $\frac{3}{4}$ _____

a



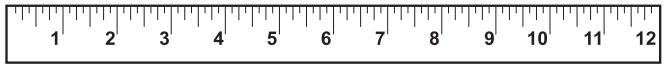
$\frac{8}{12}$ _____ _____

b



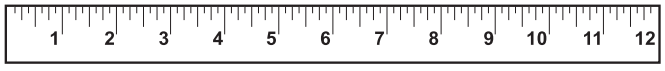
$\frac{10}{12}$ _____ _____

c



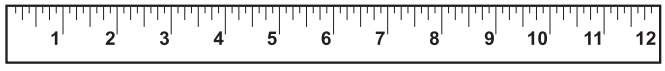
$\frac{12}{12}$ _____ _____

d



$\frac{2}{6}$ _____ _____

e



$\frac{2}{3}$ _____ _____

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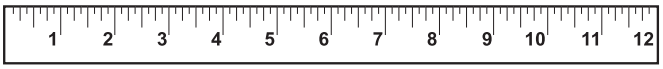
More Fractions of a Foot

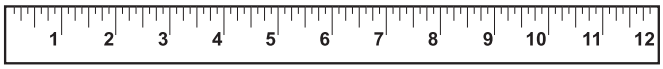
1 Write the number of inches in each fraction of a foot. You can look at page 41 to help.

a $\frac{1}{2}$ of a foot is equal to _____ inches **b** $\frac{1}{4}$ of a foot is equal to _____ inches

c $\frac{1}{6}$ of a foot is equal to _____ inches **d** $\frac{1}{3}$ of a foot is equal to _____ inches

2 Write the number of inches in each fraction of a foot. Use the rulers below and the information in problem 1 to help. Then circle the greater fraction in each pair. If they are equal, circle them both.





example (circled) $\frac{1}{2}$ 6 inches $\frac{1}{4}$ 3 inches	**a** $\frac{1}{3}$ $\frac{1}{4}$
b $\frac{2}{3}$ $\frac{1}{2}$	**c** $\frac{1}{2}$ $\frac{3}{6}$
d $\frac{2}{3}$ $\frac{3}{4}$	**e** $\frac{1}{4}$ $\frac{2}{3}$

3 Write all the factors of each number. Hint: *Think about pairs of factors that multiply to make the number.*

ex 18	1, 2, 3, 6, 9, 18	**a** 12	
b 15		**c** 36	
d 60		**e** 120	

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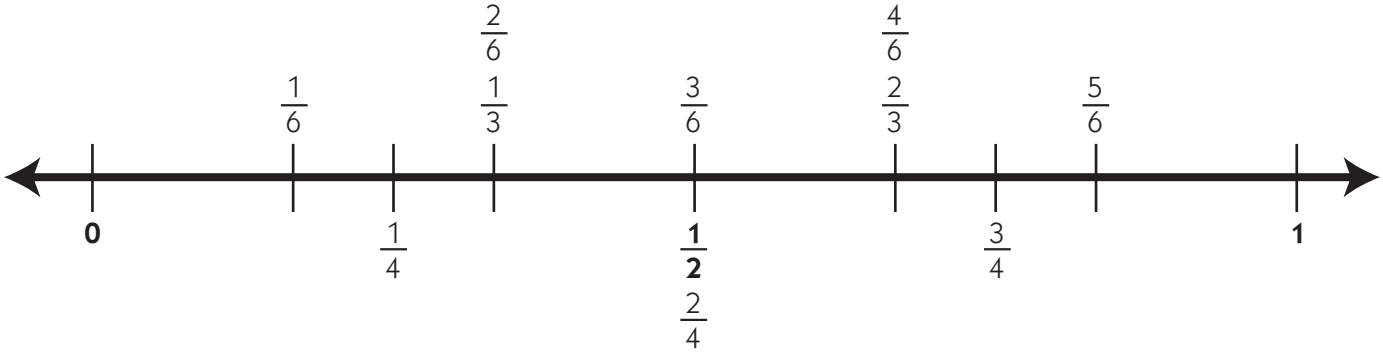
Comparing Fractions on a Number Line

When you are comparing fractions, it can help to think about how close those fractions are to landmarks like one whole and one-half. Use the number line to help complete the problems below.



1 Complete the table.

Circle the fraction that is greater than $\frac{1}{2}$.	Write a number sentence showing which fraction is greater.
example $\frac{4}{6}$ $\frac{1}{4}$	$\frac{4}{6} > \frac{1}{4}$
a $\frac{2}{6}$ $\frac{2}{3}$	
b $\frac{1}{3}$ $\frac{5}{6}$	

2 Complete the table.

Circle the fraction that is closest to 1.	Write a number sentence showing which fraction is greater.
a $\frac{3}{4}$ $\frac{2}{3}$	
b $\frac{5}{6}$ $\frac{2}{3}$	
c $\frac{3}{4}$ $\frac{5}{6}$	

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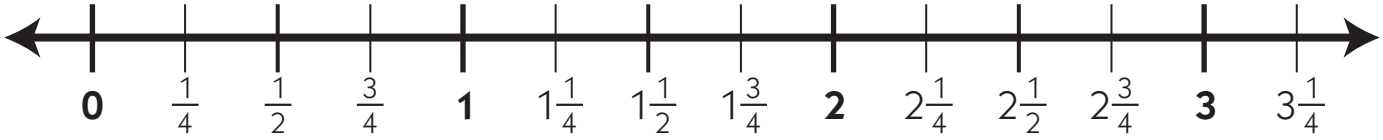
Fractions & Mixed Numbers on a Number Line

1 Use the number line to answer the questions below.



example a What improper fraction is equal to $2\frac{1}{4}$? In other words, how many fourths are in two and one-fourth?	$\frac{9}{4}$
example b What number is halfway between 2 and 3?	$2\frac{1}{2}$
a What improper fraction is equal to $1\frac{1}{2}$? In other words, how many halves are in one and one-half?	
b What mixed number is equal to $\frac{6}{4}$?	
c Which is greater, $\frac{5}{4}$ or $1\frac{1}{2}$?	
d What mixed number is equal to $\frac{13}{4}$?	
e What improper fraction is equal to $2\frac{1}{2}$? In other words, how many halves are in two and one-half?	
f Which is greater, $1\frac{3}{4}$ or $\frac{8}{4}$?	

CHALLENGE

2 What number is halfway between 0 and 1?

3 What number is halfway between 0 and 3?

4 What number is halfway between 0 and 17?

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Fraction Story Problems

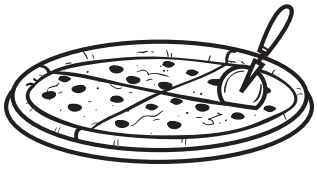
Draw pictures to help answer the questions below. Circle your answer to each question.

1 Jim had a piece of string that was three-fourths of a foot long. Damien had a piece of string that was half a foot long. Whose string was longer? How much longer was it? Use a labeled sketch, as well as numbers and/or words, to prove your answer.

2 Rosa and Jasmine were trying to run a kilometer (1 kilometer is equal to 1000 meters). Rosa made it halfway. Jasmine made it one-third of the way. Who ran farther? Use a labeled sketch, as well as numbers and/or words, to prove your answer.

CHALLENGE

3 Lisa and her brother Darius were eating small pizzas. Their mom cut each pizza into fourths. Lisa figured out that she ate one and a half little pizzas. Darius counted that he ate seven fourths. Who ate more pizza? How much more? Use a labeled sketch, numbers, and/or words to prove your answer.



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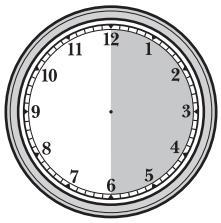
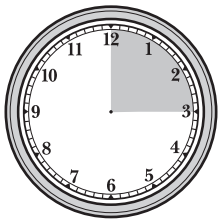
Clock Fractions

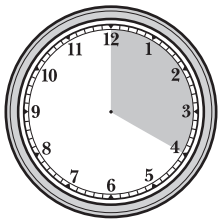
Sometimes people talk about time in fractions of an hour. For example, a quarter of an hour is 15 minutes. Half an hour is 30 minutes. The pictures below show some different fractions of an hour on clocks.



$\frac{1}{2}$ hour is 30 minutes



$\frac{1}{4}$ hour is 15 minutes

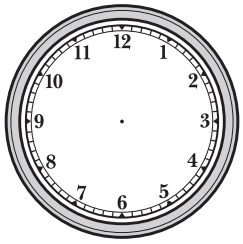
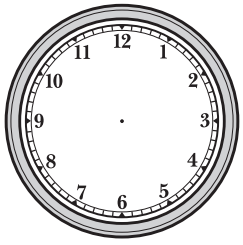
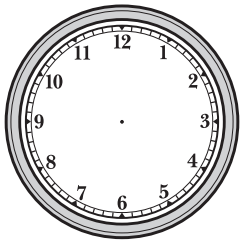


$\frac{1}{3}$ hour is 20 minutes

1 Problem 2 will be easier if you can divide 60 by some other numbers. Solve the division problems below.

a $60 \div 2 =$ _____ **b** $60 \div 3 =$ _____ **c** $60 \div 4 =$ _____ **d** $60 \div 6 =$ _____

2 Draw the following fractions on the clocks. Then write how many minutes are in each fraction of an hour.

Fractions of an Hour	Picture on a Clock	How Many Minutes?
a $\frac{3}{4}$		
b $\frac{2}{3}$		
c $\frac{1}{6}$		

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More Time & Distance Problems

1 Mr. Jackson stayed for an hour after school to help his students with their math homework. Four students came in for help. If Mr. Jackson spent the same amount of time helping each student and used up the whole hour, how much time did he spend with each student? Express your answer both as a fraction of an hour and as a number of minutes. Show your work.

Mr. Jackson spent _____ of an hour with each student.

Mr. Jackson spent _____ minutes with each student.

CHALLENGE

2 A very slow snail crawls at a rate of 12 feet per hour. If the snail crawls for 45 minutes, how far will she get? Show your work.

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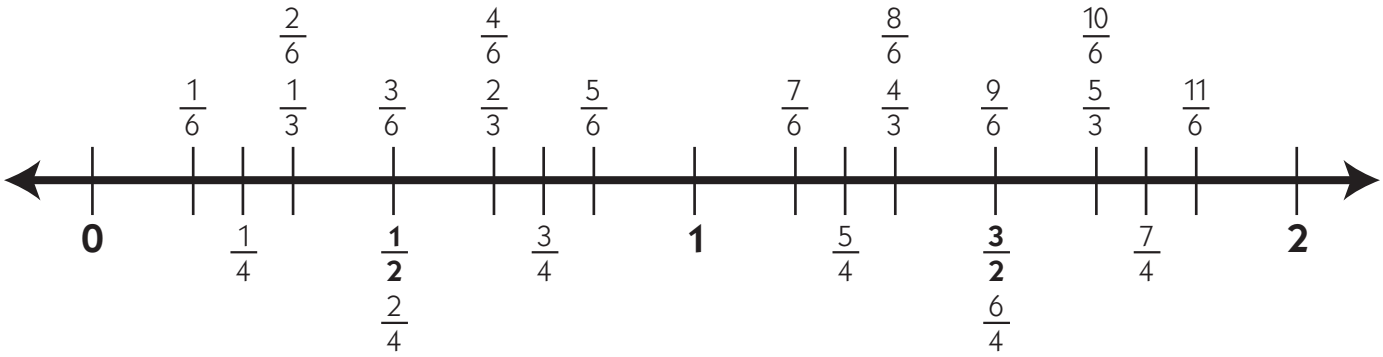
Fractions & Division Tables



1 Write a greater than (>), less than (<), or equal sign in the circle to complete each number sentence below. Use the number line to help figure out which fraction is greater.

ex $\frac{1}{4} < \frac{1}{2}$	**a** $\frac{3}{4}$ ○ $\frac{5}{6}$	**b** $\frac{2}{3}$ ○ $\frac{4}{6}$
c $\frac{5}{3}$ ○ $\frac{5}{4}$	**d** $\frac{2}{3}$ ○ $\frac{3}{2}$	**e** $\frac{1}{3}$ ○ $\frac{3}{6}$

2 Complete the division tables below.

ex

÷	10	4	18	6	16	12	14	8
2	5	2	9	3	8	6	7	4

a

÷	70	90	20	80	30	50	60	40
10	7							

b

÷	15	30	35	25	10	45	20	40
5	3							

c

÷	8	20	16	36	24	28	12	32
4	2							

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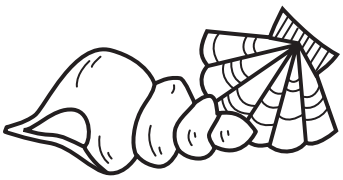
Sharing Problems

1 Kendra and Veronica's aunt gave them $19 to spend at the store. If they split the money evenly, how much did they each get to spend? Use labeled sketches, numbers, and/or words to solve this problem. Show all your work.

2 Frank had 42 shells that he wanted to share with his 4 friends. If he gave each friend the same number of shells (and kept the same number of shells for himself), how many shells did each person get? Use labeled sketches, numbers, and/or words to solve this problem. Show all your work.



CHALLENGE

3 Joe's grandma lives 36 blocks up the street from Joe. On Saturday, Joe rode his bike two-thirds of the way to his grandma's house and then realized he forgot the present he was going to give her. Joe rode back to his house, got the present, and rode all the way to his grandma's house. Then he rode straight home. How many blocks did Joe ride altogether? Use labeled sketches, numbers, and/or words to solve this problem. Show all your work.

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Multiplying by 10, 100 & 1,000

1 Multiply by 10, 100, and 1,000. Some of the problems below are already done for you as examples.

10 × 3 = 30	10 × 5 =	10 × 7 =	100 × 2 = 200	100 × 4 =	100 × 9 =
1,000 × 2 = 2,000	1,000 × 7 =	1,000 × 6 =	10 × 9 =	1,000 × 5 =	100 × 3 =

2 Fill in the missing numbers.

10 × 8 = ☐	10 × 4 = ☐	100 × 7 = ☐	100 × 5 = ☐
1,000 × 3 = ☐	1,000 × 5 = ☐	☐ × 9 = 9,000	100 × ☐ = 600
☐ × 100 = 500	☐ × 10 = 80	5 × ☐ = 500	7 × ☐ = 70

CHALLENGE

☐ × 3 = 3,000,000	☐ × 40 = 400	☐ × 60 = 6,000

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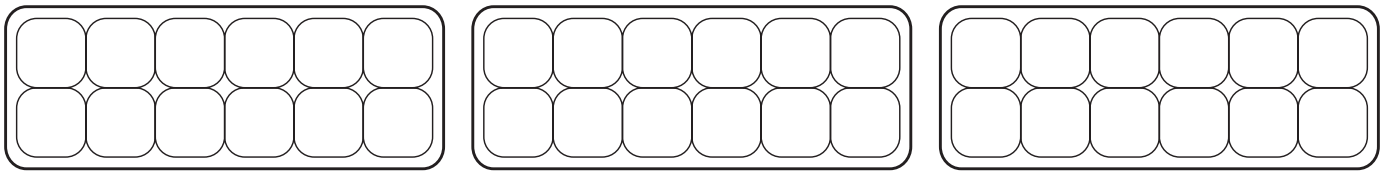
Writing Improper Fractions as Mixed Numbers

1 Complete the multiplication facts.

5 × 7	5 × 70	50 × 7	50 × 70
4 × 3	4 × 30	40 × 3	40 × 30
8 × 7	8 × 70	80 × 7	80 × 70

2 Write each fraction as a whole number or a mixed number. Some of the problems are done for you as examples. You can draw on the egg cartons to help.



$\frac{3}{3}$ = _____ $\frac{6}{3}$ = 2 $\frac{4}{3}$ = _____ $\frac{5}{3}$ = _____

$\frac{7}{3}$ = $2\frac{1}{3}$ $\frac{6}{6}$ = _____ $\frac{12}{12}$ = _____ $\frac{18}{12}$ = _____

$\frac{6}{6}$ = _____ $\frac{12}{6}$ = _____ $\frac{8}{6}$ = _____ $\frac{9}{6}$ = _____

CHALLENGE

$\frac{5}{4}$ = _____ $\frac{8}{4}$ = _____ $\frac{15}{4}$ = _____ $\frac{36}{4}$ = _____

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Area Problems

1 Frank bought a rug for his room. It is 60 inches by 40 inches. What is the total area of the rug in square inches? Use labeled sketches, numbers, and/or words to solve this problem. Show all your work.

2 The school gym is 80 feet by 50 feet. What is the total area of the gym floor in square feet? Use labeled sketches, numbers, and/or words to solve this problem. Show all your work.

CHALLENGE

3 Lisa's room is 90 inches by 90 inches. She bought a rug for her floor that is 50 inches by 40 inches. How much of her floor is *not* covered by the rug? Use labeled sketches, numbers, and/or words to solve this problem. Show all your work.

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Multiplication & Division Puzzles

1 Fill in the missing numbers.

7 × □ = 42	□ × 6 = 18	9 × □ = 81	□ × 3 = 24	□ × 8 = 40
5 × □ = 10	9 × □ = 45	□ × 8 = 32	6 × □ = 36	□ × 3 = 27

2 Use multiplication and division to find the secret path through each maze. The starting and ending points are marked for you. You can only move one space up, down, over, or diagonally each time. Write four equations to explain the path through the maze.

example

start

3	4	12
36	6	2
9	4	6

end

3 × 4 = 12
12 ÷ 2 = 6
6 × 6 = 36
36 ÷ 9 = 4

a

start

81	6	36
6	9	4
7	42	9

end

b

start end

1	3	2
6	2	9
3	18	2

CHALLENGE

3 Complete the division table below.

÷	600	240	120	180	540	5,400	1,800	1,200
60								

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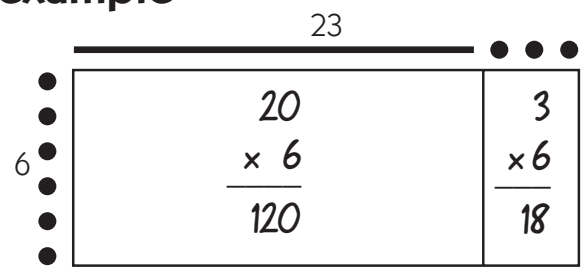
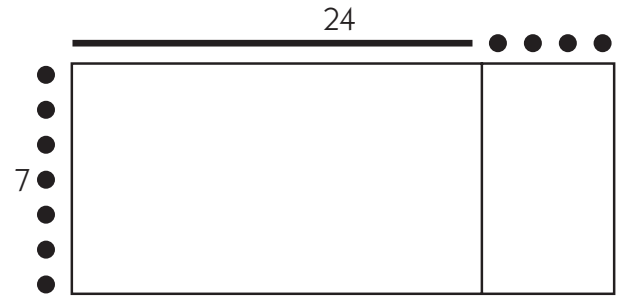
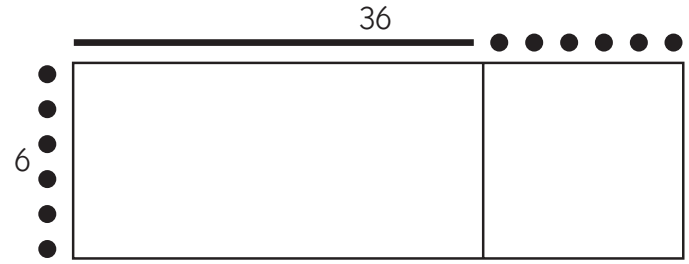
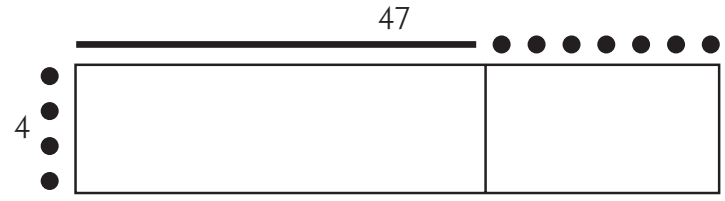
Using Partial Products to Solve Multiplication Problems

Use partial products to solve each multiplication problem below.

Fill in the array to show the partial products.	Use numbers to show your work.
example 	23 × 6 6 × 20 = 120 6 × 3 = + 18 138
1 	24 × 7
2 	36 × 6
3 	47 × 4

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Using the Standard Multiplication Algorithm

1 Use the standard algorithm to solve each multiplication problem.

ex 2 34 × 7 238	**a** 43 × 6	**b** 28 × 4	**c** 59 × 4
d 37 × 3	**e** 84 × 3	**f** 33 × 8	**g** 68 × 5

2 Solve the problems below using the standard algorithm. Show your work.

ex 1 1 164 × 3 492	**a** 137 × 3	**b** 382 × 7	**c** 485 × 6
d 146 × 4	**e** 232 × 6	**f** 143 × 5	**g** 406 × 5

CHALLENGE

h 1,243 × 5	**i** 3,531 × 4	**j** 4,325 × 4	**k** 3,478 × 9

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Two Different Multiplication Methods

1 Solve each problem below. Use the standard algorithm at least two times. Use the partial products method at least two times.

ex a standard algorithm $\begin{array}{r} {\scriptstyle 1\ 2} \\ 135 \\ \times\ 4 \\ \hline 540 \end{array}$	**ex b** partial product $\begin{array}{r} 135 \\ \times\ 4 \\ \hline \end{array}$ $4 \times 100 = 400$ $4 \times 30 = 120$ $4 \times 5 = +\ 20$ 540	**a** $\begin{array}{r} 28 \\ \times\ 8 \\ \hline \end{array}$	**b** $\begin{array}{r} 47 \\ \times\ 5 \\ \hline \end{array}$
c $\begin{array}{r} 56 \\ \times\ 3 \\ \hline \end{array}$	**d** $\begin{array}{r} 321 \\ \times\ 7 \\ \hline \end{array}$	**e** $\begin{array}{r} 482 \\ \times\ 6 \\ \hline \end{array}$	**f** $\begin{array}{r} 259 \\ \times\ 3 \\ \hline \end{array}$

2 Ramon bought 8 big cases of breakfast cereal. Each case held 12 boxes of cereal. Each box of cereal held 18 oz. of cereal. How many boxes of breakfast cereal did Ramon buy?

a Restate the question in your own words:

b Underline the information in the problem you do need to solve the problem.

c Cross out the information in the problem you don't need to solve the problem.

d Solve the problem. Show all your work.

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Kylie's Babysitting Money

1 Kylie earns $8 an hour babysitting. She babysat 21 hours last month. This month, she babysat 17 hours more than last month. How much more money did she earn this month?

a Restate the question in your own words:

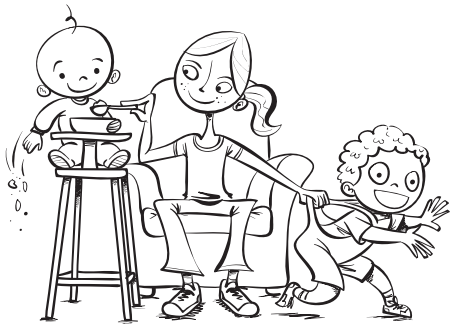
b Underline the information in the problem you do need to solve the problem.

c Cross out the information in the problem you don't need to solve the problem.

d Solve the problem. Show all your work.

CHALLENGE

2 If Kylie wants to earn $256 next month, how many hours will she need to work? Show all your work.



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Multiplication Round & Check

1 Multiply the numbers.

20	30	30	40	50	100	100	200
× 10	× 10	× 20	× 10	× 10	× 20	× 30	× 30
____	____	____	____	____	____	____	____

2 Think about rounding to estimate the answers to the problems below. Then rewrite each problem vertically and solve it using the standard algorithm. Hint: *Use the answers above to help with your estimates.*

Problem	**ex** 39 × 9	**a** 41 × 9	**b** 32 × 9	**c** 12 × 18
Estimate	400			
Solution	8 39 × 9 351			
Problem	**d** 28 × 18	**e** 33 × 22	**f** 103 × 18	**g** 123 × 32
Estimate				
Solution				

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Bread & Paper

1 Five days a week, Marion bakes eight dozen loaves of bread and delivers them to 3 sandwich shops. Each shop gets the same number of loaves. In 3 weeks, how many loaves of bread does each sandwich shop get from Marion? Show all your work.

CHALLENGE

2a A piece of paper measures 36 inches by 24 inches. The teacher wants to cut the paper into 9 equal pieces for her students. The dimensions of the 9 pieces of paper must be whole numbers of inches. What could the dimensions of the 9 identical pieces of paper be? There are two possibilities. Use labeled sketches, numbers, and/or words to solve this problem. Show all your work.

b What must the area of each of the 9 pieces of paper be? Use pictures, numbers, and/or words to explain your answer.

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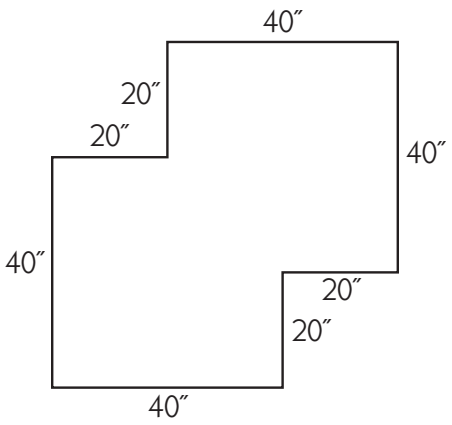
Area & Perimeter, Time & Money

1 Find the area and perimeter of this figure. Show all of your work.



Area _____

Perimeter _____

2a Simon earns $24 per hour. Raymond earns one-half that amount. Simon works 5 hours per day. If Raymond wants to earn the same amount of money as Simon, how many hours would he need to work each day? Show all your work.

b How much money does Simon make each day? Show all your work.

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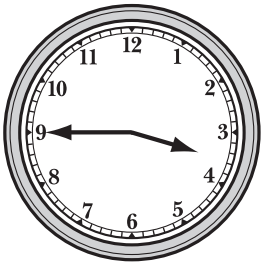
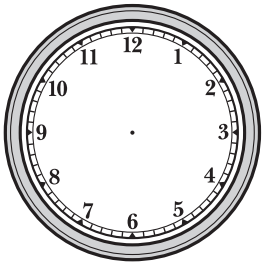
Division & Elapsed Time

1 Complete the following division facts.

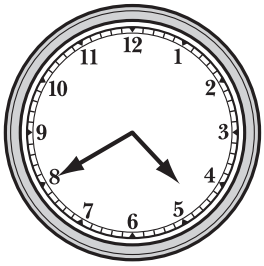
32 ÷ 8 = _____	21 ÷ 3 = _____	18 ÷ 2 = _____	16 ÷ 4 = _____
63 ÷ 7 = _____	40 ÷ 5 = _____	81 ÷ 9 = _____	24 ÷ 6 = _____
42 ÷ 6 = _____	48 ÷ 8 = _____	64 ÷ 8 = _____	36 ÷ 4 = _____

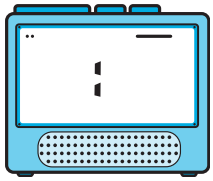
2 Show what time it will be an hour and a half from the time shown on the clock below.



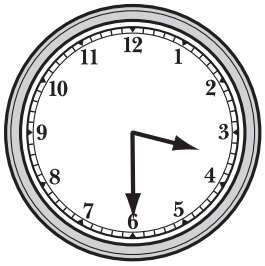


3 On the digital clock, show what time it was twenty-five minutes before the time shown on the clock below.

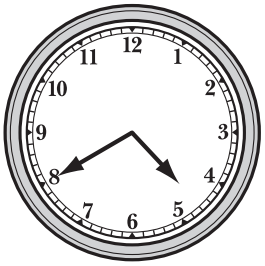




4 The clocks below show when Darren started and stopped practicing his violin yesterday. How long did he spend practicing his violin yesterday?



started



stopped

5 The clocks below show when the fourth graders' music class starts and ends. How long is their music class?

starts

ends

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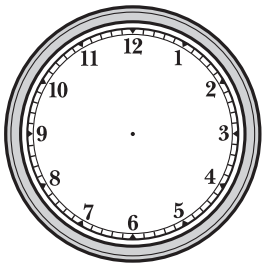
Family Math Night

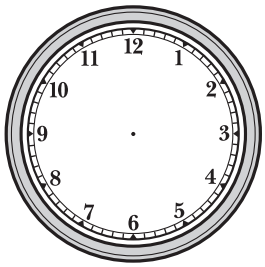
Making an estimate before solving a problem can help you decide if your answer is reasonable. Make an estimate, solve the problem, and then use your estimate to help decide if your answer makes sense.

1 Ms. Suarez and her students are hosting a math night for the students' families. They estimate that it will take them 20 minutes to set up, an hour and a half to do the activities, and 45 minutes to clean up. If they start setting up at 3:30 p.m., what time will they be done cleaning up?

a Use rounding or another strategy to make a reasonable estimate before you solve the problem.

b Solve the problem. Show all your work. You can use the blank clocks if you want to.





c Is your answer reasonable? How can you tell?

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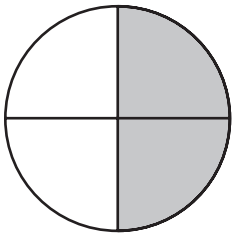
Fractions & Mixed Numbers

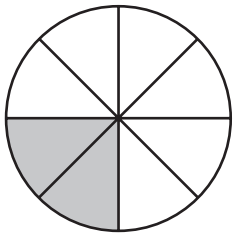
1 The circles below are divided into equal parts. Write two fractions to show what part of each circle is filled in.

example

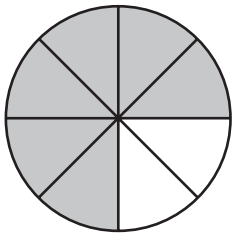


$\frac{1}{2}$ $\frac{2}{4}$

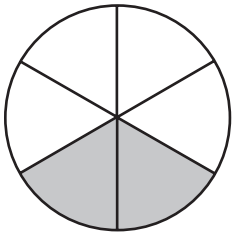
a



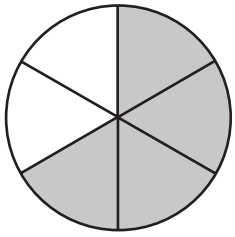
b



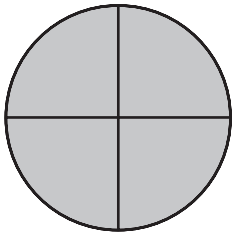
c



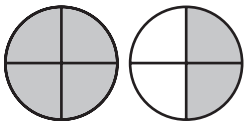
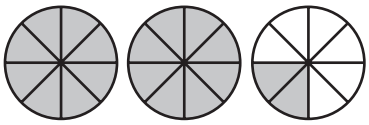
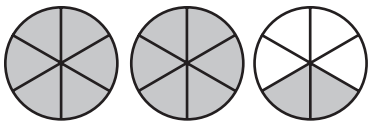
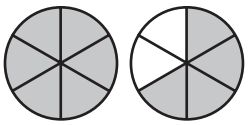
d



e



2 The circles below are divided into equal parts. Write a fraction and a mixed number to show how many circles are filled in.

	Fraction	Mixed Number		Fraction	Mixed Number
example 	$\frac{3}{2}$	$1\frac{1}{2}$	**a** 		
b 			**c** 		

3 Fill in the missing fractions or mixed numbers.

CHALLENGE

Fractions	**ex** $\frac{5}{2}$	**a** $\frac{9}{2}$	**b** $\frac{9}{4}$	**c** $\frac{14}{4}$	**d**	**e**	**f** $\frac{62}{3}$	**g**
Mixed Number	$2\frac{1}{2}$				$3\frac{1}{2}$	$2\frac{3}{4}$		$30\frac{1}{3}$

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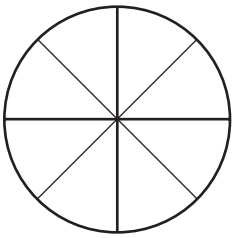
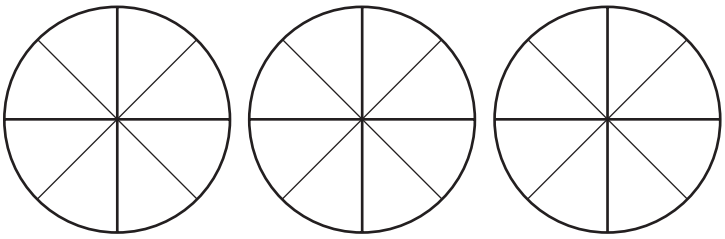
Pizza Problems

1 The pizzas at Little Tom's are cut into 8 pieces. Lucy ate $\frac{1}{2}$ of a pizza and Alex ate $\frac{3}{8}$ of a pizza. Who ate more pizza? How much more? Use pictures, numbers, and/or words to explain how you know.



2 On Friday night, the Suarez family ate $2\frac{3}{4}$ pizzas. Their neighbors, the Johnson family, ate $\frac{17}{8}$ of a pizza. Which family ate more pizza? How much more? Use pictures, numbers, and/or words to explain how you know.



CHALLENGE

3 Which is greater, $\frac{82}{8}$ or $\frac{37}{4}$? Explain how you know. Hint: *Think about how many eighths and how many fourths are in one whole.*

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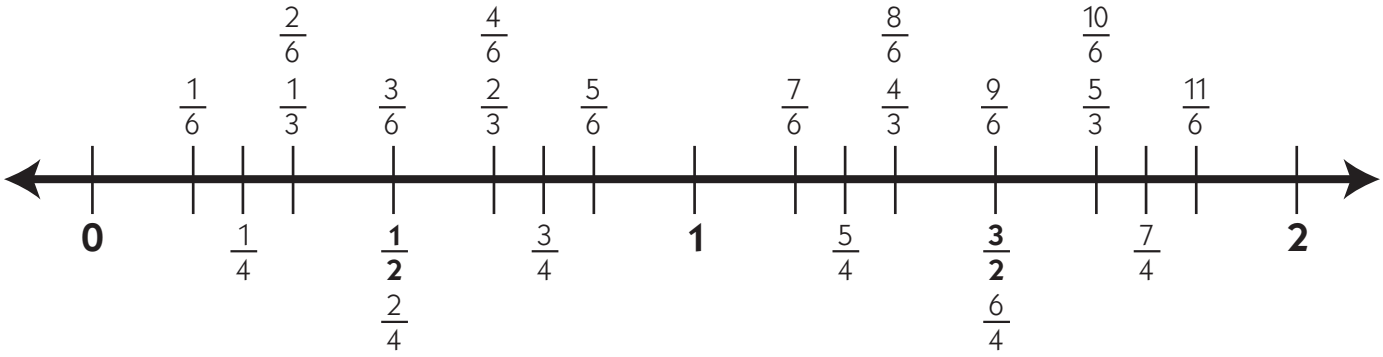
Using Fractions on a Number Line to Solve Problems



1 Use the number line above to help answer these questions.

a Celia ran $\frac{5}{6}$ of a mile. Jade ran $1\frac{1}{4}$ mile. Who ran farther?

b Lester has a piece of rope that is $\frac{9}{6}$ of a foot long. Dario has a piece of rope that is $1\frac{1}{3}$ of a foot long. Whose piece of rope is longer?

c Table A is $1\frac{2}{3}$ of a yard long. Table B is $\frac{11}{6}$ of a yard long. Which table is longer?

2 Put the following fractions in order from smallest to greatest. Hint: *Think about landmarks. Which fractions are less than one-half? Which fractions are close to 1?*

$\frac{1}{4}$	$\frac{7}{6}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{12}$	$\frac{7}{8}$

_____ _____ _____ _____ _____ _____

Least Greatest

3 Think about landmarks like one-half and one to compare the fractions below. Use a greater than (>) or less than (<) sign to compare them.

ex $\frac{3}{4} > \frac{1}{3}$	**a** $\frac{3}{6}$ $\frac{3}{4}$	**b** $\frac{5}{6}$ $\frac{3}{4}$	**c** $\frac{5}{6}$ $\frac{2}{3}$
d $\frac{5}{4}$ $\frac{5}{6}$	**e** $\frac{5}{4}$ $\frac{4}{3}$	**f** $\frac{11}{6}$ $\frac{5}{3}$	**g** $\frac{10}{9}$ $\frac{101}{100}$

NAME _____ **DATE** _____

Time Conversions

1 Fill in the following equivalencies for measurements of time.

a There are _____ seconds in 1 minute.

b There are _____ minutes in 1 hour.

c There are _____ hours in 1 day.

d There are _____ days in 1 week.

e There are _____ days in 1 year.

f There are _____ weeks in 1 year.

2 How many seconds are in 1 hour? Show your work.

3 How many minutes are in 1 day? Show your work.

4 How many hours are in a day and a half? Show your work.

5 Today is Luis's birthday. He is turning 12 years old. How many days has it been since he was born? Show your work.

CHALLENGE

6 Today is also Luis's grandfather's birthday. He is turning 78 years old. How many days has it been since he was born? Show your work.

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Weight Conversions

1 Fill in the following equivalencies for measurements of weight.

a There are _____ ounces in 1 pound. **b** There are _____ pounds in 1 ton.

2 Solve the problems below. Show all your work for each one.

a Ming has a very big cat that weighs 15 pounds. How many ounces does his cat weigh?

b Esperanza's baby sister weighs 11 and a half pounds. How many ounces does she weigh?

c Mr. Chang weighs 175 pounds. How many ounces does he weigh?

d An average male African elephant weighs 5 tons. How many pounds does it weigh?

CHALLENGE

e How many ounces does an average male African elephant weigh?

f A blue whale can weigh up to 300,000 lbs. How many tons is that?

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Capacity Conversions

1 Fill in the following equivalencies for measurements of capacity.

a There are _____ fluid ounces in 1 cup

b There are _____ cups in 1 pint.

c There are _____ pints in 1 quart.

d There are _____ cups in 1 quart.

e There are _____ quarts in 1 gallon.

f There are _____ pints in 1 gallon.

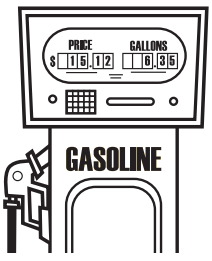
2 Solve the problems below. Show all your work for each one.

a I have a full gallon of milk in my refrigerator. How many cups are in it?

b How many fluid ounces are in 1 gallon?

c Anthony's grandpa drives a semi truck for work. It has two gas tanks. Each gas tank holds 75 gallons of gasoline. How many quarts of gasoline does the truck hold altogether?

d How many fluid ounces of gasoline does the truck hold?



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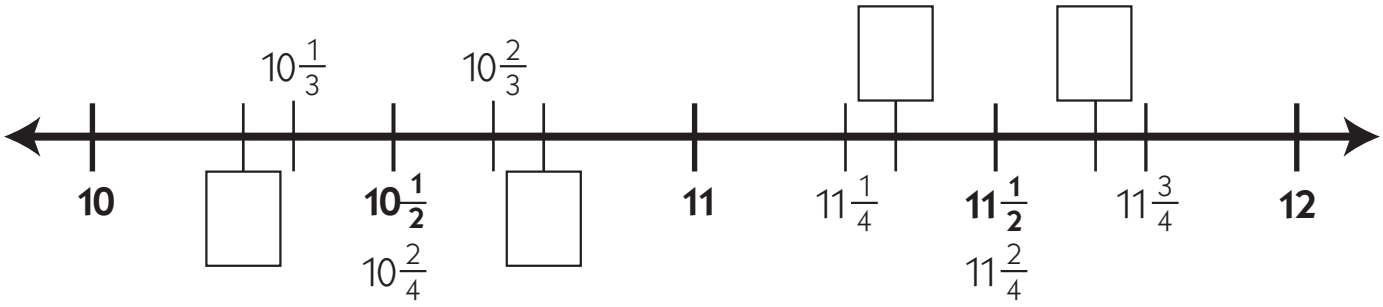
Fraction Practice

1 Fill in the four missing numbers on the fraction number line below.



2 Use the number line above to help answer these questions.

a Alicia ran $10\frac{2}{3}$ miles. Did she run closer to 10 miles or 11 miles?

b Erica ran $11\frac{1}{4}$ miles. She said she ran about 12 miles. Was she accurate? Explain why or why not.

c Frank ran $10\frac{2}{3}$ miles. Cameron ran $10\frac{2}{4}$ miles. Who ran farther?

3 There are 4 fourths in 1 whole, so there are 40 fourths in 10 wholes. Therefore, we can say $\frac{4}{4} = 1$ and $\frac{40}{4} = 10$. Think about how many thirds and fourths are in a whole, and look at the number line above, to help fill in the blanks below.

$\frac{44}{4} =$ 11	$\frac{2}{2} =$ _____	$\frac{20}{2} =$ _____	$\frac{22}{2} =$ _____
$\frac{3}{3} =$ _____	$\frac{30}{3} =$ _____	$\frac{33}{3} =$ _____	$\frac{35}{3} =$ _____
$\frac{23}{2} =$ _____	$\frac{31}{3} =$ _____	$\frac{42}{4} =$ _____	$\frac{29}{3} =$ _____

4 Write the following fractions in simplest form.

ex $\frac{12 \div 3}{15 \div 3} = \frac{4}{5}$	**a** $\frac{6 \div \_\_\_}{21 \div \_\_\_} =$	**b** $\frac{8 \div \_\_\_}{36 \div \_\_\_} =$

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Length Conversions

1 Fill in the following equivalencies for measurements of length and distance.

a There are _____ inches in 1 foot.

b There are _____ feet in 1 yard.

c There are _____ inches in 1 yard.

d There are _____ feet in 1 mile.

2 Solve the problems below. Show all your work.

a The pool is 12 feet deep at its deepest part. How many inches deep is it?

b We run a 50-yard-dash on Field Day. How many feet are in 50 yards?

c How many inches are there in 50 yards?

d The cross country team ran 8 miles for practice yesterday. How many feet did they run?

CHALLENGE

e *About* how many yards are there in a mile? Write your best estimate.

f *Exactly* how many yards are there in a mile? Show all your work.

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Decimals & Fractions

1 Write the place value of the underlined digit in each number. The place values are spelled for you here:

hundreds	tens	ones	tenths	hundredths

example 2.0<u>3</u> hundredths

a 3.<u>1</u>7 _____

b 12<u>0</u>.4 _____

c <u>5</u>06.92 _____

d 54.2<u>9</u> _____

e 32.<u>7</u> _____

2 Write each decimal number.

ex a Twenty-three and two-tenths: 23.2

ex b One hundred thirty and five-hundredths: 130.05

a Six and seven-hundredths: _____

b Two-hundred sixty-five and eight-tenths: _____

3 Write each fraction or mixed number as a decimal number.

ex a $5\frac{3}{10}$ = 5.3	**ex b** $12\frac{4}{100}$ = 12.04	**ex c** $3\frac{17}{100}$ = 3.17
a $\frac{7}{10}$ =	**b** $3\frac{5}{100}$ =	**c** $\frac{4}{100}$ =
d $4\frac{38}{100}$ =	**e** $1\frac{9}{100}$ =	**f** $1\frac{9}{10}$ =

4 Use a greater than (>), less than (<), or equal sign to show the relationship between the decimal numbers below.

ex 1.09 < 1.9	**a** 1.12 1.2	**b** 3.5 3.48
c 23.81 23.85	**d** 4.50 4.5	**e** 3.06 3.65

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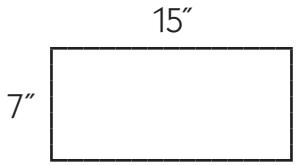
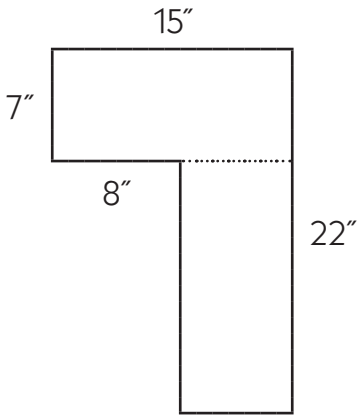
Area Problems

Determine the area of each figure below. Some figures are divided into rectangles for you with dotted lines. Show all your work.

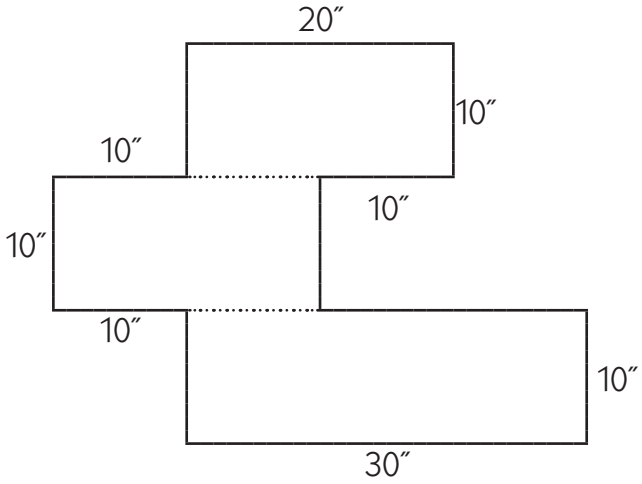
1 Area = _____



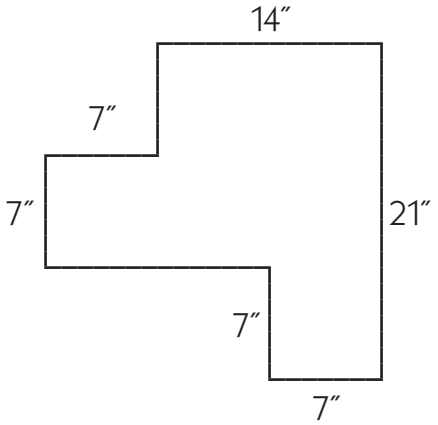
2 Area = _____



3 Area = _____



4 Area = _____



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What's the Rule?

For each pattern, fill in what comes next. Then use words to describe the rule that makes each pattern.

ex	**a** Pattern 1, 4, 7, 10, 13, 16, 19
	b Rule Add 3 each time.
1	**a** Pattern 3, 6, 12, _____, _____, _____
	b Rule
2	**a** Pattern 16, 8, 4, _____, _____, _____
	b Rule
3	**a** Pattern 6.13, 7.26, 8.39, _____, _____, _____
	b Rule
4	**a** Pattern $2\frac{1}{8}$, $3\frac{1}{4}$, $4\frac{3}{8}$, $5\frac{1}{2}$ _____, _____, _____
	b Rule
5	**a** Pattern $\frac{18}{9}$, $\frac{15}{9}$, $1\frac{1}{3}$, 1, _____, _____, _____
	b Rule

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Ounces, Cups, Pints, Quarts & Gallons

1 Fill in the following equivalencies for measurements of capacity.

a There are _____ fluid ounces in 1 cup.

b There are _____ cups in 1 pint.

c There are _____ pints in 1 quart.

d There are _____ cups in 1 quart.

e There are _____ quarts in 1 gallon.

f There are _____ pints in 1 gallon.

2 Ben filled his lawn mower's gas tank. It holds 5 gallons of gas. How many fluid ounces is that? Show all your work.

CHALLENGE

3 Jenny has a big watering can that holds 2 gallons of water. She filled it up and then used $\frac{3}{4}$ of the water to water the plants on her front porch. Then she went to the back porch. On the way, she poured 2 more quarts of water into the watering can. She used 1 pint of the water to water the plants on her back porch. How much water was left in her watering can? Show all your work.

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Grade 4 Practice Book

ANSWER KEY

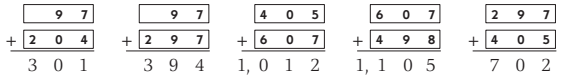
Use after Unit One, Session 10

Page 1, Multi-Digit Addition Review

1 327; 779; 962; 1,177
829; 1,513; 1,346; 7,818

2 **a** 1,262
b 1,896

3 (challenge)



Page 2, Addition Story Problems

1 561 pounds of apples

2 3,164 people

3 (challenge) 30,300 feet

Page 3, Multi-Digit Subtraction Review

1 135; 2,241; 91; 2,381
3,632; 6,192; 188; 2,918

2 **a** 38
b 7,293

3 **a** (challenge) 301 – 34 = 267 (This is just one possible solution; there are many.)
b (challenge) 674 – 352 = 322 (This is just one possible solution; there are many.)
c (challenge) 860 – 341 = 519

Page 4, Subtraction Story Problems

1 52 breakfast sandwiches

2 5,961 bags of potato chips

3 (challenge) 11,916 people were still at the game

Page 5, Add, Subtract & Multiply

1 $3.99; $27.26; $50.71; $15.17
$2.51; $1.58; $47.73; $1.78

2 **a** $7.11
b $502.43

3 24, 20, 27, 14, 0, 6
24, 28, 32, 0, 49, 20

Page 6, Shopping Problems

1 $5.34

2 $1.83

3 (challenge) $41.10

Page 7, Addition, Subtraction & Clock Problems

1 972; 904; 7,106; 575
3,918; 697; 2,198; 5,666

2 **a** 25 minutes
b 20 minutes
c (challenge) 15 minutes

Page 8, Miles, Books & Jellybeans

1 587 miles

2 385 books

3 (challenge) 783 jellybeans

Page 9, Round 'Em Up!

1 6,814; 1,006; 7,045; 4,275

2 **a** 50
b 50
c 40
d 90
e 120
f 860
g 270
h 990
i 1,250
j 2,050

3 **a** 200
b 300
c 800
d 400
e 100
f 200
g 800
h 400
i 700

4 **a–e** (challenge) Solutions will vary.

Page 10, Centimeters, Decimeters & Meters

1 **a** 280 centimeters
b 28 decimeters

2 **a** 200
b 20
c 2

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Use after Unit One, Session 10 (cont.)

Page 10, Centimeters, Decimeters & Meters (cont.)

3 **a** (challenge) Sherman crawled 237 cm farther than Sidney.

b (challenge) Explanations will vary. Example: *Sidney was faster because he would have gone 5 meters or 500 cm in an hour.*

Use after Unit One, Session 21

Page 11, Multiplication & Division Facts

1 24, 16, 42, 30, 24, 18, 0
8, 36, 36, 40, 15, 63, 48
9, 6, 9, 4
2, 6, 2, 7

2 18, 20, 35, 32, 64
2, 5, 3, 5, 8

3 (challenge) Responses will vary. Example: *Since 16 is 2 × 8, you can multiply the answer to 4 × 8 by 2 to get 4 × 16. 4 × 8 = 32 and 32 × 2 = 64, so 4 × 16 = 32.*

Page 12, Sandwiches, Pizza & Books

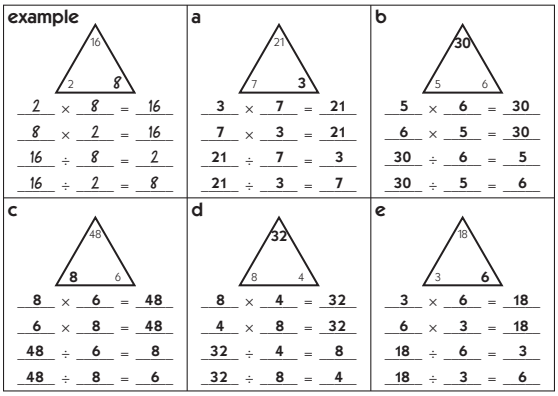
1 $18

2 4 pieces of pizza

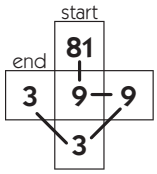
3 (challenge) 12,706 books

Page 13, All in the Family

1

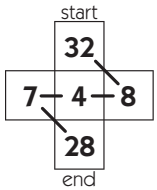


2 **a** (challenge)



81 ÷ 9 = 9
9 ÷ 3 = 3

b (challenge)



32 ÷ 8 = 4
4 × 7 = 28

Page 14, Flowers, Shells & Cards

1 24 flowers

2 6 shells

3 (challenge) 6 bundles

Page 15, Multiples & Multiplication Facts

1 **a** 9, 21

b 12, 24

c 27, 54

2 **a** 6, 8, 14, 10 should be circled.

b 8, 16, 20, 28 should be circled.

c 21, 14, 42, 35 should be circled.

d 32, 48, 16, 72 should be circled.

e 21, 18, 36, 12 should be circled.

3 81, 27, 16, 12, 56
8, 2, 6, 9, 4
(challenge) 12, 24, 48, 96, 192

Page 16, Tasty Treats

1 40 milkshakes

2 There are two possible answers:
2 cookies each, with 3 cookies left over OR
$2\frac{1}{2}$ cookies each

3 (challenge) 197 pounds of vegetables

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ANSWER KEY

Use after Unit One, Session 21 (cont.)

Page 17, Arrays & Factors

1

a 16

8 × 2

2 × 8 = 16
8 × 2 = 16
16 ÷ 8 = 2
16 ÷ 2 = 8

(A 4 × 4 square accompanied by the appropriate equations is also acceptable.)

b 18

6 × 3

3 × 6 = 18
6 × 3 = 18
18 ÷ 6 = 3
18 ÷ 3 = 6

(A 2 × 9 rectangle accompanied by the appropriate equations is also acceptable.)

2 **a** 1, 2, 4, 8, 16
b 1, 17
c 1, 2, 3, 4, 6, 8, 12, 24
d 1, 3, 9
e 1, 2, 3, 4, 6, 9, 12, 18, 36

3 **a** 17 should be circled.
b 16, 9, and 36 should have squares around them.

4 **a** (challenge) 306 + 398 = 704
b (challenge) 623 – 446 = 177

Page 18, The Big Race & the Walk-a-Thon

1 3 hours

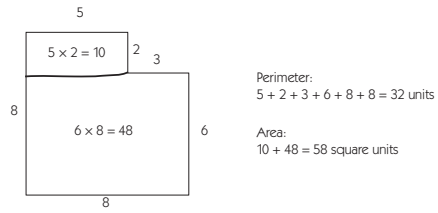
2 30 kilometers

3 4 groups of 8, or 8 groups of 4, or 16 groups of 2.

Page 19, Area & Perimeter

1 **a** Perimeter: 4 + 4 + 4 + 4 = 16 units;
Area: 4 × 4 = 16 square units
b Perimeter: 4 + 4 + 6 + 6 = 20 units;
Area: 4 × 6 = 24 square units
c Perimeter: 3 + 3 + 7 + 7 = 20 units;
Area: 3 × 7 = 21 square units

2 (challenge) Perimeter = 32 units
Area = 58 square units
Students' work will vary. Example:



Page 20, Area & Perimeter Story Problems

1 **a** 72 square feet
b 34 feet

2 **a** 28 square feet
b 22 feet

3 1,500 feet

Use after Unit Two, Session 10

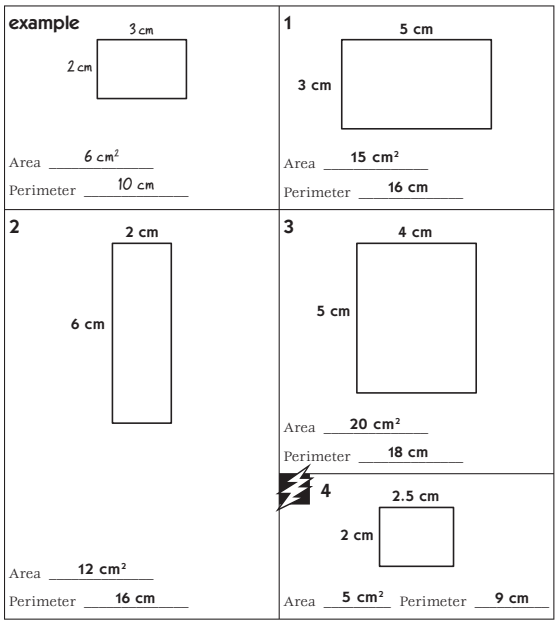
Page 21, Place Value & Perimeter

1 **a** 9,248
b 17,633
c 32,058

2 **a** Hundreds, six hundred
b Hundreds, zero
c Ten thousands, forty thousand

3 **a** 720 inches
b 962 inches

Page 22, Measuring to Find Area & Perimeter



Page 23, Multiplication & Division Practice

1 21, 16, 36, 25, 8, 54, 12
8, 4, 2, 8
6, 5, 8, 6

2 63, 0, 49, 5, 40
6, 8, 8, 4, 6

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ANSWER KEY

Use after Unit Two, Session 10 (cont.)

Page 23, Multiplication & Division Practice (cont.)

3 40; 400; 4,000; 70; 700; 7,000
800; 50; 6,000; 20; 900; 0

4 (challenge) 100, 8, 10

Page 24, Multiplication & Division Story Problems

1 700 bags of dried apples

2 20 miles

3 6,000 footballs

4 (challenge) Students' work will vary. Possible equal groups are:

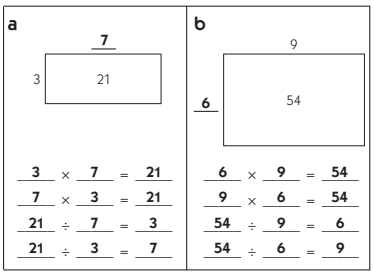
- 4 groups of 25 seashells
- 5 groups of 20 seashells
- 10 groups of 10 seashells
- 20 groups of 5 seashells
- 25 groups of 4 seashells
- 50 groups of 2 seashells

Page 25, Expanded Notation & Fact Families

1 **a** 20,456
b 32,112
c 7,046
d 96,035
e 63,007
f 13,855
g 50,305

2 **a** 1,000
b 300
c 7,000
d 30
e 400
f 60
g 400

3



Page 26, Money & Stadium Seats

1 $65.00

2 2504 empty seats

3 (challenge) $1,335.00 more

Page 27, Time after Time

1 Clock hands should show 7:35.

2 Clock hands should show 9:50.

3 Clock hands should show 5:20.

4 (challenge) Responses will vary. Example: *Clock hands that show 4:15 on the first clock and 5:40 on the second clock*

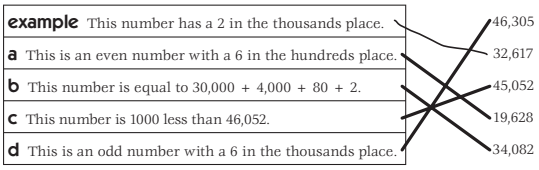
Page 28, Time & Distance Problems

1 **a** 1 hour and 10 minutes
b (challenge) 3:55 pm

2 **a** 1,000 centimeters each hour
b 10 meters
c (challenge) 15 meters; explanations will vary. Example: *Half of 10 is 5, so the spider will crawl 5 more meters in 1 and a half hours.*

Page 29, Number Riddles

1



2 **a** Thirty-three thousand, seventy-two
b Eighty-six thousand, one hundred five
c Seventy-four thousand, six hundred twenty-nine

3 (challenge) Answers will vary. Example: *5,730*

Page 30, The Arcade & the Animal Shelter

1 **a** Responses will vary. Example: *How much money does Rene have?*
b $2.25

2 **a** Responses will vary. Example: *How much money did Lin get for the shelter?*
b 75¢

Use after Unit Two, Session 21

Page 31, Counting Coins & Bills

1 **a** $0.66
b $0.50
c $0.17
d $0.75
e $0.61

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ANSWER KEY

Use after Unit Two, Session 21 (cont.)

Page 31, Counting Coins & Bills (cont.)

2 **a** $3.47
b $1.74
c $1.12
d $5.85
e $3.91
f (challenge) $7.97
g (challenge) $16.45

Page 32, How Much Change?

1 $3.35
2 $6.11
3 (challenge) $4.06

Page 33, Multiplying with Money

1 **a** 75; students' work will vary.
b 105; students' work will vary.
2 **a** (challenge) 310; students' work will vary.
b (challenge) 315; students' work will vary.

Page 34, Money & Miles Per Hour

1 $60.00
2 39 miles
3 (challenge) $300.00

Page 35, Fill the Frames

1 10 5 4 | 4 x 10 = 40 | 4 x 5 = 20	40 + 20 = 60	4 x 15 = 60
2 10 7 3 | 3 x 10 = 30 | 3 x 7 = 21	30 + 21 = 51	3 x 17 = 51
3 10 6 5 | 5 x 10 = 50 | 5 x 6 = 30	50 + 30 = 80	5 x 16 = 80

Page 36, Apricots & Carrots

1 $1.35
2 $2.25
3 (challenge) 3 loads of laundry

Page 37, Addition & Multiplication Puzzles

1 **a**

			225
66	13	**100**	179
80	**50**	30	160
75	13	50	**138**
			166

2 **a**

			60
100	**2**	3	600
4	**2**	1,000	8,000
10	3	2	60
			400

3 **a** 2
b 10
c 8
d 2
e 100

Page 38, Candy & Video Games

1 **a** Responses will vary. Example: *How much money did Joya spend in all?*
b $2.24
2 **a** Responses will vary. Example: *How much money does Devante need?*
b $139.00

Page 39, Multiplication Puzzles

1

			60
3	**5**	**5**	75
7	2	**3**	42
6	2	**6**	72
			36

ANSWER KEY

Use after Unit Two, Session 21 (cont.)

Page 39, Multiplication Puzzles (cont.)

2

			60
5	5	**3**	75
3	4	5	60
5	5	**6**	150
			120

3

			100
4	**8**	5	160
2	5	**5**	50
4	3	**4**	48
			80

4 (challenge)

			240
7	2	20	280
5	**3**	4	60
4	6	**3**	72
			63

5 (challenge)

			120
3	**30**	**4**	360
7	6	10	420
5	25	**2**	250
			36

Page 40, The Information You Need

1 Emilio has $125. He wants to buy a new video game system that ~~usually costs $312 but~~ is on sale for $289. He wants to borrow money from his brother so that he can buy it while it is on sale. How much money will Emilio need to borrow to buy the game system while it is on sale?

- **a** Responses will vary. Example: *How much money does Emilio need to borrow?*
- **b & c** See above.
- **d** $164.00

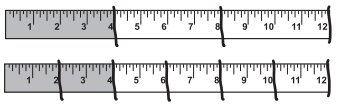
2 ~~Marie had a $5 bill, three $1 bills, 2 quarters, and 3 pennies in her pocket.~~ She bought a bottle of juice for 89¢ and an apple for 65¢. If she paid with two $1 bills, how much change did she get back?

- **a** Responses will vary. Example: *How much change did Marie get?*
- **b & c** See above.
- **d** 46¢

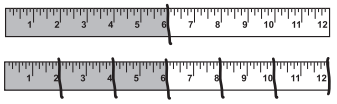
Use after Unit Three, Session 10

Page 41, Fractions of a Foot

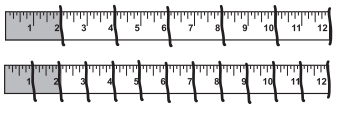
1 **a** $\frac{1}{3}$, $\frac{2}{6}$, $\frac{4}{12}$



b $\frac{1}{2}$, $\frac{3}{6}$, $\frac{6}{12}$



c $\frac{1}{6}$, $\frac{2}{12}$



2 **a** $\frac{4}{6}$, $\frac{2}{3}$

b $\frac{5}{6}$

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ANSWER KEY

Use after Unit Three, Session 10 (cont.)

Page 41, Fractions of a Foot (cont.)

2 **c** $^{2}/_{2}$, $^{3}/_{3}$, $^{4}/_{4}$, $^{6}/_{6}$, $^{12}/_{12}$

d $^{4}/_{12}$, $^{1}/_{3}$

e $^{8}/_{12}$, $^{4}/_{6}$

Page 42, More Fractions of a Foot

1 **a** 6
b 3
c 2
d 4

2 **a** $^{1}/_{3}$ should be circled (4 inches, 3 inches)
b $^{2}/_{3}$ should be circled (8 inches, 6 inches)
c $^{1}/_{2}$ and $^{3}/_{6}$ should be circled (both are 6 inches)
d $^{3}/_{4}$ should be circled (8 inches, 9 inches)
e $^{2}/_{3}$ should be circled (3 inches, 8 inches)

3 **a** 1, 2, 3, 4, 6, 12
b 1, 3, 5, 15
c 1, 2, 3, 4, 6, 9, 12, 18, 36
d 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
e (challenge) 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60, 120

Page 43, Comparing Fractions on a Number Line

1 **a** $^{2}/_{3}$ should be circled; $^{2}/_{3} > {}^{2}/_{6}$
b $^{5}/_{6}$ should be circled; $^{5}/_{6} > {}^{1}/_{3}$

2 **a** $^{3}/_{4}$ should be circled; $^{3}/_{4} > {}^{2}/_{3}$
b $^{5}/_{6}$ should be circled; $^{5}/_{6} > {}^{2}/_{3}$
c $^{5}/_{6}$ should be circled; $^{5}/_{6} > {}^{3}/_{4}$

Page 44, Egg Carton Fractions

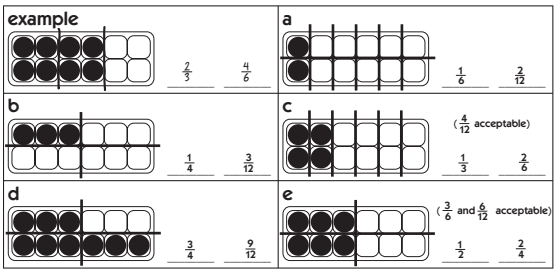
1 6, 4, 3, 2
18, 8, 9, 10

2 **a** $^{2}/_{6}$
b $^{1}/_{4}$
c $^{1}/_{2}$
d $^{5}/_{6}$
e $^{3}/_{4}$
f $^{4}/_{6}$

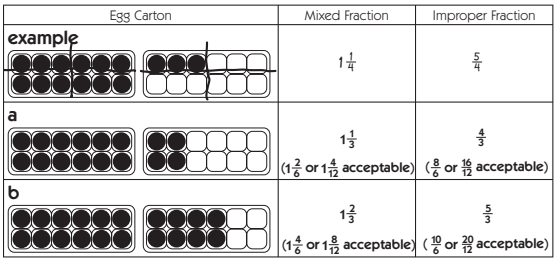
3 **a** $^{4}/_{6} = {}^{2}/_{3}$
b $^{1}/_{3} > {}^{1}/_{4}$
c $^{3}/_{4} < {}^{5}/_{6}$
d $^{1}/_{3} < {}^{3}/_{4}$
e $^{1}/_{2} = {}^{2}/_{4}$
f $^{2}/_{3} < {}^{3}/_{4}$
g $^{2}/_{6} = {}^{1}/_{3}$

Page 45, More Egg Carton Fractions

1



2



Page 46, Comparing & Ordering Fractions

1 $^{1}/_{4}$, $^{1}/_{3}$, $^{1}/_{2}$, $^{2}/_{3}$, $^{3}/_{4}$, $^{3}/_{2}$, $^{5}/_{3}$, $^{7}/_{4}$

2 $^{1}/_{4}$, $^{1}/_{2}$, $1^{3}/_{4}$, $2^{1}/_{4}$, 3

3 $^{2}/_{3}$, 2, $2^{1}/_{3}$

4 (challenge) $^{8}/_{9}$; explanations will vary. Example: *$^{3}/_{4}$ is $^{1}/_{4}$ less than 1. $^{8}/_{9}$ is $^{1}/_{9}$ less than 1. $^{1}/_{4}$ is more than $^{1}/_{9}$, so $^{3}/_{4}$ must be less than $^{8}/_{9}$.*

5 (challenge) $^{5}/_{4}$; explanations will vary. Example: *$^{5}/_{4}$ is the same as $1^{1}/_{4}$. $^{10}/_{9}$ is the same as $1^{1}/_{9}$. $^{1}/_{4} > {}^{1}/_{9}$, so $^{5}/_{4} > {}^{10}/_{9}$.*

Page 47, Fractions & Mixed Numbers on a Number Line

1 **a** $^{3}/_{2}$
b $1^{2}/_{4}$ ($1^{1}/_{2}$ is also acceptable)
c $1^{1}/_{2}$
d $3^{1}/_{4}$
e $^{5}/_{2}$
f $^{8}/_{4}$

2 (challenge) $^{1}/_{2}$

3 (challenge) $1^{1}/_{2}$

4 (challenge) $8^{1}/_{2}$

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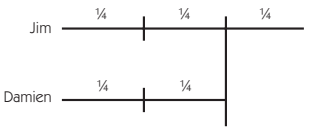
Use after Unit Three, Session 10 (cont.)

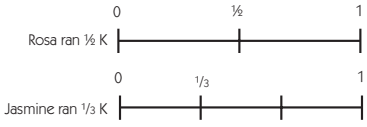
Page 48, Fraction Story Problems

1 Jim's string is $\frac{1}{4}$ of a foot longer than Damien's. Student work will vary. Example:

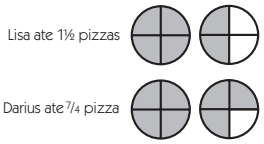


Jim's string = ¾ of a foot
Damien's string = ½ of a foot
Jim's string is ¼ of a foot longer than Darien's.

2 Rosa ran further than Jasmine. Student work will vary. Example:



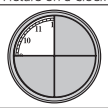
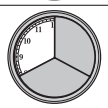
3 (challenge) Darius ate $\frac{1}{4}$ more of a pizza than Lisa did. Student work will vary. Example:



Page 49, Clock Fractions

1 **a** 30
b 20
c 15
d 10

2 Note: *Other shadings are possible.*

Fractions	Picture on a Clock	How Many Minutes?
a $\frac{3}{4}$		45 minutes
b $\frac{2}{3}$		40 minutes
c $\frac{1}{6}$		10 minutes

Page 50, Time & Fractions

1 **a** Mai spent more time doing homework. (10 more minutes) Students' work will vary.
b 5:15; students' work will vary.
c 5:25; students' work will vary.

2 (challenge) It takes 10 more minutes to get to Ashley's aunt's house.

Use after Unit Three, Session 20

Page 51, Multiplication Tables

1 **a** 15, 6, 27, 9, 24, 18, 21, 12
b 20, 8, 36, 12, 32, 24, 28, 16
c 40, 16, 72, 24, 64, 48, 56, 32

2 8, 9, 4, 4
8, 8, 3, 3

3 (challenge) Answers will vary. Example: *376*

4 (challenge) Answers will vary. Example: *2 × 376 = 752*

Page 52, Fractions & Division

1 **a** $\frac{1}{2}$
b $\frac{1}{4}$
c $\frac{1}{6}$

2 Each friend got $\frac{1}{3}$ of the cookie.

3 Each friend got $\frac{4}{3}$ or $1\frac{1}{3}$ cookies.

Page 53, More Multiplication Tables

1 32, 30, 49, 48, 36
7, 7, 5, 7, 9

2 **a** 50, 20, 90, 30, 80, 60, 70, 40
b 25, 10, 45, 15, 40, 30, 35, 20
c 45, 18, 81, 27, 72, 54, 63, 36

3 (challenge) 120, 60, 108, 180, 90, 162

Page 54, Classroom Groups

1 Each student got 3 erasers, and there were 2 erasers left over.

2 **a** 27 students
b (challenge) 9 groups of 3

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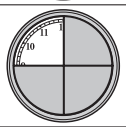
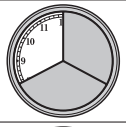
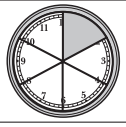
ANSWER KEY

Use after Unit Three, Session 20 (cont.)

Page 55, Fractions of an Hour

Note: *Other shadings are possible.*

1 $\frac{1}{3}$		20 minutes
2 $\frac{3}{4}$		45 minutes
3 $\frac{2}{3}$		40 minutes
4 $\frac{1}{6}$		10 minutes

Page 56, More Time & Distance Problems

1 $^1/_4$ of an hour; 15 minutes

2 (challenge) 9 feet

Page 57, Fractions & Divison Tables

1 **a** $^3/_4 < {}^5/_6$

b $^2/_3 = {}^4/_6$

c $^5/_3 > {}^5/_4$

d $^2/_3 < {}^3/_2$

e $^1/_3 < {}^3/_6$

2 **a** 9, 2, 8, 3, 5, 6, 4

b 6, 7, 5, 2, 9, 4, 8

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

Page 58, Sharing Problems

1 $9.50

2 8 shells each, with 2 shells left over

3 (challenge) 120 blocks

Page 59, Division Tables & Equivalent Fractions

1 **a** 8, 3, 4, 9, 7, 6, 5

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

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

2 **a** $^1/_4$, $^3/_{12}$

b $^1/_2$, $^2/_4$, $^3/_6$, $^6/_{12}$

c $^3/_4$, $^9/_{12}$

d $^5/_6$, $^{10}/_{12}$

e $^1/_3$, $^2/_6$, $^4/_{12}$

Page 60, Packages & Pizza

1 3 packages of muffins

2 10 packages of tennis balls (2 balls left)

3 (challenge) $2^1/_4$ pizzas

Use after Unit Four, Session 10

Page 61, Multiplying by 10, 100 & 1,000

1 50, 70, 400, 900

7,000; 6,000; 90; 5,000; 300

2 80; 40; 700; 500

3,000; 5,000; 1,000; 6

5, 8, 100, 10

(challenge) 1,000,000; 10; 100

Page 62, Money & Minutes

1 Brianna earns $1,000 per month at her job. ~~She used to make $800 per month~~. If she works only for the months of June, July, and August, how much money will she make?

a Responses will vary. Example: *How much money will Brianna make in 3 months?*

b & c See above.

d $3,000

2 ~~Jonah is 18 years old~~. It takes him 50 minutes to ride his bike to work and 50 minutes to ride his bike home every day. If he worked 6 days last week, how many minutes did he spend riding his bike to and from work?

a Responses will vary. Example: *How many minutes did Jonah spend riding his bike?*

b & c See above.

d 600 minutes

e (challenge) 10 hours

Page 63, Writing Improper Fractions as Mixed Numbers

1 35; 350; 350, 3,500

12; 120; 120; 1,200

56; 560; 560, 5,600

2 1, $1^1/_3$, $1^2/_3$

1, 1, $1^6/_{12}$ ($1^1/_2$ also acceptable)

1, 2, $1^2/_6$, ($1^1/_3$ acceptable), $1^3/_6$ ($1^1/_2$ acceptable)

(challenge) $1^1/_4$, 2, $3^3/_4$, 9

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ANSWER KEY

Use after Unit Four, Session 10 (cont.)

Page 64, Area Problems

1 2,400 square inches

2 4,000 square feet

3 (challenge) 6,100 square inches

Page 65, Multiplication & Division Puzzles

1 6, 3, 9, 8, 5
2, 5, 4, 6, 9

2 **a** 81 ÷ 9 = 9
9 × 4 = 3
36 ÷ 6 = 6
6 × 7 = 42

start

81	6	36
6	9	4
7	42	9

end

b 1 × 2 = 2
2 × 9 = 18
18 ÷ 3 = 6
6 ÷ 3 = 2

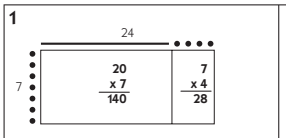
start end

1	3	2
6	2	9
3	18	2

3 (challenge) 10, 4, 2, 3, 9, 90, 30, 20

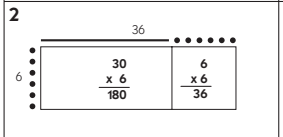
Page 66, Using Partial Products to Solve Multiplication Problems

1



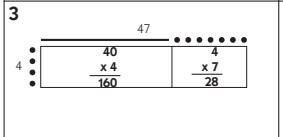
24
× 7
7 x 20 = 140
7 x 4 = + 28
168

2



36
× 6
6 x 30 = 180
6 x 6 = + 36
216

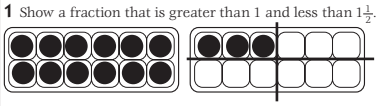
3



47
× 4
4 x 40 = 160
4 x 7 = + 28
188

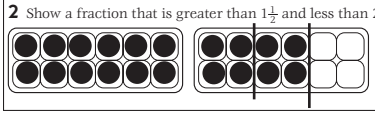
Page 67, Greater Than & Less Than

1 Show a fraction that is greater than 1 and less than $1\frac{1}{2}$.



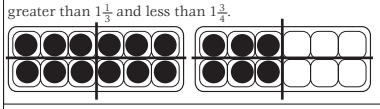
Answers will vary.
Example: $1\frac{1}{4}$

2 Show a fraction that is greater than $1\frac{1}{2}$ and less than 2.



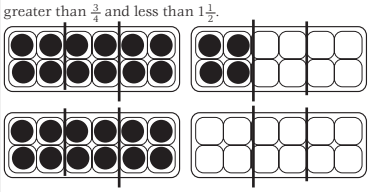
Answers will vary.
Example: $1\frac{2}{3}$ or $1\frac{4}{6}$

3 Show a fraction with 4 in the denominator that is greater than $1\frac{1}{3}$ and less than $1\frac{3}{4}$.



$\frac{6}{4}$ or $1\frac{2}{4}$

4 Show a fraction with 3 in the denominator that is greater than $\frac{3}{4}$ and less than $1\frac{1}{2}$.



$\frac{4}{3}$ or $1\frac{1}{3}$

$\frac{3}{3}$
also acceptable

Page 68, Using the Standard Multiplication Algorithm

1 **a** 258
b 112
c 236
d 111
e 252
f 264
g 340

2 **a** 411
b 2,674
c 2,910
d 584
e 1,392
f 715
g 2,030
h (challenge) 6,215
i (challenge) 14,124
j (challenge) 17,300
k (challenge) 31,302

Page 69, Two Different Multiplication Methods

1 **a** 224
b 235
c 168
d 2,247

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ANSWER KEY

Use after Unit Four, Session 10 (cont.)

Page 69, Two Different Multiplication Methods (cont.)

1 **e** 2,892

f 777

2 Ramon bought 8 big cases of breakfast cereal. Each case held 12 boxes of cereal. ~~Each box of cereal held 18 oz. of cereal~~. How many boxes of breakfast cereal did Ramon buy?

a Responses will vary. Example: *How many boxes of cereal did Ramon get?*

b & c See above.

d 96 boxes of cereal

Page 70, Kylie's Babysitting Money

1 Kylie earns $8 an hour babysitting. ~~She babysat 21 hours last month~~. This month, she babysat 17 hours more than last month. How much more money did she earn this month?

a Responses will vary. Example: *How much more money did Kylie earn this month than she did last month?*

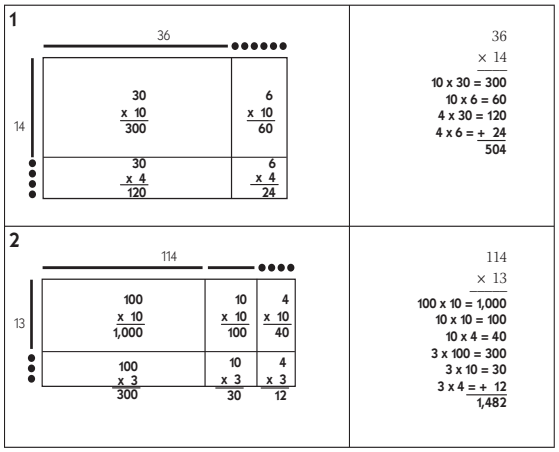
b & c See above.

d $136

2 (challenge) 32 hours; student work will vary.

Use after Unit Four, Session 21

Page 71, More Partial Products



Page 72, Toothpicks & Leaves

1 ~~Last year, there were 26 students in Mrs. Coleman's class~~. This year, there are 28 students in her class. They are doing an art project, and every student needs 17 toothpicks. How many toothpicks will they need altogether?

a Responses will vary. Example: *How many toothpicks do the kids need for the project?*

b & c See above.

d 476 toothpicks

2 ~~Leo is 11 years old~~. His neighbors pay him $12 to rake the leaves in their yards. He raked 23 yards in October and 15 yards in November. How much money did he earn in those two months?

a Responses will vary. Example: *How much money did Leo earn in 2 months?*

b & c See above.

d $456

Page 73, Reasonable Estimates & Partial Products

1 **a** 400 (first bubble)

b 600 (first bubble)

c 6,000 (third bubble)

d 3,000 (third bubble)

2 **a** 1,242

b 1,548

c 1,943

d 2,183

e 2,632

Page 74, Multiplication Story Problems

1 728 desks

2 1,750 sit-ups

3 (challenge) 672 seats

Page 75, Multiplication Round & Check

1 200; 300; 600; 400; 500; 2,000; 3,000; 6,000

2 **a** Estimate: 400; Solution: 369

b Estimate: 300; Solution: 288

c Estimate: 200; Solution: 216

d Estimate: 600; Solution: 504

e Estimate: 600; Solution: 726

f Estimate: 2,000; Solution: 1,854

g (challenge) Estimate: 3,600; Solution: 3,936

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Use after Unit Four, Session 21 (cont.)

Page 76, Cherry Tomatoes & Cafeteria Tables

1 ~~Farmer Sara drives 32 miles each week~~ to take baskets of vegetables to her customers. She put 16 cherry tomatoes into each basket. She filled 23 baskets. How many cherry tomatoes did she use altogether?

- **a** Responses will vary. Example: *How many cherry tomatoes did it take to fill all the baskets?*
- **b & c** See above.
- **d** 368 cherry tomatoes

2 There are 24 tables in the cafeteria, and each table seats 17 students. ~~The cafeteria serves lunch from 11:45 am until 12:25 pm~~. How many students can sit in the cafeteria at a time?

- **a** Responses will vary. Example: *How many kids can sit in the cafeteria at the same time?*
- **b & c** See above.
- **d** 408 students

Page 77, Using the Standard Algorithm & Partial Products to Multiply

1 900; 1,200; 1,600; 4,000; 6,000; 8,000

2
- **a** 1,044
- **b** 1,634
- **c** 4,092
- **d** 7,245

Page 78, Raffle Tickets & Exercise Minutes

1 The middle school was giving away raffle tickets at Back to School Night. There were 48 classrooms altogether and ~~896 students at the school~~. Each classroom got a bundle of 108 tickets to give away. How many tickets did the classrooms get altogether?

- **a** Responses will vary. Example: *How many tickets were there to give away in all?*
- **b & c** See above.
- **d** 5,184 tickets

2 Deja exercises four days a week at the gym. ~~The gym is 7 blocks away from her house~~. Each time, she spends 45 minutes exercising. If she does this for 13 weeks, how much time will she spend exercising altogether?

- **a** Responses will vary. Example: *How many minutes will Deja spend exercising in 13 weeks?*
- **b & c** See above.
- **d** 2,340 minutes
- **e** (challenge) 39 hours and 0 minutes

Page 79, Using the Standard Algorithm to Multiply Large Numbers

1 4,800; 5,600; 6,400; 6,000; 12,000; 18,000

2
- **a** 5,928
- **b** 5,760
- **c** 4,602
- **d** 7,631
- **e** 15,652

Page 80, Bread & Paper

1 480 loaves of bread

2
- **a** (challenge) 12" × 8" or 4" × 24"
- **b** (challenge) 96 square inches

Use after Unit Five, Session 10

Page 81, More Fractions & Division

1
- **a** $\frac{1}{4}$
- **b** $\frac{3}{4}$
- **c** $\frac{1}{8}$
- **d** $\frac{3}{8}$
- **e** $\frac{5}{8}$
- **f** $\frac{1}{3}$
- **g** $\frac{2}{3}$

2 12, 6, 3, 8
120, 60, 30, 80

3
- **a** 8
- **b** 3
- **c** 6
- **d** 80
- **e** 120
- **f** 30
- **g** 60
- **h** (challenge) 18
- **i** (challenge) 160

Page 82, Favorite Fruit Graph

1 Watermelon

2 Peaches

3 Apples and strawberries

4 120 students

5 60 students

6 30 students

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ANSWER KEY

Use after Unit Five, Session 10 (cont.)

Page 83, Spinner, Tile & Marble Fractions

1 **a** $1/2$
b $1/4$
c $1/3$
d $1/8$

2 **a** $2/8$ ($1/4$ acceptable also)
b $2/6$ ($1/3$ acceptable also)
c $3/6$ ($1/2$ acceptable also)
d $6/8$ ($3/4$ acceptable also)

3 **a** $3/9$ ($1/3$ acceptable also)
b $1/6$
c $3/10$

Page 84, Probability Experiments

1 $2/8$ or $1/4$ (Other acceptable answers include: 2 out of 8 chances, 1 out of 4 chances.)

2 Chris has a better chance of getting a gray tile from the large bowl than the small bowl. Explanations will vary. Example: *Half the tiles in the large bowl of 240 are gray because 120 is half of 240. Only $2/8$ or $1/4$ of the tiles in the small bowl are gray. So his chances are only 2 out of 8, which is less than 1 out of 2.*

3 $2/10$ or $1/5$ (Other acceptable answers include: 2 out of 10 chances, 1 out of 5 chances.)

4 **a** (challenge) 4 would need to be black. Explanations will vary. Example: *20 is twice as much as 10. If you want the chances to stay the same, you have to double the number of black marbles.*
$2 \times 2 = 4$.
b (challenge) 20 would need to be black. Explanations will vary. Example: *2 is $1/5$ of 10. 20 is $1/5$ of 100. The chances have to be 2 out of 10, or $1/5$.*

Page 85, Eating Our Vegetables

1 **a** 2 students
b 16 students
c 13 students
d Tuesday, Wednesday, and Friday
e (challenge) Friday; explanations will vary. Example: *$1/3$ of 24 is 8, so $2/3$ of 24 would be 16. Sixteen kids ate vegetables on Friday.*

2 100 students; explanations will vary. Example:
$1/4 + 1/3 = 7/12$
$12/12 - 7/12 = 5/12$
$240 \div 12 = 20$
$20 \times 5 = 100$

Page 86, Fair Spinners

1 **a** Choice 3, the half and half spinner
b Yes; explanations will vary. Example: *4 parts of the spinner are labeled A and 4 parts are labeled B. The parts are the same size, so it's fair.*

2 **a** Responses will vary. Example: *If you split the spinner into 3 equal parts, each boy has an equal chance.*

2 **b** Responses will vary. Example: *Split the spinner into 6 equal parts, and give each color 2 parts. That way, each boy has a 2 out of 6 chance of landing on his color.*

Page 87, Multiplication & Division Practice

1 **a** 4,760
b 11,661
c 9,248
d 11,392
e 17,347
f 11,175
g 25,929

2 8, 9, 8
7, 8, 7
8, 3, 6

3 (challenge) 27, 14, 16

Page 88, Area & Perimeter, Time & Money

1 Area = 2,800 square inches
Perimeter =240 inches

2 **a** 10 hours
b $120

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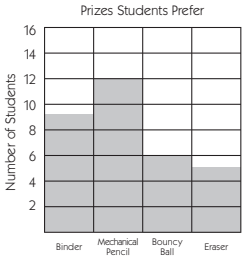
ANSWER KEY

Use after Unit Five, Session 10 (cont.)

Page 89, Prizes for Student Helpers

1



2 **a** $24.95
b $40.00
c $6.50
d $1.25

3 $72.70; students' work will vary.

Page 90, Probability Experiments with Tile & Marbles

1 **a** $^4/_8$ (Other acceptable responses include $^1/_2$, 1 out of 2, half, 4 out of 8.)
b 120; explanations will vary. Example: *4 out of 8 is half, so to keep the probability the same, half the tiles have to be white. Half of 240 is 120.*

2

Problem	Color in the Marbles	Number of Black Marbles
a Ling wants to make a collection of marbles where the chance of pulling out a black marble is $\frac{1}{3}$. Color in some of the 36 marbles to show how many should be black.		12
b Ling wants to change the collection of marbles so that it is twice as likely as it was with the collection above that she will pull out a black marble. Color in some of the 36 marbles to show how many should be black.		24
c Ling wants to change the first collection of marbles so that the chances of pulling out a black marble are half what they were with the first collection. Color in some of the 36 marbles to show how many should be black.		6

Use after Unit Five, Session 18

Page 91, Calendar Problems

1 Answers and explanations will vary. Example: *No. If you check the calendar, it's 7 weeks and 1 day until Hannah's birthday.*

2 Thursday, March 5th

3 Sunday, March 22nd

4 February 26 (third bubble)

5 (challenge) Five Sundays

Page 92, Dog Bone Graph

1 10 bones

2 5 bones

3 Friday

4 35 bones

5 170 bones

6 (challenge) 85 bones

Page 93, Division & Elapsed Time

1 4, 7, 9, 4
9, 8, 9, 4
7, 6, 8, 9

2 5:15

3 4:15

4 1 hour and 10 minutes

5 55 minutes

Page 94, Estimating to Decide if Your Answer Is Reasonable

1 **a** More than 200 dictionaries, but less than 400 (Choice 3)
b 276 dictionaries
c Answers and explanations will vary. Example: *Yes, because 20 × 12 = 240, and 23 × 12 is close to 20 × 12.*

2 28,000; 21,000; 3,600; 16,000,000; 420,000

Page 95, Multi-Digit Multiplication Practice

1 2,100; 2,800; 3,500; 21,000; 28,000

2 **a** 3,796
b 3,264
c 2,412
d 19,684
e 27,560

Page 96, Darryl's Present

1 **a** Estimates will vary. Example: *5 hours*
b Estimates will vary. Example: *10 hours*

2 7 hours

3 Answers will vary. Example: *Yes, because he already made about $100 by working 8 hours. Working 7 hours seems like a good answer because he only needs a little more than $80 more to buy the present.*

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ANSWER KEY

Use after Unit Five, Session 18 (cont.)

Page 97, Enough Information to Solve the Problem?

Problem	Is there enough information to solve the problem?	If there is not enough information, what information is missing?
1 Cody wants to buy a new pair of shoes that cost $65. His neighbors pay him to mow their lawns. If he earns $10 for each lawn, will he have enough money to buy the shoes this week?	**No**	**Answers will vary. Example: How many lawns is he going to mow this week?**
2 Jenna went to the store with a $10 bill. She bought 3 apples that each cost 65¢ and a carton of milk that cost $1.85. How much change will she get back?	**Yes**	**N/A**
3 There are 6 clusters of desks and 22 students in Mr. Fletcher's classroom. How many empty seats are there in his classroom?	**No**	**Answers will vary. Example: How many desks are in each cluster?**
4 Kiyoshi is making bags of art supplies to give away as prizes on Back to School Night. If he puts 3 erasers in each bag, how many bags can he fill?	**No**	**Answers will vary. Example: How many erasers did he start with?**
5 Salvador is making batches of cookies. He baked 6 batches of 8 cookies and a final batch of 4 cookies. How many cookies did he bake altogether?	**Yes**	**N/A**

Page 98, Choosing a Strategy

1 a Answers will vary, but draw a picture makes the best sense.

b Explanations will vary depending on the strategy selected. Example: *I chose "draw a picture" because the problem is about shapes. It seems easiest to solve the problem with a picture.*

c Width = 5 cm; length = 7 cm

d Responses will vary.

Page 99, Find the Missing Information

1 a The bread cost $2. (second bubble)

b $3.70

2 a Lisa's room is 9 ft. by 11 ft. (second bubble)

b Lisa will need 25 packages of carpet squares, even though there will be one square left over. It will cost her $125.

Page 100, Family Math Night

1 a Estimates will vary. Example: *6:15*

b 6:05

c Answers will vary. Example: *Yes, because $1\frac{1}{2}$ hours plus 20 minutes is about 2 hours, and 45 minutes more is almost 3 hours. If it took 3 hours, they would finish at 6:30, but it was a little less than 3 hours.*

Use after Unit Six, Session 10

Page 101, Fractions & Mixed Numbers

1 a $\frac{1}{4}$, $\frac{2}{8}$

b $\frac{3}{4}$, $\frac{6}{8}$

c $\frac{1}{3}$, $\frac{2}{6}$

d $\frac{2}{3}$, $\frac{4}{6}$

e $\frac{2}{2}$, $\frac{4}{4}$

2 a $\frac{9}{4}$, $2\frac{1}{4}$ ($\frac{18}{8}$, $2\frac{2}{8}$ also acceptable.)

b $\frac{7}{3}$, $2\frac{1}{3}$ ($\frac{14}{6}$, $2\frac{2}{6}$ also acceptable.)

c $\frac{5}{3}$, $1\frac{2}{3}$ ($\frac{10}{6}$, $1\frac{4}{6}$ also acceptable.)

3 a $4\frac{1}{2}$

b $2\frac{1}{4}$

c $3\frac{2}{4}$ ($3\frac{1}{2}$ also acceptable.)

d $\frac{7}{2}$

e $\frac{11}{4}$

f (challenge) $20\frac{2}{3}$

g (challenge) $\frac{91}{3}$

Page 102, Pizza Problems

1 Lucy ate $\frac{1}{8}$ of a pizza more.

2 The Suarez family ate $\frac{5}{8}$ of a pizza more.

3 (challenge) $\frac{82}{8}$ is greater than $\frac{37}{4}$. Explanations will vary.

Page 103, Using Fractions on a Number Line to Solve Problems

1 a Jade

b Lester's

c Table B

2 $\frac{1}{12}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{7}{8}$, $\frac{7}{6}$

3 a $\frac{3}{6} < \frac{3}{4}$

b $\frac{5}{6} > \frac{3}{4}$

c $\frac{5}{6} > \frac{2}{3}$

d $\frac{5}{4} > \frac{5}{6}$

e $\frac{5}{4} < \frac{4}{3}$

f $\frac{11}{6} > \frac{5}{3}$

g (challenge) $\frac{10}{9} > \frac{101}{100}$

Page 104, Time Conversions

1 a 60

b 60

c 24

d 7

e 365

f 52

2 3,600 seconds

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ANSWER KEY

Use after Unit Six, Session 10 (cont.)

Page 104, Time Conversions (cont.)

3 1,440 minutes

4 36 hours

5 4,380 days (not counting leap years)

6 (challenge) 28,470 days (not counting leap years)

Page 105, Showing Fractions in Simplest Form

1 **a** 1, 2, 4

b 1, 2, 4, 8

c 1, 3

d 1, 2, 3, 6

e 1, 2, 3, 4, 6, 12

2

a $\frac{8}{12}$	1, 2, 4, 8	1, 2, 3, 4, 6, 12	4	$\frac{8}{12} \div \frac{4}{4} = \frac{2}{3}$	$\frac{8}{12} = \frac{2}{3}$
b $\frac{4}{6}$	1, 2, 4	1, 2, 3, 6	2	$\frac{4}{6} \div \frac{2}{2} = \frac{2}{3}$	$\frac{4}{6} = \frac{2}{3}$

Page 106, Weight Conversions

1 **a** 16

b 2,000

2 **a** 240 ounces

b 184 ounces

c 2,800 ounces

d 10,000 pounds

e (challenge) 160,000 ounces

f (challenge) 150 tons

Page 107, Simplifying Fractions

1

a $\frac{9}{12}$	1, 3, 9	1, 2, 3, 4, 6, 12	3	$\frac{9}{12} \div \frac{3}{3} = \frac{3}{4}$	$\frac{9}{12} = \frac{3}{4}$
b $\frac{10}{16}$	1, 2, 5, 10	1, 2, 4, 8, 16	2	$\frac{10}{16} \div \frac{2}{2} = \frac{5}{8}$	$\frac{10}{16} = \frac{5}{8}$

2 **a** $\frac{9 \div 3}{15 \div 3} = \frac{3}{5}$

b $\frac{6 \div 2}{16 \div 2} = \frac{3}{8}$

c $\frac{8 \div 4}{12 \div 4} = \frac{2}{3}$

Page 108, Capacity Conversions

1 **a** 8

b 2

c 2

d 4

e 4

f 8

2 **a** 16 cups

b 128 ounces

c 600 quarts

d 19,200 ounces

Page 109, Fraction Practice

1 $10\frac{1}{4}$, $10\frac{3}{4}$, $11\frac{1}{3}$, $11\frac{2}{3}$

2 **a** 11 miles

b No; explanations will vary. Example: *$11\frac{1}{4}$ miles is closer to 11 than 12.*

c Frank

3 1, 10, 11,

1, 10, 11, $11\frac{2}{3}$,

$11\frac{1}{2}$, $10\frac{1}{3}$, $10\frac{2}{4}$ or $10\frac{1}{2}$, $9\frac{2}{3}$

4 **a** $\frac{6 \div 3}{21 \div 3} = \frac{2}{7}$

b $\frac{8 \div 4}{36 \div 4} = \frac{2}{9}$

Page 110, Length Conversions

1 **a** 12

b 3

c 36

d 5,280

2 **a** 144 inches

b 150 feet

c 1,800 inches

d 42,240 feet

e (challenge) Estimates will vary. Example: *1,750 yards*

f (challenge) 1,760 yards

Use after Unit Six, Session 22

Page 111, Decimals & Fractions

1 **a** Tenths

b Ones

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ANSWER KEY

Use after Unit Six, Session 22 (cont.)

Page 111, Decimals & Fractions (cont.)

1 **c** Hundreds
d Hundredths
e Tenths

2 **a** 6.07
b 265.8

3 **a** 0.7 or .7
b 3.05
c 0.04 or .04
d 4.38
e 1.09
f 1.9

4 **a** 1.12 < 1.2
b 3.5 > 3.48
c 23.81 < 23.85
d 4.50 = 4.5
e 3.06 < 3.65

Page 112, Running Problems

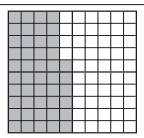
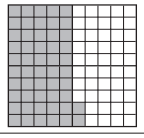
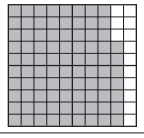
1 **a** 9.56 seconds
b Less than twice as long; explanations will vary. Example: *If it had taken him twice as long to run 200 meters, his time would have been 9.86 + 9.86, which equals 19.72. 19.42 is less than 19.72*

2 Steven is 0.12 seconds away from tying the world record. Students' work will vary.

3 It took her 0.75 seconds longer. Students' work will vary.

Page 113, Using Pictures to Compare Decimals & Fractions

Note: *Other shadings are possible.*

1 0.46		0.46 > $\frac{1}{4}$ 0.46 < $\frac{1}{2}$ 0.46 < $\frac{3}{4}$
2 0.52		0.52 > $\frac{1}{4}$ 0.52 > $\frac{1}{2}$ 0.52 < $\frac{3}{4}$
3 0.87		0.87 > $\frac{1}{4}$ 0.87 > $\frac{1}{2}$ 0.87 > $\frac{3}{4}$

Page 114, From Home to School & Back

1 **a** $0.15
b $3.30

2 **a** 3.4 miles
b (challenge) 17 miles

3 (challenge) 2.95 miles

Page 115, Ordering Decimals & Fractions

1 **a** 0.5
b 0.50
c 0.75
d 0.25
e 0.5 or 0.50
f 0.75
g 1 or 1.0

2 **a**

less than $\frac{1}{4}$	between $\frac{1}{4}$ and $\frac{1}{2}$	between $\frac{1}{2}$ and $\frac{3}{4}$	greater than $\frac{3}{4}$
0.06 0.15	0.28 0.3	0.6 0.71	0.92 0.8

b 0.06, 0.15, 0.28, 0.3, 0.6, 0.71, 0.8, 0.92

3 0.08, 0.23, $^1/_4$, 0.3, $^3/_4$, 0.78, $^9/_{10}$

4 0.02, $^1/_3$, $^5/_4$, $1^1/_2$, 2.25, $^{10}/_4$, 3.6

Page 116, Pencils & Paint

1 No (Keiko needs $2.95 more to buy 5 boxes of pencils)

2 (challenge) $595.20 ($620 if they only buy gallons)

Page 117, Rounding Decimals & Fractions to the Nearest Whole Number

1 0.25, $^3/_4$, 1.05, $^9/_5$

2 0.75, $^7/_5$, $5^7/_{10}$, 7.05

3 **a** 0
b 1
c 2
d 1
e 7
f 6
g 7
h 8

4 **a** (challenge) 38
b (challenge) 74
c (challenge) 27
d (challenge) 401

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Use after Unit Six, Session 22 (cont.)

Page 118, Decimal & Fraction Story Problems

1 Yes; explanations will vary. Example: *2.4 = $2^{4}/_{10}$. $^{4}/_{10}$ > $^{1}/_{4}$, so 2.4 pounds will be more than enough.*

2 No; explanations will vary. Example: *$3^{3}/_{4}$ = 3.75, and .75 > .6, so 3.6 pounds is not enough.*

3 Yes; explanations will vary. Example: *$13^{1}/_{2}$ = 13.5. 13.8 > 13.5, so they can stop now.*

Page 119, Comparing Decimals & Fractions

1

a 0.12 $\frac{2}{10}$	$\frac{12}{100}$ and $\frac{20}{100}$	**0.12** and **0.20**	0.12 < $\frac{2}{10}$
b $\frac{56}{100}$ 0.5	$\frac{56}{100}$ and $\frac{50}{100}$	**0.56** and **0.50**	$\frac{56}{100}$ > 0.5
c 0.04 $\frac{9}{100}$	$\frac{4}{100}$ and $\frac{9}{100}$	**0.04** and **0.09**	0.04 < $\frac{9}{100}$
d $\frac{8}{100}$ 0.3	$\frac{8}{100}$ and $\frac{30}{100}$	**0.08** and **0.30**	$\frac{8}{100}$ < 0.3

2

a $\frac{2}{3}$ < 0.75	**b** 0.5 = $\frac{50}{100}$	**c** 0.7 > $\frac{1}{2}$
d $\frac{8}{10}$ > 0.08	**e** $\frac{9}{100}$ < 0.6	**f** 0.5 > $\frac{3}{16}$
g 4.3 < $\frac{9}{2}$	**h** 3.05 > $\frac{6}{2}$	**i** $\frac{5}{4}$ = 1.25
j 2.50 = $2\frac{1}{2}$	**k** $\frac{10}{5}$ < $2\frac{1}{4}$	**l** $\frac{12}{4}$ > 2.75

3 (challenge)

a 3.5 > $\frac{305}{100}$	**b** $\frac{46}{100}$ > 0.3	**c** 0.29 < $\frac{29}{10}$	**d** $\frac{150}{200}$ > 0.3

Page 120, More Decimal & Fraction Story Problems

1 Yes; explanations will vary.
Example: *1.15 + 1.56 = 2.71. 2.71 is more than $2^{1}/_{2}$ pounds, so Elisa will have enough.*

2 Ming; explanations will vary.
Example: *Ming ran 8.6 miles. Enrico ran $8^{1}/_{2}$ miles. 8.6 > $8^{1}/_{2}$ so Ming ran farther.*

Use after Unit Seven, Session 10

Page 121, Area Problems

1 105 square inches, students' work will vary.

2 210 square inches, students' work will vary.

3 700 square inches, students' work will vary.

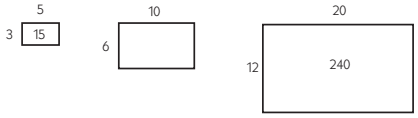
4 (challenge) 294 square inches, students' work will vary.

Page 122, Thinking about Area

1 **a** 9
b 18
c 36
d 72
e Responses will vary. Example: *The area is twice as big.*

2 **a** 128
b 64
c 32
d 16
e Responses will vary. Example: *The area is cut in half each time.*

3 (challenge) Responses will vary. Example: *When you double the length of both dimensions, the area is 4 times as big from one to the next.*



Page 123, Solving Equations

1 **a** 12
b 11
c 8
d 42
e 48
f 86

2 **a** 8
b 20
c 7
d 100
e 5
f 14
g 7
h 7

3 (challenge) Responses will vary. Examples:
a a + *10* = *15*
b *100* = *20* × a
c *50* ÷ a = *10*
d *3* = a – *2*

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Use after Unit Seven, Session 10 (cont.)

Page 124, Writing & Solving Equations

1 Alana had 25 seashells. She gave some to her sister. Now she has 12 seashells. How many seashells did she give her sister?	25 – ☐ = 12	25 – s = 12	She gave her sister 13 shells. s = 13
2 George put apples into bags to sell at the farmers market. He put 5 apples into each bag. He had 45 apples altogether. How many bags did he fill?	45 ÷ 5 = ☐	45 ÷ 5 = a	He put 9 apples in each bag. a = 9
3 Mr. James had 16 bookmarks to give to the 4 students in his reading group. How many bookmarks did each student get if they all got the same number of bookmarks?	16 ÷ 4 = ☐	16 ÷ 4 = b	Each kid got 4 bookmarks. b = 4
4 Serafina had 30 stickers. She gave the same number of stickers to each of her 3 friends. Now she has 18 stickers left. How many stickers did she give to each friend?	30 – (3 x ☐) = 18	30 – (3 x s) = 18	She gave 4 to each friend. s = 4

Page 125, What's the Rule

1	**a** Pattern 3, 6, 12, 24, 48, 96	
	b Rule	Double the number.
2	**a** Pattern 16, 8, 4, 2, 1, ½	
	b Rule	Divide the number in half.
3	**a** Pattern 6.13, 7.26, 8.39, 9.52, 10.65, 11.78	
	b Rule	Add 1.13 each time
4	**a** Pattern $2\frac{1}{8}$, $3\frac{1}{4}$, $4\frac{3}{8}$, $5\frac{1}{2}$ $6\frac{5}{8}$, $7\frac{3}{4}$, $8\frac{7}{8}$	
	b Rule	Add $1\frac{1}{8}$ each time.
5	**a** Pattern $\frac{18}{9}$, $\frac{15}{9}$, $1\frac{1}{3}$, 1, $\frac{2}{3}$ ($\frac{6}{9}$), $\frac{1}{3}$ ($\frac{3}{9}$), 0	
	b Rule	Subtract $\frac{3}{9}$ or $\frac{1}{3}$ each time.

Page 126, Number Patterns & Divisibility

1 **a** 14, 16, 18, 20, 22, 24

b 30, 35, 40, 45, 50, 55

c 50, 60, 70, 80, 90, 100

2 Responses will vary. Examples:

a *All the count-by-2 numbers are even. They all end in multiples of 2.*

b *All the count-by-5 numbers end in 0 or 5.*

c *All the count-by-10 numbers end in 0. They are also all even.*

3 **a** 40: yes, yes, yes

b 75: no, yes, no

c 37: no, no, no

d 110: yes, yes, yes

e 364: yes, no, no

f 930: yes, yes, yes

g 361: no, no, no

h 576: yes, no, no

i 785: no, yes, no

Page 127, Ounces, Cups, Pints, Quarts & Gallons

1 **a** 8

b 2

c 2

d 4

e 4

f 8

2 640 ounces

3 (challenge) 7 pints (112 ounces, 14 cups, or $3\frac{1}{2}$ quarts are also acceptable responses.)

Page 128, Find or Write the Matching Equation

1

a Nina had 2 cats. They had kittens and now Nina has 8 cats. How many kittens did they have?

b Tim had 8 kites. He gave them to his friends. Each friend got 2 kites. How many friends did Tim give kites to?

c Kaylee had 8 keys on her keychain. She got rid of some of them, and now she has 2 keys left. How many keys did she get rid of?

d Takumi was tying knots. He tied the same number of knots on 2 different pieces of string. When he was done, he had tied 8 knots. How many knots did he tie on each piece of string?

$8 \div k = 2$

$8 - k = 2$

$2 \times k = 8$

$2 + k = 8$

2 The letter students use to represent the unknown amount may vary. Examples:

a $30 \div 5 = r$

b $9 \div 3 = b$

c $\$45 - m > \$30$

Page 129, Thinking about Number Patterns

1 **a** 42, 44, 46, 48, 50, 52

b 60, 65, 70, 75, 80, 85

c 90, 100, 110, 120, 130, 140

2 Responses will vary. Examples:

- *It must be even.*
- *It must be a multiple of 10.*
- *It must be divisible by 2.*

3 (challenge) Responses and explanations will vary. Example: *I agree with Nia because 2 × 3 = 6, so any multiple of 6 must also be a multiple of both 2 and 3. If you look at the first few multiples of 6, for example (6, 12, 18, 24, 30, 36, and 42), they're all even, so they have to be multiples of 2. You can divide them all by 3, so they're all multiples of 3 as well.*

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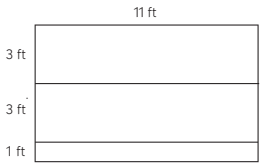
ANSWER KEY

Use after Unit Seven, Session 10 (cont.)

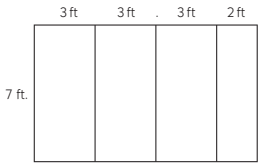
Page 130, The Paper Problem

1 Drawings will vary. Examples:

a



b



2 (challenge) Responses will vary. Example: *The first way shown above wastes a 2′ × 11′ piece of paper or 22 square feet. The second way shown above wastes a 2′ × 7′ piece of paper, or 14 square feet. The second way wastes less paper.*

Use after Unit Eight, Session 10

Page 131, The Vegetable Eating Contest

1 2 students

2 15 students

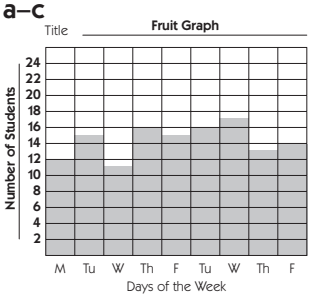
3 Friday

4 Tuesday, Wednesday, Thursday

5 Responses will vary. Example: *Room 108 did a better job because there was only 1 day more kids from that class ate less vegetables. On all the other days, they ate more or the same amount. For the whole week, the kids from 106 only ate vegetables 61 times, and the kids from 108 ate vegetables 71 times.*

Page 132, Room 108's Fruit Graph

1 a–c



2 a 11, 12, 13, 14, 15, 15, 16, 16, 17

b 17 – 11 = 6

c There are 2 modes: 15 and 16

d 15

Page 133, Two Different Kinds of Data

1 Numerical; A

2 Categorical; D

3 Categorical; B

4 Numerical; C

Page 134, How Tall Are We?

1 50, 51, 52, 52, 52, 53, 53, 54, 54, 57, 60

2 a 60 – 50 = 10 inches

b Responses will vary. Example: *The tallest friend was 10" taller than the shortest friend.*

3 a 52 inches

b Responses will vary. Example: *The height that was most common is the group was 52".*

4 a 53 inches

b Responses will vary. Example: *Half of the friends were 53" or taller, and half were 53" or shorter.*

Page 135, Estimate or Exact Measurement?

1 a E

b M

c E

d M

e M

2 Responses will vary.

3 Responses will vary.

Page 136, Multiplication Review

1 a 15, 6, 27, 9, 24, 18, 21, 12

b 35, 14, 63, 21, 56, 42, 49, 28

c 45, 18, 81, 27, 72, 54, 63, 36

2 8, 7, 5, 8, 6

3 9, 3, 7, 6

4 282; 2,002; 1,417; 40,932

Page 137, Decimal & Fraction Riddles

1 a 0.25

b 0.75

c 0.7

d 0.02

e 0.30

f 0.53

g 2.06

h 3.25

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ANSWER KEY

Use after Unit Eight, Session 10 (cont.)

Page 137, Decimal & Fraction Riddles (cont.)

2 **a** $^{3}/_{2} = 1.5$

b $0.6 > {}^{9}/_{100}$

c $^{36}/_{100} > 0.25$

d $0.75 = {}^{9}/_{12}$

e $83^{1}/_{2} > 83.48$

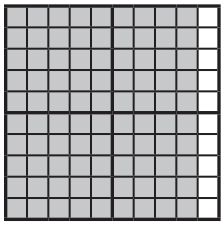
f $^{125}/_{100} > 1.07$

g $^{82}/_{100} < 0.9$

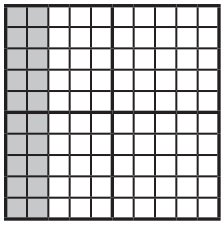
h $74^{3}/_{4} < 74.8$

3 Responses will vary. Examples:

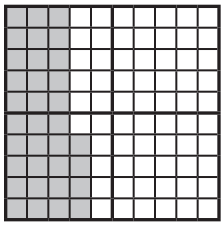
a *0.90*



b *0.20*



c *0.34*

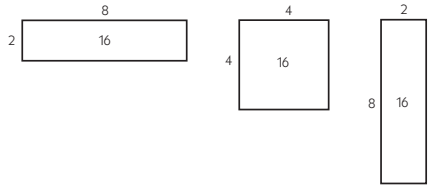


Page 138, Jeff's Wallpaper Problem

1 328 square feet

2 90 square feet

3 (challenge) The area stays the same.



Page 139, Multiplication, Area & Perimeter Review

1 **a**

			56
1	6	**7**	**42**
4	2	**4**	32
4	1	**9**	36
			18

1 **b**

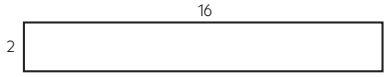
			0
7	3	**0**	0
4	2	**9**	72
5	3	3	45
			42

2 **a** Area = 1,862 square units
Perimeter = 174 units

b Area = 15,038 square units
Perimeter = 558 units

c Area = 11,164 square units
Perimeter = 474 units

3 (challenge)



Perimeter: (2 × 2) + (2 × 16) = 36 units
Area: 2 × 16 = 32 square units

Page 140, Tiling the Kitchen Floor

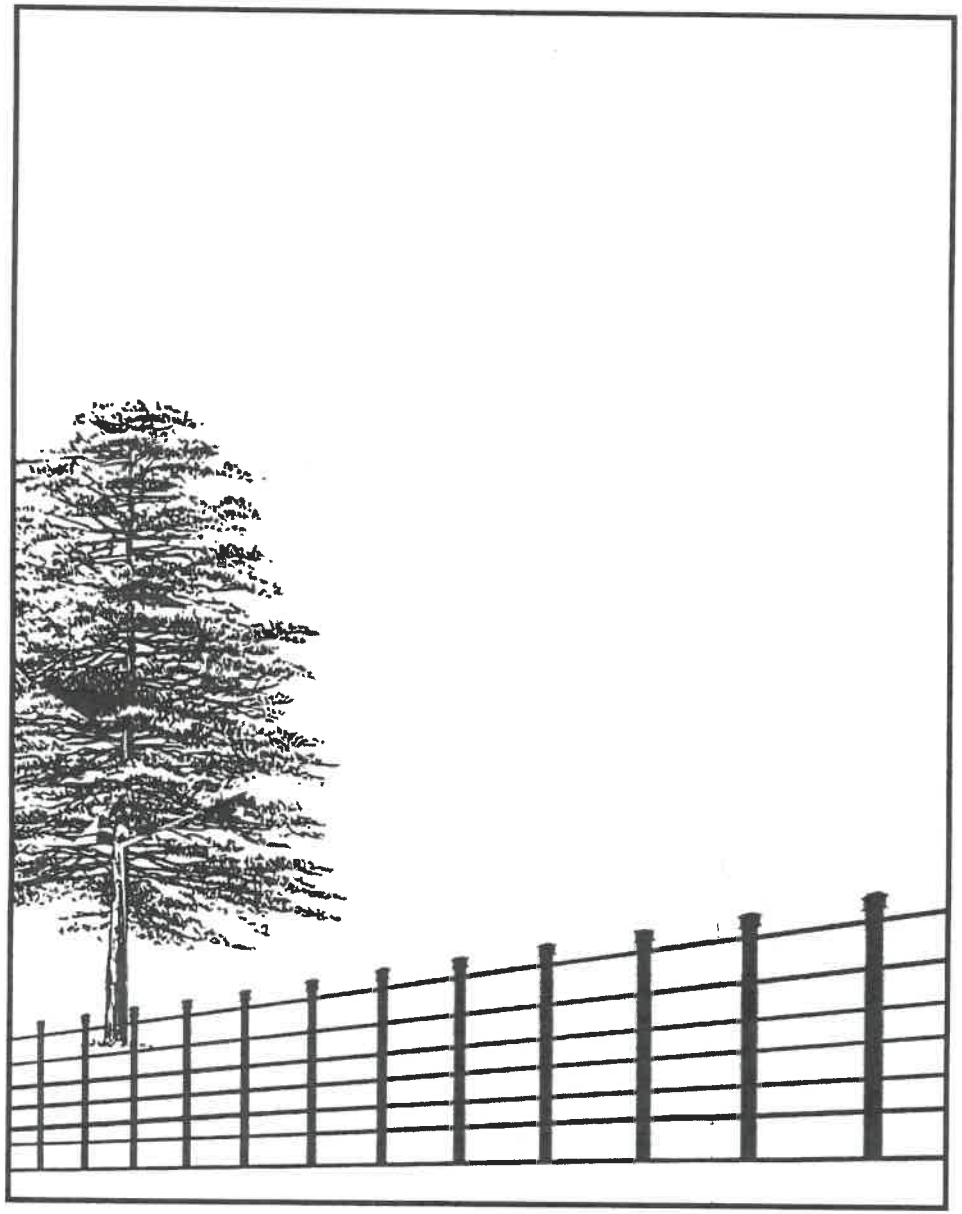
1 Jean and Mike are covering their kitchen floor with big tiles. The floor is 21 feet long and 17 feet wide. The tiles they are using are each 1 foot wide and 3 feet long. ~~Each tile weighs 5 pounds~~. The tiles come in packages of 10 that each cost $120. How much will it cost them to cover their floor with these tiles?

a Responses will vary. Example: *How much will Jean and Mike have to pay for the tiles they need?*

b & c See above.

d $1,440.00

Zoo Animals

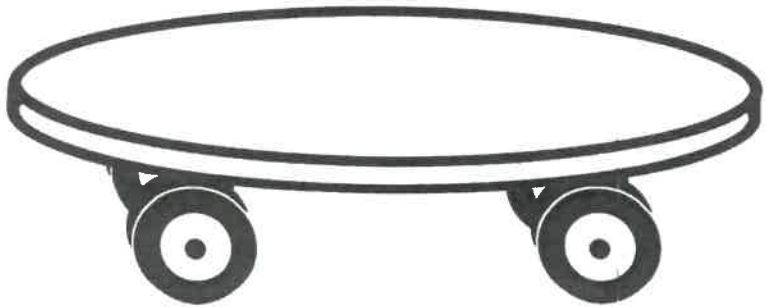


Finish the picture.

Fourth Grade Art

Your Choice

X is for Extra



Who's on the skateboard?

About Me

Name _____

Age _____

Birthday _____

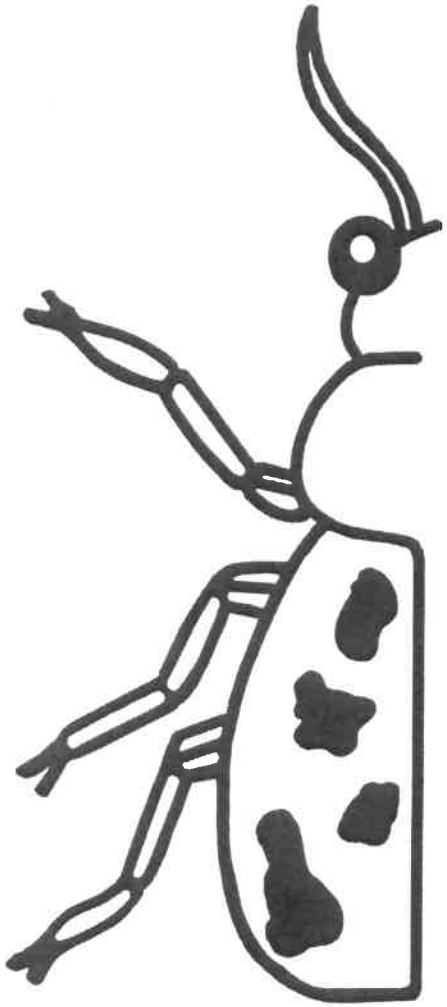
Favorite Color _____

Favorite Food _____

Favorite Sport _____

Favorite TV Show _____

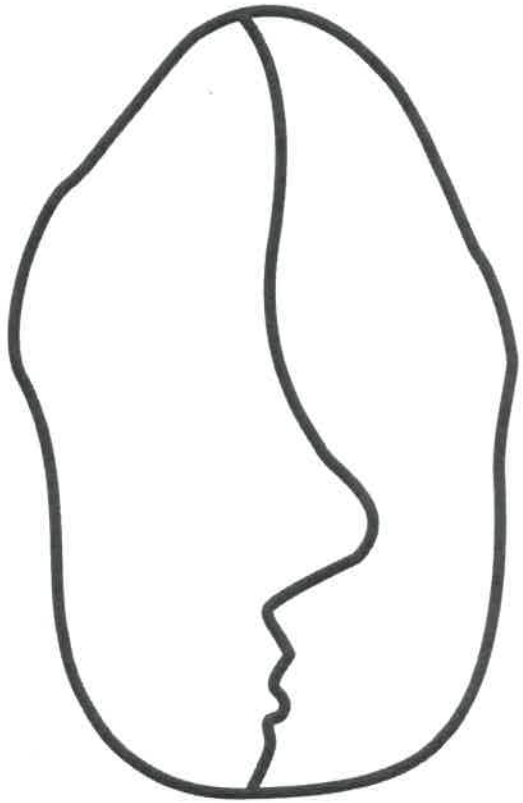
Balance



Make it symmetrical.

Well-known Artist

Pablo Picasso



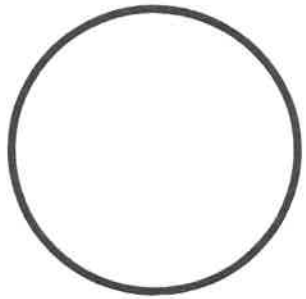
Finish this abstract face.

Values

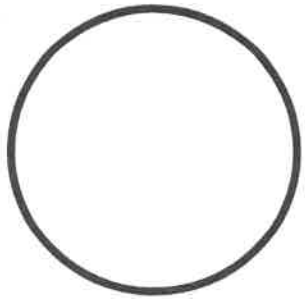
Using your crayons.

* Tints

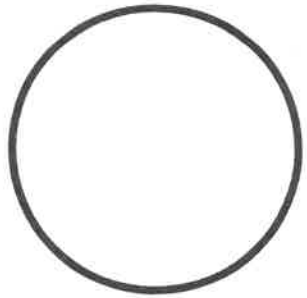
red + white =



orange + white =



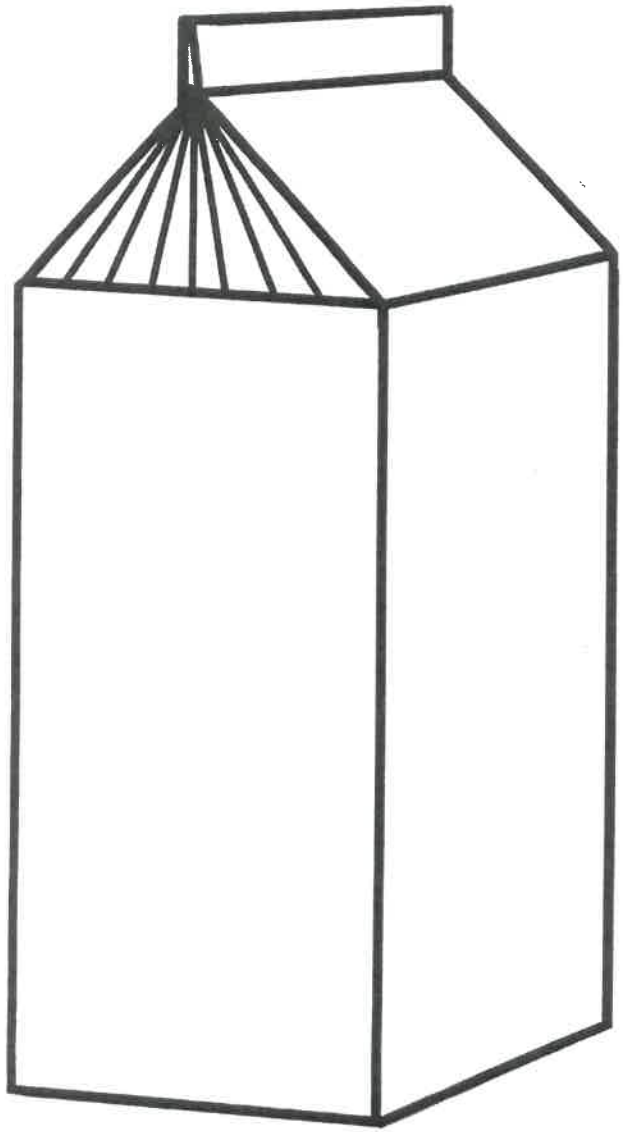
black + white =



Collage

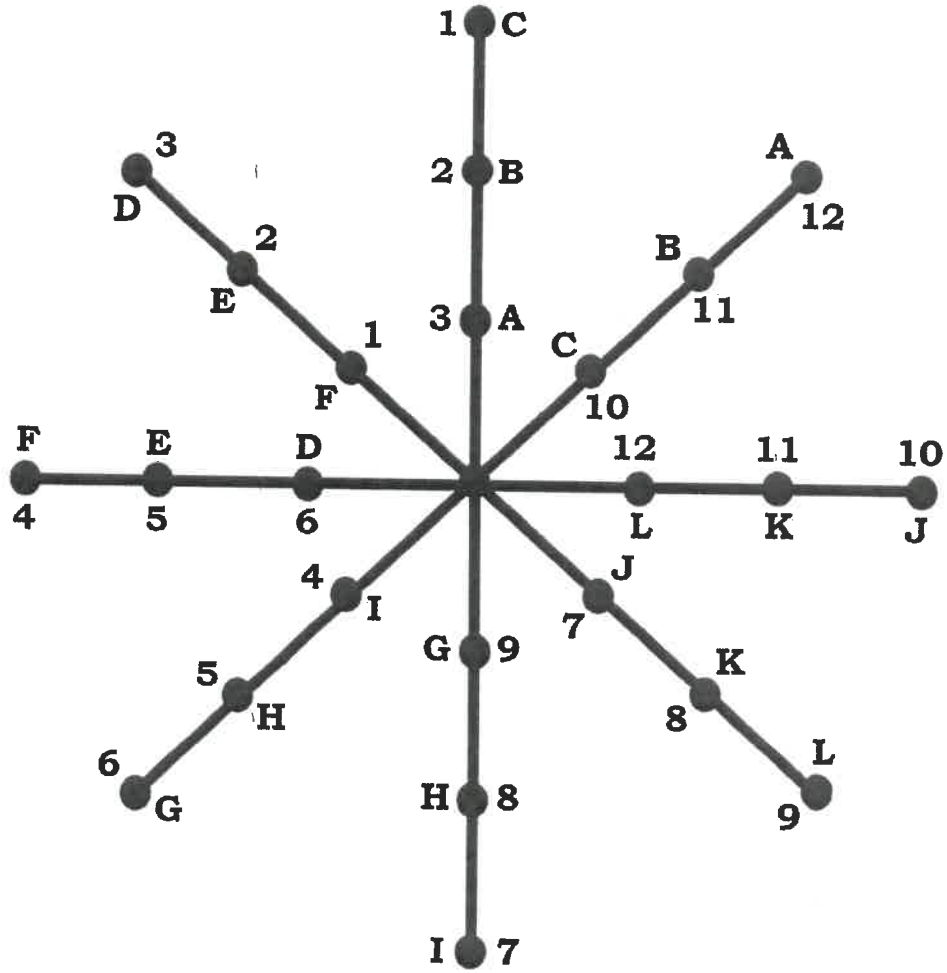
Draw a collection of money.

Design



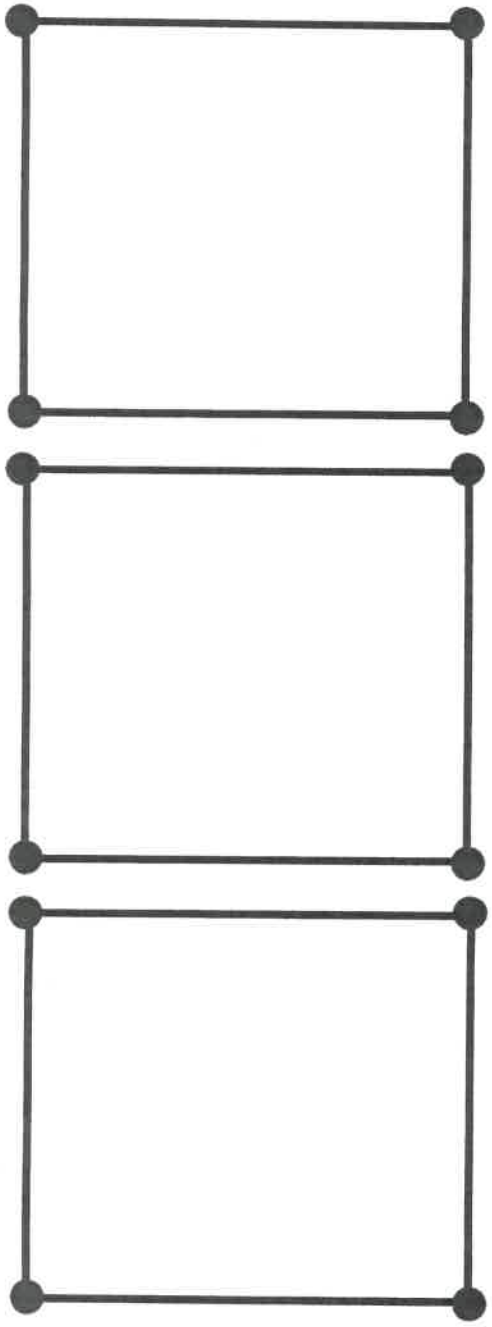
Design the label.

Using a Ruler



Connect same letters.
Connect same numbers.

Texture



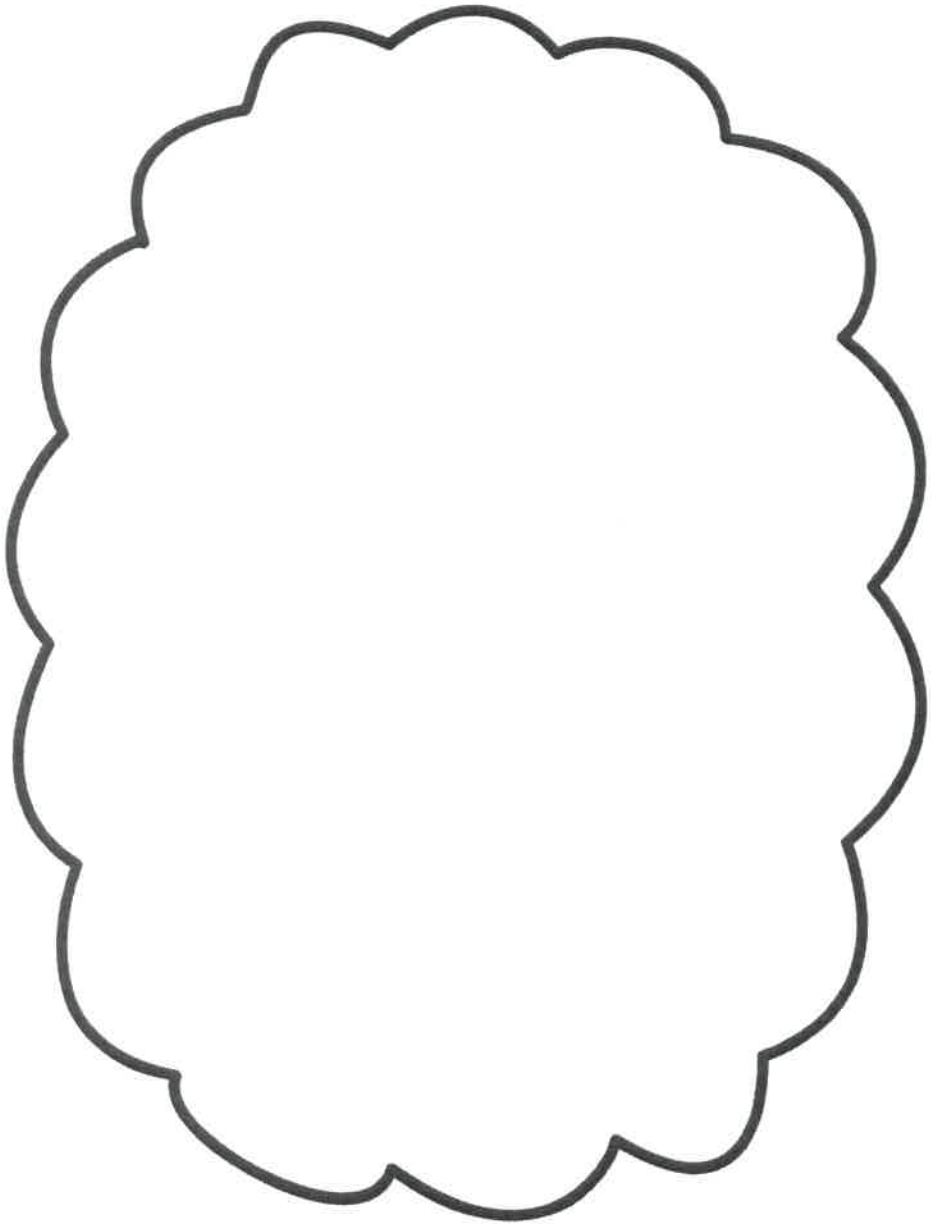
Complete three texture rubbings from found textures in the art room.

Elements of Art

Word Find...
Circle words up, down, and across.

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

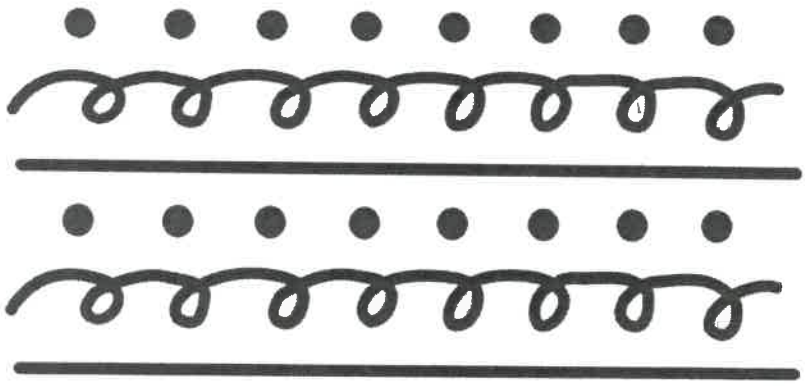
Free Draw



Still-life

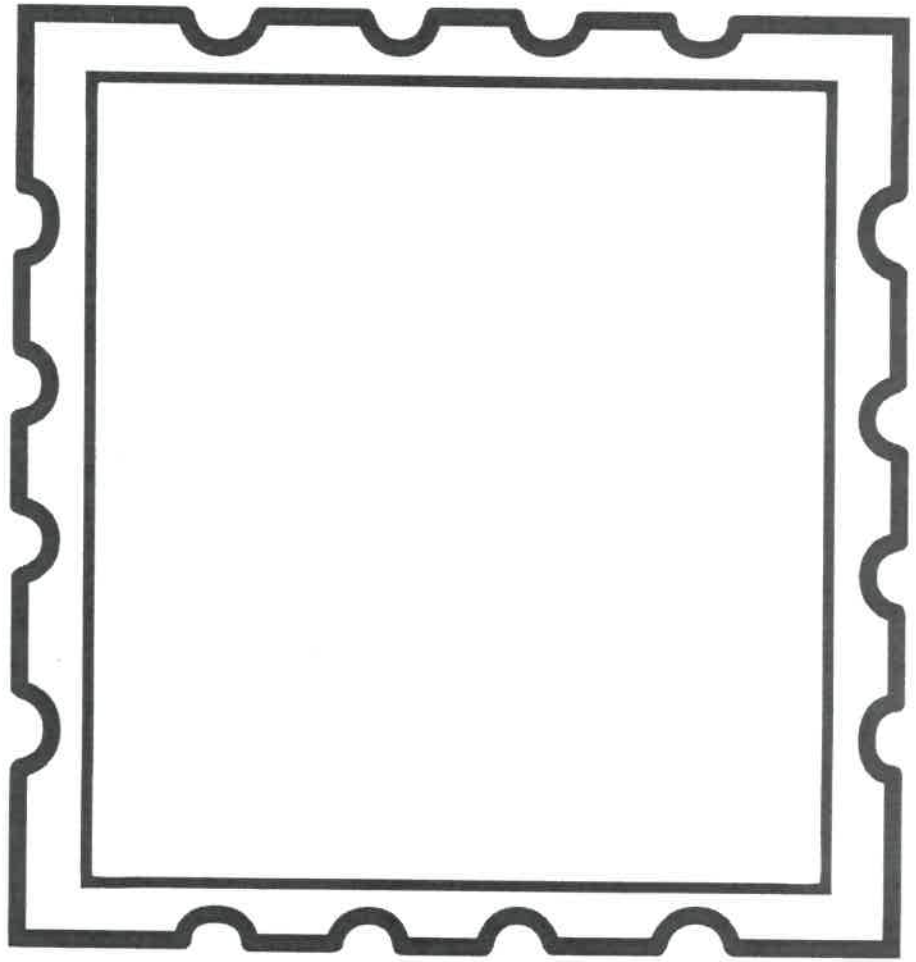
Draw the still-life.

Repeated Pattern



Finish the pattern.

Graphic Design



Design this stamp.

Hue

Use your crayons.

A happy day

A sad thought

Exciting football game

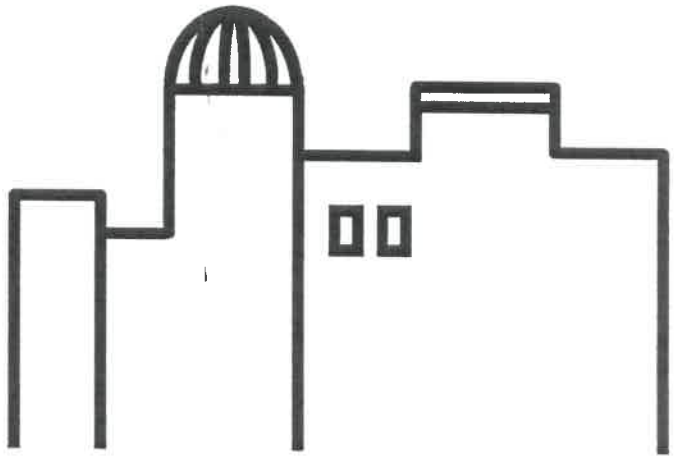
A rainy day

A terrible storm

A dreamy feeling

Colors suggest feelings.

Quick Sketch



Finish the cityscape.

Principles of Art

V
BalOnce
r
UnOty
e
PatOern
RhOthm

Imagination

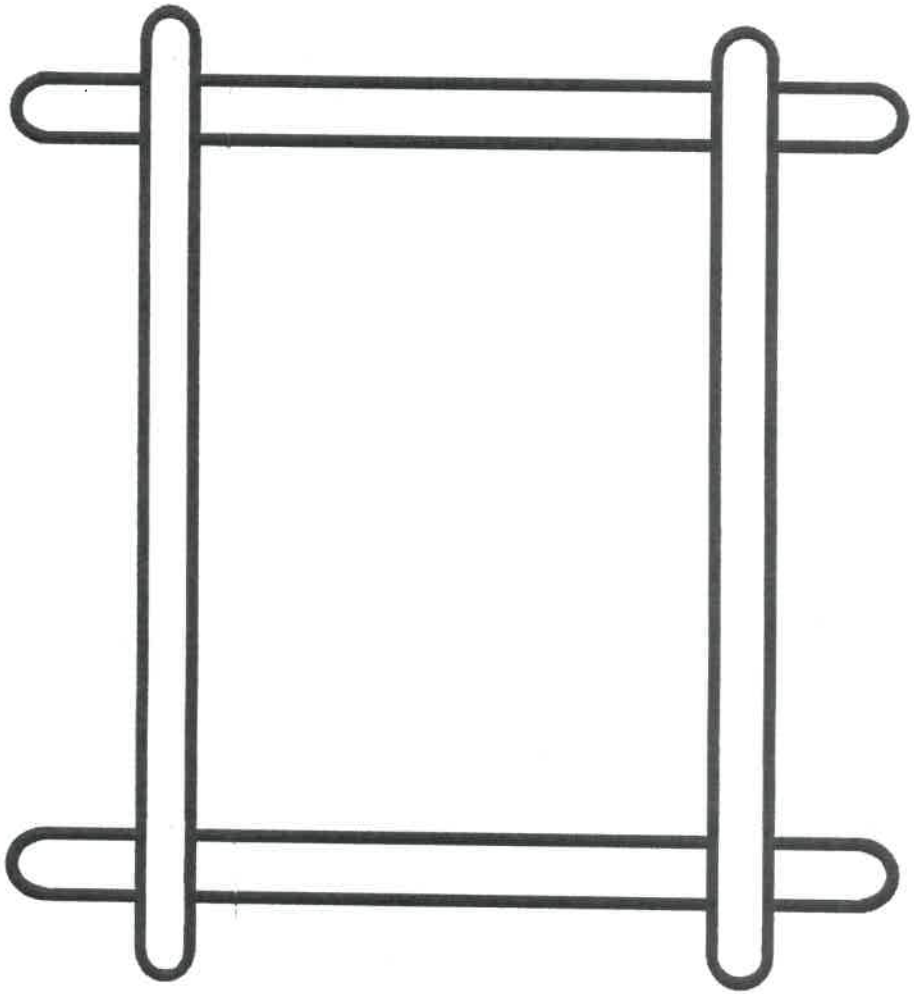
Where's the music coming from?

Just for Fun

Draw more jewelry.

Other Portraits

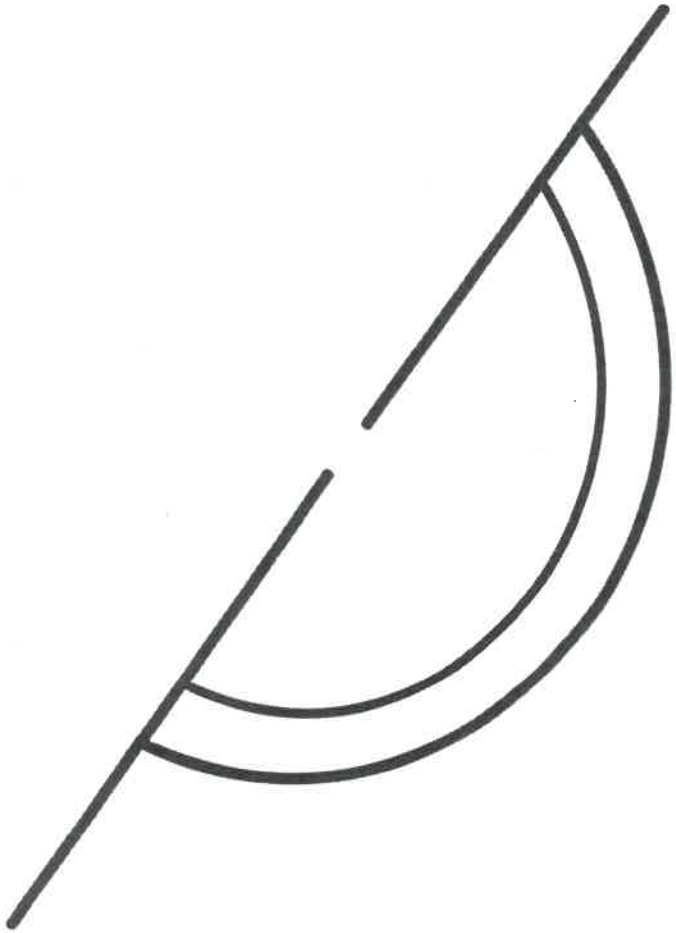
Draw the person sitting across from you.



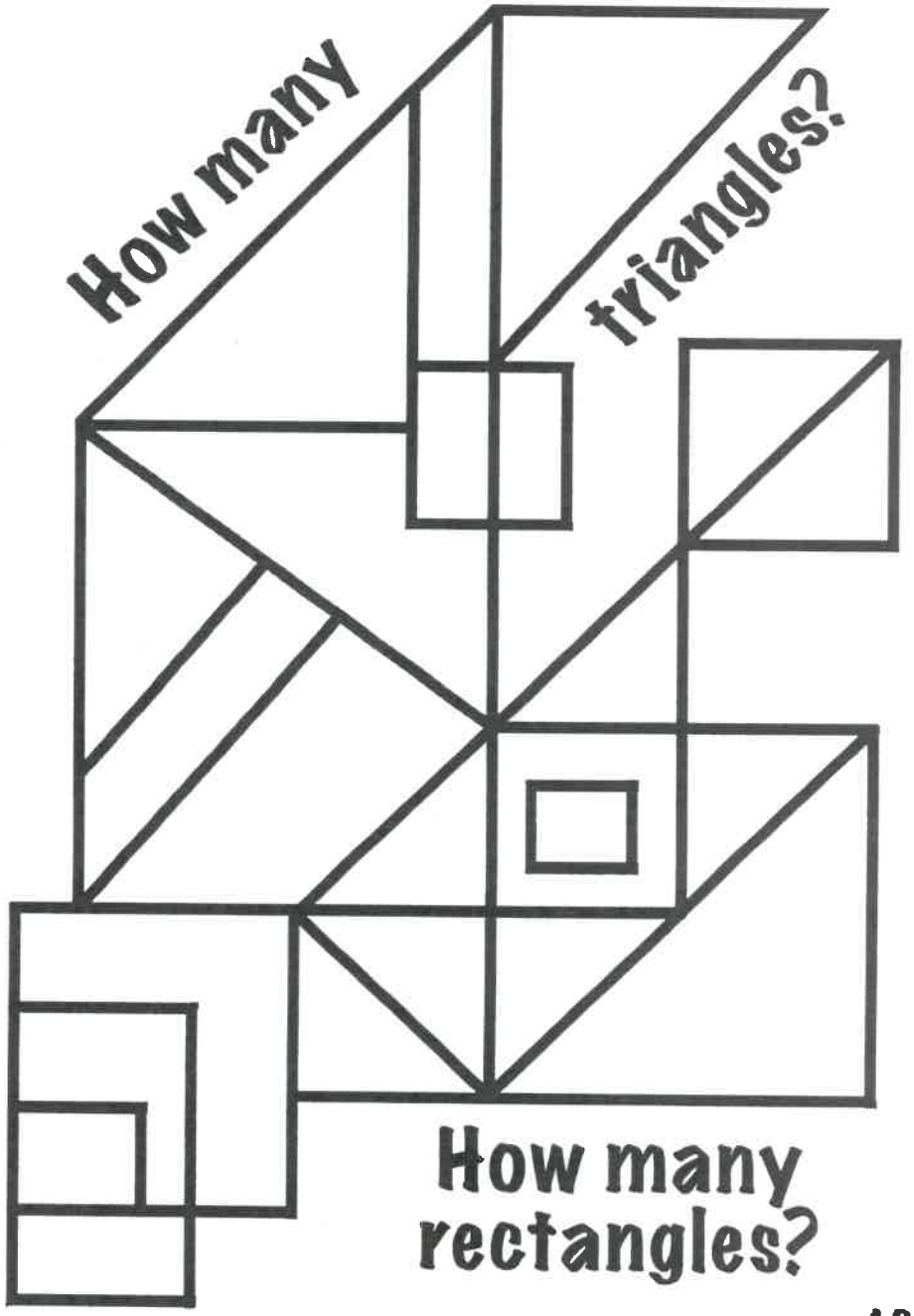
Title: _____

Non-objective

Finish the design.



Knowing my Shapes

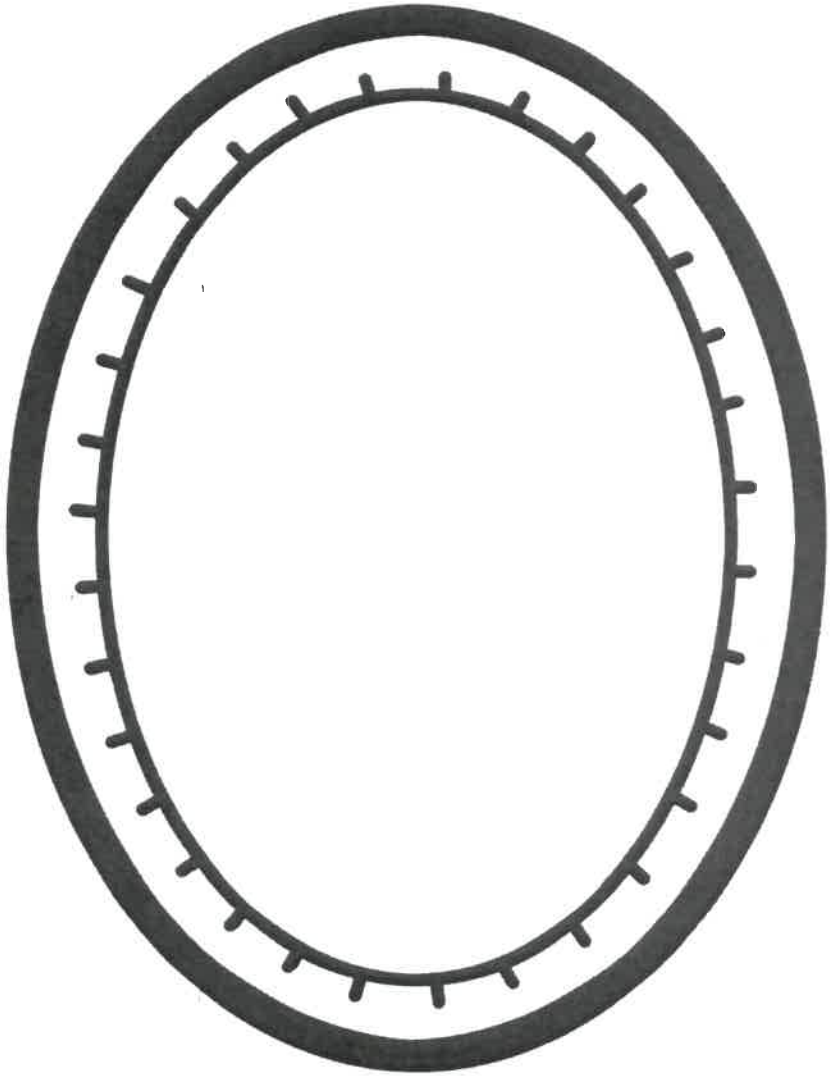


Lines

Trace your hand.

Draw all the lines and details that you see.

My self-portrait



Title: Self-portrait

Artist: _____

APRIL Fitness Calendar

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
		I hope you have a great time doing this exercise calendar.	**1** Do 10 Push ups.	**2** Jog in place while you name as many fruits and vegetables.	**3** Stretch and reach as high as possible ten times.	**4** Do 10 Push ups.
5 Go play outside with your family or friends then come back in and read a book.	**6** Go crab walk around a room during a commercial of your favorite television show!	**7** Do a push-up for each letter in the words MILK and CALCIUM	**8** Go walk with an adult for 30 minutes15	**9** Throw and catch a ball with a friend or an adult.	**10** Go play outside with your family or friends then come back in and read a book.	**11** Go crab walk around a room during a commercial of your favorite television show!
12 **Do a push-up for each letter in the words MILK and CALCIUM** **10** Go dribble a ball!!	**13** Create a karate air-kicking and air-punching demonstration to music.	**14** Balance on one foot while reading a page from a book. Read page 2 on the other foot.	**15** Walk from room to room while balancing a book on your head!	**16** Jog in place for one minute. Rest. Jog for 30 seconds more.	**17** Go for a bike ride for at less 30 minutes.	**18** Ask a parent to go for a bike ride or take a walk. The longer the better!!
19 Challenge a parent to a sprinting race.	**20** Go play a game of basketball.	**21** Who in your family can do the most sit ups?	**22** Get help totaling the calories in a snack you ate. Do that many jumping jacks.	**23** What is your 60 second sit-up record? *Try #1* _____ *Try #2* _____	**24** Do 5 push-ups next to a partner.	**25** Throw and catch a ball with an adult.
26 Do 10 Push ups.	**27** Jog in place while you name as many fruits and vegetables.	**28** Stretch and reach as high as possible ten times.	**29** How fast can you hop from room to room with a penny on one foot?	**30** Using a racket what is your record for most times bouncing a ball in the air? ___		

KCKPS MAY PHYSICALLY ACTIVE CALENDAR

Name:	Teacher:

Purpose: *This calendar encourages families to become more physically active and to take steps toward a healthier lifestyle. Each day, students are asked to complete a different activity with a family member (or with adult supervision).*

Directions: *After a student completes a day's activity, make a check mark and initial in the space provided.*

✔ Done	Day	Activities
	1	Practice touching your toes during commercials.
	2	Play with a friend outside
	3	Do as many curl-ups as you can with someone holding your feet.
	4	March Madness: Take 64 imaginary jump shots.
	5	Say your math facts while doing reverse lunges.
	6	Take a walk with your family and talk about the activities you have completed.
	7	Kids should be active sixty minutes EVERY day! Do 60 jumping jacks.
	8	Practice touching your toes during commercials.
	9	Play a game that is active. You decide what that is.
	10	Do as many trunk-lifts as you can.
	11	Take 32 imaginary dunks and 16 cross-over dribbles.
	12	Do push-up shoulder taps while reciting your spelling words.
	13	Take a walk with your family and talk about the activities you have completed.
	14	Run in place and name 3 reasons why you will never smoke or use tobacco.
	15	Play with a friend outside
	16	Take a hike.
	17	Do as many squats as you can.
	18	Take 8 pretend chest passes and 4 imaginary foul shots.
	19	Perform squat-jumps while naming the continents.
	20	Take a walk with your family and talk about the activities you have completed.
	21	How many food groups are there? Do 5 plank-jacks.
	22	Pick 5 different muscles to stretch. Hold each stretch for 20 seconds.
	23	Play outside.
	24	Do as many push-ups as you can.
	25	Take 2 laps around a pretend court and 1 giant star-jump!
	26	Read a book while doing a wall sit.
	27	Take a walk.
	28	About how many glasses of water should you drink each day? Do 8 burpees.
	29	Pick 5 different muscles to stretch. Hold each stretch for 20 seconds.
	30	Go to the park!
	31	Do as many squat-thrusts as you can.

Juggle Scarves	Warrior Pose 20	15 Jumping Jacks	Dribble 20 Times	Dance
12 Star Jumps	Name 7 Vegetables	Skip 2 Laps	5 Pushups	Jump Rope Trick
15 Squats	5 Locomotor	free	Name 5 Food Groups	Lunge 1 Lap
Play Catch 20	15 Toe Touches	3 Heart Facts	Run 2 Laps	Hopscotch 7 Times
Jump Rope 15	Secret Handshake	Stretch 15	Tree Pose 20	Move and Sing

Create Your Own Game

Game: _____

Field/Boundaries:

Number of players:_____ Number of teams:_____

Goal/Objective of the game (How do you win?)_____

_____

Equipment: _____

Rules: Are there points? Penalties? Out of bounds? Different Positions? Rounds?.....

_____

_____

_____

_____

_____

_____

Workout #1

- Jog in place for 1 minute
- 10 R and L leg stretches
- Plank for 20 seconds
- 15 Scissor Jumps
- 10 Sit Ups
- Wall Squat 25 seconds
- 15 Ski Jumps
- 10 Toe Touches

REPEAT FOR 12 MINUTES
30 SECOND REST IN BETWEEN

Workout #2

- 40 Jumping Jacks
- 10 R and L arm stretches
- 7 Squats
- 15 Heel Raises
- 20 High Knees
- 7 Lunges
- 15 Curl Ups
- 20 Mountain Climbers

REPEAT FOR 12 MINUTES
30 SECOND REST IN BETWEEN

Workout #3

- 40 Jumping Jacks
- 30 Second Stretch
- 20 Back Kicks
- 10 Squats
- ABC Push Ups
- 20 Imaginary Jump Ropes
- 7 Standing Long Jumps
- 10 Hops Each Foot

REPEAT FOR 12 MINUTES
30 SECOND REST IN BETWEEN

Workout #4

- Jog in place 1 minute
- 30 Second Stretch
- 10 Leap Frogs
- 10 Walking Lunges
- 15 Squat Kicks
- 25 Mountain Climbers
- 15 Skips in place
- 15—You Pick!

REPEAT FOR 12 MINUTES
30 SECOND REST IN BETWEEN

4th & 5th Grade Music Bingo

Things to do every day:

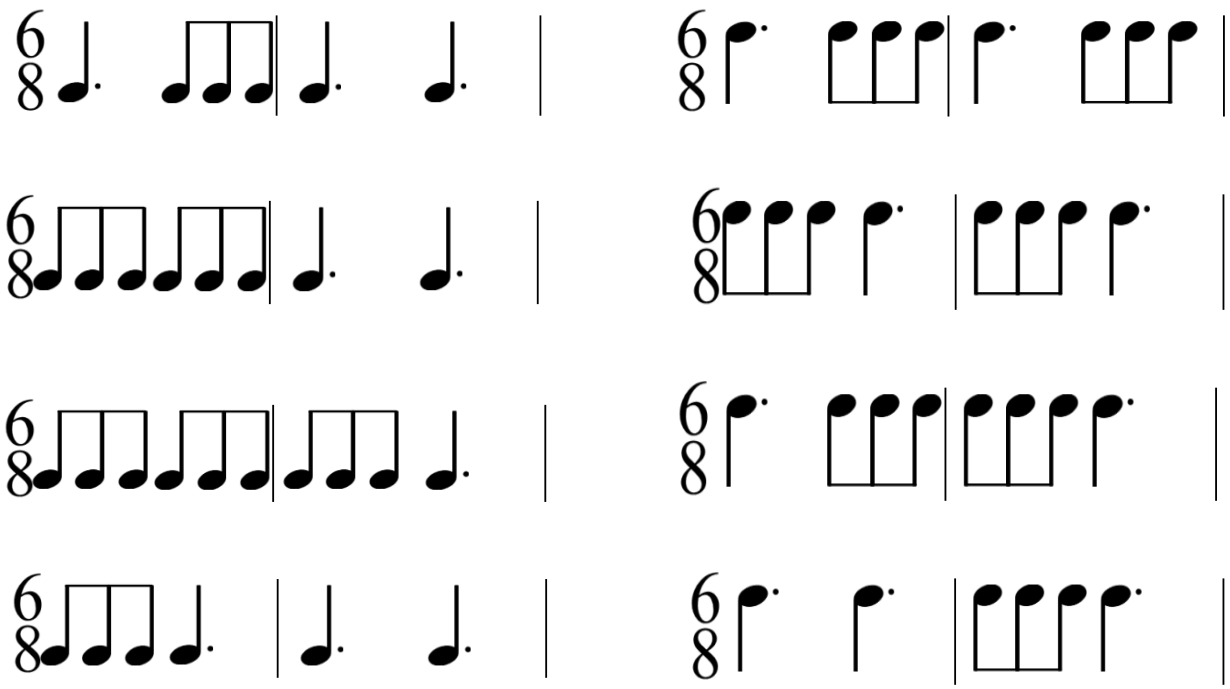
- Practice reading rhythm cards to someone at home
- Sing a song from class
- Make up a new body percussion pattern

Fill in 2 squares each week

Teach a family member one of our songs from this year.	Have a family member echo du and du-da-di rhythms.	Create rhythms using du and du-da-di.	Put on your favorite music and dance around the room.	Sing patterns using Do, Re, and Mi.
Sing a canon or partner song.	Have a family member share their favorite song with you.	Teach a family member one of the dances we've learned this year.	Compose your own song using different rhythm patterns.	Teach a family member about different kinds of ensembles.
Move slow to slow music.	Move fast to fast music.	Complete a music activity of your choice: _____ _____ _____	Interview someone at home about their favorite music.	Write new lyrics to your favorite song.
Use items around your home to create your own instrument.	Read about Jazz, answer the questions, then share what you learned with someone at home	Create your own body percussion patterns.	Find a book in your home you could sing as a Songtale.	Write a paragraph about a song about peace and happiness - what would it sound like?
Listen to a song and write a story that fits the music.	Sing one of your favorite songs we've worked on this year.	Practice keeping a steady beat to some of your favorite music.	Create rhythms while listening to music.	Compose your own song using rhythm cards and perform it.
Choose your favorite genre and tell a family member why that one is best.	Write a paragraph about a song about war and anger - what would it sound like?	Sing to yourself in the mirror.	Read about Hip Hop, answer the questions, then share what you learned with someone at home	Teach a family member a dance or music game.

Rhythm Cards: Du and Du-Da-Di

Cut apart these rhythms, then mix them up into any order to make your own composition. Perform your composition for someone at home. See how many you can do without tricking yourself!



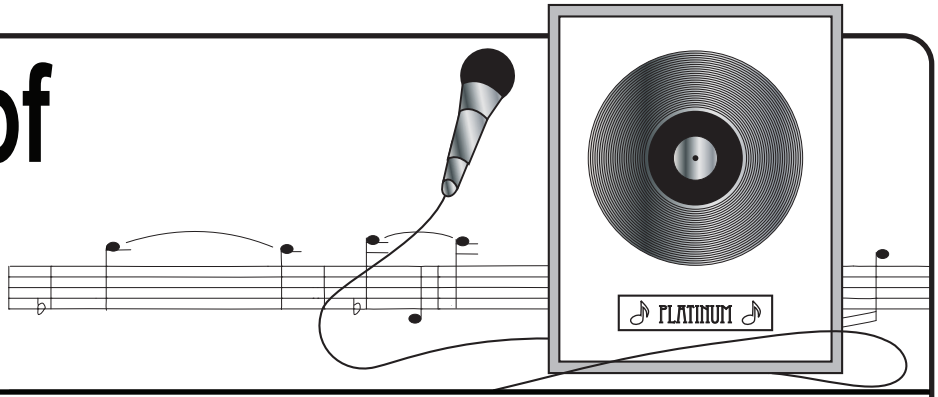
Body Percussion Boxes

Cut apart these boxes and rearrange in any order you like to make your own body percussion rhythm.

1. Perform for someone at home.
2. See how slow and how fast you can go!
3. See if you can perform your body percussion while singing a song.

Pat	Clap	Pat	Clap
Pat	Jump	Snap	Stomp
Slide	Clap	Slide	Clap
Snap	Clap	Pat	Stomp

The History of Hip Hop



Directions: Read the passage below and answer the questions that follow.

It is said that hip hop music was born at a birthday party in the Bronx, NY. This popular genre of music started out as party music in the 1970s. It was played by local DJs in the city neighborhoods.

DJs put different pieces of music together. They did this to make new sounds. Then, rapping was added. Rapping is a way of talking over the music with words that rhyme. DJs arranged the beats so that rappers could find a rhythm. Then, the rappers would speak in time with the beat. Rappers often wrote lyrics, or the words of a song, about their own lives.

At first, hip hop served as a response to disco. Disco was a dance music craze in the 1970s. Disco was all about wealth and status. Hip hop emphasized reality and community. Hip hop music and culture became helpful to musicians and listeners. It was a way for them to deal with the difficult things about city life.

Hip hop quickly became an artistic outlet for African Americans. It was a new way to tell stories. From there, hip hop evolved from just a type of music to an entire lifestyle.

Hip hop is an art form that continues to evolve and impact communities today. New artists and new sounds are brought into the genre. The new styles continue to become popular. Hip hop is a genre that is heard and enjoyed all over the world.

1. How are hip hop and disco related?_____

_____

2. Why do you think hip hop is an important music genre for African Americans?_____

_____

3. What are two things that make hip hop unique?_____

_____

4. What is one notable fact about how hip hop music was created?_____

_____

5. In your own words, write a definition for *rapping*._____

_____

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Name _____ Date _____

Jazz Greats: Charlie Parker

Charlie Parker is one of the best-known names in saxophone jazz. He is considered by many to be the greatest jazz saxophonist in history.

Parker was born in 1920 in Kansas City, Missouri. He began playing the saxophone at the age of 11. He said once in an interview that, during his early career, he practiced 15 hours a day for three or four years. In 1939, he moved to New York. At first, he supported himself as a dishwasher, making $9 a week. Then, in 1942, Parker met Dizzy Gillespie, a jazz trumpeter. The two would later become a famous duo.

Parker played with a talented group of young musicians, such as Gillespie and Thelonious Monk, in Harlem after-hours clubs. In 1939, he hit upon a new method of playing, one that would lead him to become one of the creators of bebop, a new form of jazz. Some classic jazz musicians rejected the new sound, but others embraced it, playing jam sessions with the young beboppers and learning their ways.

Parker was a great innovator and created many new musical techniques. A fusion of jazz and classical music that Bird worked on with the string section of a chamber orchestra resulted in the album Charlie Parker with Strings, which was so popular, he recorded a second, longer album of the same name. Parker also created a unique version of the 12-bar blues that he used in his song "Blues for Alice." Many of Parker's innovations are still used by jazz musicians today.

Directions: Answer the questions below. Use text evidence to support your answers.

1. What is the main idea of Jazz Greats: Charlie Parker? Write it in your own words.

_____

_____

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Name _____ Date _____

Jazz Greats: Charlie Parker

2. Choose a quote from the text that supports the following statement, and record it on the lines below.

   Charlie Parker worked hard during his early career.

_____

_____

3. Why did Charlie Parker create a second album named *Charlie Parker with Strings*?

_____

_____

4. Describe what the author means when the text says, "Some classic jazz musicians rejected the new sound, but others embraced it..."

_____

_____

5. What was the result of Charlie Parker's experience playing with a talented group of young musicians in Harlem after-hours clubs?

_____

_____

6. One of Charlie Parker's nicknames is Bird. Why do you think this nickname was chosen for him?

_____

_____

7. What evidence in the passage shows that Parker was influential in jazz music? Include two pieces of evidence.

   a. _____

   _____

   b. _____

   _____

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4th and 5th Grade Strings

Choice Board

Complete two activities per week.

Practice for 20 minutes.	Learn to play Twinkle, Twinkle by ear.	Write your own eight-measure rhythm on the back of this sheet.	Teach a family member how to hold your instrument.	Teach a family member how to pizzicato .
Teach a family member how to hold the bow.	Practice for 10 minutes.	Learn to play Happy Birthday by ear.	Compose your own song using different rhythm patterns.	Practice your note-reading flashcards with a family member.
Write and perform your own song on the D and A string.	Play as many songs from the book that you can in 15 minutes.		Practice for 15 minutes.	Play your instrument for your pet for 10 minutes.
Use items around your home to create your own instrument.	Create a rhythm composition using found sounds at home (pots, chairs, cups, etc.)	Create your own body percussion patterns to a song you like.	Pick three songs from your book and play a concert for your family.	Play the D major scale five times.
Listen to a song and write a story that fits the music.	Hum one of your favorite songs we've worked on this year.	Practice keeping a steady beat to some of your favorite music.	Create rhythms while listening to music.	Teach a family member how to care for your instrument.