4TH GRADE
Standards Practice Pack C

READING, WRITING, & MATH

Complete one assignment for reading, writing, and math each day.

**Reading:** Read the selection and answer the questions. When you are finished, be sure to read a great book!

**Writing:** Read the prompt and respond in writing. This is a great opportunity to practice your best writing skills and good handwriting.

**Math:** Complete the standards practice page. Draw pictures or use objects to help you.
Makayla gently placed her black witch's hat on top of her black curls as she looked at herself in the mirror. Her mom had painted her skin green and outlined her eyes with purple paint. She wore tall, black boots underneath a long, purple dress. It was October 31st, and she was ready for trick-or-treating on Halloween night.

"Makayyla!" her mom called out from downstairs.

Makayla's two friends, Colden and Porter, had arrived. Colden stood in the doorway, his costume blowing in the wind. A white sheet hung over his head, and his eyes peered out from two cut-out holes.

Porter decided to dress like his favorite superhero, Batman. A black mask covered his face and a long cape trailed behind him. They carried plastic pumpkin bowls to collect candy later.
in the evening.

The two boys greeted Makayla with equal levels of excitement. "Hi, Makayla!" Colden said.

"You ready to go trick-or-treating?" Porter asked.

She nodded her head and ran to grab her coat.

"Let's go, everyone!" her mom called out, and they all marched out the front door.

All around them, children and parents walked from door to door in colorful costumes. Carved Jack-o-lanterns sat in front of houses, candles shimmering inside the orange pumpkins. A breeze blew past Makayla and her friends, making her shiver. The weather had just started to get colder.

Makayla remembered her class earlier that day, when her teacher talked about the origins of Halloween. Mrs. Narula told Makayla and her classmates that the holiday started with an ancient festival called Samhain, 2,000 years ago in Ireland. The word Samhain means "summer's end" in Gaelic, a language spoken in Ireland and Scotland. Mrs. Narula looked at different documents from the American Folklife Center to find out about Halloween's history. She found that the festival celebrated the end of summer and the beginning of winter—a time to gather crops to prepare for the colder months.

The Celtic people who celebrated this festival also believed it was the time when all the souls who had died that year traveled to the next world. To keep the dead spirits away, people lit bonfires. For ceremonies, some dressed in animal furs to disguise themselves so that the dead spirits would not be able to recognize them. Mrs. Narula said this is one reason why we might still dress up in costumes today. Later, the festival of Samhain was replaced with All Souls' Day, a Christian holiday that honored the dead. People celebrated with bonfires and parades. They also dressed up in costumes as saints, angels, and devils.

Porter reached up and pressed the doorbell at the house across the street.

Diiiiing-dong.

A big, green Frankenstein pulled open the door, holding a big bowl of wrapped treats. Makayla and her friends gasped, and then laughed when they realized it was just Mr. Clock dressed up.

"Trick-or-treat!" the three sang with big smiles.
As Mr. Clock sprinkled candy into their baskets, Makayla thought of Mrs. Narula again.

"In the 1800s, many people from Ireland and Scotland came to the United States to start a new life," the teacher told her students earlier that day. "Even though their ancestors had their own trick-or-treating traditions, they started their own in their new country."

Mrs. Narula had read an article by Benjamin Radford, a man who researches science and history. He wrote that teenagers in those communities started to play pranks during Halloween celebrations. Adults tried to stop the pranks by giving children candy instead. And the tradition still remains today with children all around the world dressing up for candy!
1. At the beginning of the passage, what is Makayla getting ready to do?
   A. open Christmas presents
   B. go trick-or-treating on Halloween
   C. go on an Easter egg hunt
   D. eat Thanksgiving dinner

2. Throughout the story, Makayla remembers information Mrs. Narula taught in class. What does this information describe?
   A. the history of Halloween
   B. the history of Ireland and Scotland
   C. the way different holidays are researched
   D. the importance of wearing costumes

3. Halloween traditions have changed over time. What evidence from the passage supports this conclusion?
   A. Trick-or-treating began before Irish immigrants came to America.
   B. People dressed up as angels or saints during All Saints' Day.
   C. Samhain celebrated the end of summer and beginning of winter.
   D. Playing pranks was not always a part of Halloween celebrations.

4. Based on the passage, what conclusion can you make about how Halloween has changed?
   A. Halloween has become a more serious holiday.
   B. Halloween is now more focused on preparing for winter.
   C. Halloween has become a more lighthearted holiday.
   D. Halloween is now more focused on bonfire rituals.

5. What is this passage mostly about?
   A. the history of Halloween
   B. the ancient people who celebrated Samhain
   C. research at the American Folklife Center
6. Read the following sentences: "Makayla remembered her class earlier that day, when her teacher talked about the **origins** of Halloween. Mrs. Narula told Makayla and her classmates that the holiday started with an ancient festival called Samhain, 2,000 years ago in Ireland."

As used in this sentence, what does the word "**origin**" most nearly mean?

A. the celebration  
B. the length  
C. the end  
D. the start

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

__________ the celebration of Halloween has changed over time, it has also kept some traditions from ancient festivals.

A. Meanwhile  
B. Although  
C. Therefore  
D. For instance

8. Halloween started as an ancient festival. What was it called?
9. What is one reason why we might dress up in costumes on Halloween today?

10. Explain how Halloween has both changed and kept traditions from the past. Support your answer using information from the passage.
Imagine watching hundreds of thousands of bats swirl around you, swarming to form a large, black mass that flies off into the horizon. At Carlsbad Caverns in New Mexico, this scene is a regular occurrence. The caverns, located in a United States National Park, are home to around 400,000 Mexican free-tailed bats that fly out into the night sky each evening at dusk to feed on nearby moths and insects, returning at dawn to their caves. The spectacle draws crowds from around the world into the Chihuahuan Desert, where the park is located. One such visitor was Laurel Mathews, who once visited the caves with her family on a road trip.

"At the entrance to one of the caves, there's stadium seating for visitors to watch the bats," she remembers. "We waited a long time to see them. Finally, they started circling out of the cave and they flew off-out came more and more and more, all of them flying in loops and then out into the sky. It was amazing that there were so many!"

Laurel also remembers the sound the bats made, describing the high, screeching noise. "It was really creepy, but also really cool," she says.
Laurel recalls her family's arrival at the Carlsbad Caverns National Park. "It didn't look very spectacular when we first drove in," she admits. "But then we started exploring the big network of underground caves."

The formation of the caves is a result of a fossilized reef that existed 250 to 280 million years ago in an inland sea that has long since disappeared. Since limestone is typically made up of fragments of coral, a large limestone deposit eventually formed in the area. Today, you can still find several fossilized plants and animals in the caves' limestone that date back to a time before dinosaurs walked the earth. Starting sometime between four and six million years ago, water from the earth's surface began moving through the cracks in the stone deposit. There is a type of acid in surface water. When this water combined with rainwater, the two mixed to form another type of acid as a result of their chemical compositions. This acid slowly dissolved the limestone to eventually form the winding caves that exist today in Carlsbad Caverns. This is a very common process that happens to limestone—many caves all around the world exist in limestone deposits due to the stone's solubility (the ability of a substance to be dissolved) in a mixture of water and acid.

Eventually, speleothems—formations that arise from mineral deposits in caves—began to take shape in the lower levels of the caverns. In fact, these speleothems existed during the last ice age, when instead of a desert, a pine forest sat above the caves. Over the years, park employees and rangers have found clues that hint at the caves' history. For example, according to the National Park Service, people have found some bones of ancient ice age animals scattered around the entrance to some of the caves. In 2003, an employee found a part of a stone scraper dating back to the last ice age near a cave entrance as well. Clearly, the caves have a long history—researchers have discovered that American Indians first inhabited the area sometime between 12,000 and 14,000 years ago. Ever since then, the caves have been explored by several groups, including Spanish explorers in the 1500s, and later by American explorers and guides who drew attention from all across the country to the natural phenomenon.

Laurel remembers this phenomenon very well. "It took us between one and two hours to get all the way to the bottom," she says, recounting the windy pathway leading deeper and deeper into the heart of the caves. "The park had put in blue and red lights to highlight the beautiful rock formations."

Once they reached the bottom, Laurel says that she had to take an elevator to get back to the top. "My ears popped so much in the elevator!" she remembers. "It took a really long time to reach the top; I didn't realize how far down we were until we were on our way back up."
1. According to the passage, what currently lives in the caves at Carlsbad Cavern National?
   A. Native Americans
   B. bats
   C. bears
   D. explorers

2. What does the author describe at the beginning of the passage?
   A. how speleothems are formed
   B. the formation of limestone caves
   C. fossils found in Carlsbad Cavern
   D. watching bats at Carlsbad Cavern

3. Limestone deposits can help researchers learn about what the area was like thousands of years ago. What evidence from the passage best supports this conclusion?
   A. Limestone can contain fossilized plants and animals.
   B. Acid can slowly dissolve limestone to form winding caves.
   C. Limestone is typically made up of coral fragments.
   D. Many caves around the world exist in limestone deposits.

4. "At the entrance to the cave, there's stadium seating for visitors to watch the bats." Based on this information, what can you conclude about the popularity of the bats at Carlsbad Cavern?
   A. The bats are not a popular attraction at Carlsbad Cavern.
   B. People go to Carlsbad Cavern to see the caves, not the bats.
   C. The bats are a popular attraction at Carlsbad Cavern.
   D. Most people who visit Carlsbad Cavern don't know about the bats.
5. What is this passage mostly about?
   A. Laurel Mathews’ family vacation
   B. how bats navigate using sound
   C. how speleothems are formed
   D. caves at Carlsbad Cavern National Park

6. Read the following sentences: "The caverns, located in a United States National Park, are home to around 400,000 Mexican free-tailed bats that fly out into the night sky each evening at dusk to feed on nearby moths and insects, returning at dawn to their caves. The **spectacle** draws crowds from around the world into the Chihuahuan Desert, where the park is located."

As used in this sentence, what does the word "**spectacle**" mean?
   A. a very impressive show
   B. something that happens irregularly
   C. something that happens at night
   D. something that people watch with glasses

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

__________, Laurel did not think the Carlsbad Cavern National Park looked very spectacular, but her opinion changed after she explored the caves.
   A. For instance
   B. Initially
   C. Particularly
   D. Therefore
8. What are speleothems?

9. Explain how the limestone caves at Carlsbad Cavern were formed.

10. Explain how researchers may learn about the history of the caves at Carlsbad Cavern. Support your answer using information from the passage.
"Mom's gonna be home late," said Fletcher. "We have to make dinner."

Fletcher stood in the doorway of his sister's room. Clara splayed out on a beanbag chair, reading a magazine with a boy band on the cover. She was 13, and Fletcher thought she was probably too old to still have a beanbag chair in her room. He mentioned this a lot, because at 10 years old, he considered himself the perfect age to take the chair. It looked super-comfortable.

"Clara!" he shouted. His sister took off her headphones, but didn't say anything. She just looked at him, glassy-eyed, waiting for him to speak. "We gotta make dinner. Mom's gonna be home late."

"What do you mean, 'We'?"

"I mean you and me."

"You don't know how to make dinner."
"I do, too!"

"Toast doesn't count."

"I can make dinner," said Fletcher. "I can totally make dinner. And Mom called me and said she was gonna be home late. She said, 'You and your sister will have to fix something to eat.' That's what she said. 'You and your sister.' So I'm helping."

"Great," said Clara. She heaved herself off the beanbag chair and walked past him toward the kitchen. As he followed, Fletcher felt a pang of fear. He didn't know how to make dinner at all.

"What do you want to eat?" asked Clara.

Fletcher stood over the kitchen counter, flipping through Mom's biggest cookbook. "This," he said, and pointed to a recipe.

"Coq au vin," said Clara. She pronounced it like "coke aw van." "Did you even read this recipe? It takes like, three days."

"That's gotta be a misprint."

"And besides, it calls for wine. Vin is French for wine. We don't have any, and we're not allowed in the wine cabinet, anyway. Try again."

Fletcher flipped to a random page. "What about this? It looks easy."

"Chocolate cream pie. No. We cannot make chocolate cream pie for dinner."

"Then how about..." He flipped to another page. "Ooh! These potato chips look awesome!"

"You really think Mom wanted us to make potato chips for dinner?"

"Maybe..."

"You have to fry stuff for this. That's dangerous. We're not allowed."

We're not allowed was one of Clara's favorite things to say. Whenever she and Fletcher were alone at night which was a lot, since Mom started her new job. Fletcher had great ideas for fun things to do: cool TV shows to watch, or awesome dinners to make. And Clara never had anything to say but, "We're not allowed."

"Here," said Clara. "We have potato chips in the pantry anyway. Eat some."
"I don't want boring old potato chips out of a bag. I want super fun, awesome, homemade, fresh-out-of-the-oil potato chips. With cinnamon on them."

"We're not putting cinnamon on the potato chips! That would be disgusting."

"Then we are making chips for dinner?"

"No!" Clara composed herself. This was something she had to do a lot when she was talking to her brother. She had been doing it for a long time. She would take a deep breath and count to however old he was. If he was still bothering her this much when he was 60, she thought, she would have to count for a long time. "How about a grilled cheese?"

"Grilled cheese is almost as boring as chips."

"But it's something we can make without burning down the house. That's a plus."

"I guess."

"And listen, it doesn't have to be boring! We can put all sorts of fun stuff on it."

"Like what?"

"Uh...like carrots."

"Carrots are not fun. Even the least fun person in the whole world wouldn't think carrots are fun. Even Aunt Becky."

"Okay, okay! So carrots are less fun than Aunt Becky. But maybe we could use..." Clara opened the fridge and scanned the shelves. She saw a block of strange looking cheese, the kind she'd only ever had at restaurants. "This cheese looks fun!"

"That cheese looks like something they dug up out of the dirt. No."

"Well, what do you want on your grilled cheese?"

"Cinnamon. And candy corn."

Clara looked at her brother. He wasn't smiling. He wasn't laughing. He wasn't kidding. And so she uttered what, to little brothers everywhere, is the magic word:

"Fine."
And so they started to grill. Clara established a two-person assembly line, which made their progress that much faster. Because he wasn't allowed to touch the stove, Fletcher assembled the sandwiches. He laid out four pieces of bread in two lines. On the right hand pieces, he put Clara's nasty looking cheese. On the left, plain old American cheese and candy corn and lots of cinnamon. He snuck a few pieces of candy corn while Clara wasn't looking and smiled. This was going to be amazing.

Meanwhile, Clara melted the butter. Once it had finished bubbling, she put the first sandwich -hers- into the pan. She gave it a few minutes and flipped it. It was a little black on one side, but she figured it would be okay. She took it off quickly. The other side had barely toasted.

"Hmm," she said. "I guess it will even out."

Next she cooked Fletcher's sandwich. Some of the candy corn slipped out, melting in the butter and turning as hard as plastic. That's going to be a pain to clean, she thought. To make sure their sandwiches were the same, she cooked Fletcher's the same way she'd cooked hers: burning it on one side and leaving it pale brown on the other.

"It'll even out," she told him. She sat on the couch and picked up her sandwich. It had gotten cold while she cooked Fletcher's, but she figured it would be okay. She lifted it to her mouth, took a bite, chewed a little, and-

"Oh my goodness," she said. "Oh...oh no!" Fletcher cackled as his sister ran to the trashcan and spit out the sandwich. "There is candy corn on my grilled cheese! And cinnamon! This is disgusting."

"Sorry!" said Fletcher, not trying very hard to stop laughing.

"You did it on purpose."

"No, no, I swear. It was an accident. They probably just snuck on."

"Snuck on. Candy corn just snuck on."

"I guess so," said Fletcher, as he bit into his sandwich. "Blech!"

Fletcher ran to the trashcan. He spit out his mouthful and looked up at his sister.

"You mixed up the two pieces of bread, didn't you?" she asked. "You got candy corn on my sandwich and my funky cheese on yours."
"I guess so," he said.

They looked at their sandwiches, each with one bite missing. They looked at the two bites spit into the trash.

"I know what to do," said Clara. "Throw those out."

As Fletcher tossed the sandwiches into the trash, Clara stood on her tiptoes in the pantry. She grabbed something off of the top shelf and slapped it onto the table: a $20 bill.

"Get the phone," she said. "We're ordering pizza."
1. Why do Fletcher and Clara have to make dinner?
   A. because their mom will be home late
   B. because their mom is sick in bed
   C. because their mom does not know how to make dinner
   D. because their mom doesn't want to cook

2. The grilled cheese sandwiches do not taste good to Clara and Fletcher. How does Clara deal with this problem?
   A. She makes potato chips.
   B. She calls her mom.
   C. She orders pizza.
   D. She makes more grilled cheese.

3. Clara is the type of person who follows the rules. Which evidence from the passage supports this statement?
   A. Clara does not want to make chocolate cream pie for dinner.
   B. Clara agrees to put candy corn on Fletcher's sandwich.
   C. Clara cooks grilled cheese for Fletcher and herself.
   D. Clara frequently says, "We're not allowed."

4. What can you infer about Clara and Fletcher's mother?
   A. She isn't a good cook.
   B. She works a lot.
   C. She is kind.
   D. She likes grilled cheese.

5. What is this story mostly about?
   A. a brother and sister cooking dinner
   B. different grilled cheese recipes
   C. a boy who loves cinnamon
   D. a mom who often works late
6. Read the following sentences: "'No!' Clara composed herself. This was something she had to do a lot when she was talking to her brother. She had been doing it for a long time. She would take a deep breath and count to however old he was."

What does "composed" mean in this sentence?

A. shouted  
B. calmed  
C. held  
D. breathed

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

_______, Fletcher wants to make coq au vin for dinner. Then he wants to make potato chips.

A. Finally  
B. Even though  
C. Particularly  
D. Initially

8. What do Clara and Fletcher make for dinner?

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9. Explain what goes wrong when Clara and Fletcher make dinner.

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10. Explain whether Clara and Fletcher are good problem solvers. Support your answer using information from the passage.

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Move Your Muscles!

by Sharon Guynup

Muscles keep you on the go. Here's how they work and why you need to keep them in tip-top shape.

Picture this: You're out shooting hoops with your friends. As you take a jump shot, you suddenly feel your leg twist beneath you. Ouch! You might have sprained your ankle. But why did you sprain it? How can you keep from hurting it again? What is a sprain, anyway?

It all has to do with your muscles (more on that sprain later). When you walk down the street, ride your bike, or even yell hello to a friend, you are using muscles. Here's the good news: everyone can have stronger muscles and prevent injuries.

Muscles: A Lot of Work!

The human body has three types of muscle. There are skeletal, smooth, and cardiac muscles. Smooth and cardiac muscles work without you having to control them. This means they are involuntary. Some body parts that have smooth muscle include the stomach, intestines, and eyes. Cardiac muscle can only be found in the heart.

Skeletal muscle is the most common type of muscle in the body. Skeletal muscles are responsible for almost all of the body's movements. These muscles are usually attached to bones by strong tissue called tendons. Your body has more than 650 skeletal muscles. They make up about 40 percent of your body weight. Skeletal muscles are generally voluntary, which means you can control them. These muscles help you run, jump, and do all kinds of activities. And they can be injured if you don't take proper care of them.

Skeletal muscles are different sizes and shapes, depending on their job. Back muscles are some of the biggest and strongest muscles in your body because they help hold you upright. Smaller muscles in your hands let you bend your fingers.
Skeletal muscles work in a simple way. They react when they receive electrical signals from your nerves. The signals are like messages from your brain. For example, when you swing a bat to whack a baseball, a nerve signal travels from your brain to your arm muscles, making them move. Nerve signals also let your brain know whether a muscle has been hurt, like if you twist your arm while swinging that bat.

**What Pain Means**

Taking good care of your muscles can help prevent you from sitting on the sidelines. This happened to Anita R., a 10-year-old soccer player from New York City. Anita felt pain under her right kneecap. "If I put pressure on it or went up and down the stairs a lot, it would sting and throb," Anita says. Her doctor thought that she "was kicking more [with] one leg and had more muscle in that leg than in the other." Anita had to go to physical therapy, where she did exercises to help her knee heal.

Your body moves by using muscles, bones, tendons, and ligaments. Ligaments usually connect bones together. Muscles, ligaments, and tendons can be injured if you push them too hard. For example, a tough run or a fall might lead to a pain in your leg. How do you know what’s happening when you feel pain? Here’s what might be going on.

- **Muscle aches** may be caused by tension, overuse, or muscle injury from hard physical activities.
- **Sprains** and **strains** can also result from being active. A sprain is a stretched or torn ligament. Such an injury might happen if you trip or fall. A strain is a torn or pulled muscle or tendon. It can happen when you pick up something heavy. Sprains and strains are common injuries in sports.
- A **repetitive motion disorder (RMD)** is a damaged muscle, tendon, or ligament caused by making the same motion again and again. RMDs are common in the hands, wrists, and shoulders. Teens who spend a lot of time playing musical instruments or video games are at risk for RMDs. Two RMDs are **tendonitis**, a swollen tendon, and **carpal tunnel syndrome**, which can be caused by swelling in a tunnel-shaped area formed by bone and ligaments in the wrist.

To avoid hurting your muscles, warm them up before exercising, says David Waymann, an exercise physiologist at the University of Michigan Health System. Walk or jog in place for at least five minutes to get blood to your muscles. "Don't use stretching as a substitute for a warm-up," Waymann says. After exercising, cool down by walking slowly. Finally, stretch for a
few minutes to keep joints and muscles from getting stiff.

Keeping your weight at a healthy level can keep your joints safe from extra strain, advises Dr. Letha Griffin, an orthopedist in Atlanta.

When you aren't active, muscles can get weak and shrink. Exercise regularly to strengthen muscles. Don't play when you're tired, sick, or in pain, and don't overdo it. Take care of your muscles, and they'll keep you on the go!

Fun Facts About Muscles

· Where are the busiest muscles in your body? In your eyes! Scientists estimate that the eye muscles move about 100,000 times a day.
· Your muscles are always partly contracted. That maintains muscle tone, keeping muscles firm and healthy. It is the only skeletal muscle activity that you cannot control.
· The body's largest muscle is the gluteus maximus muscle in the buttocks.
· Growing pains can cause intense muscle pains in your legs. They usually start before bedtime and sometimes continue through the night. They usually stop when kids stop growing.

Muscles On the Move

Skeletal muscles, along with bones, joints, tendons, ligaments, and cartilage, make up the musculoskeletal system. Here's what they do:

· **Joints** are connections where two or more bones meet, making the skeleton flexible. Two examples of joints are elbows and knees. Bones are held together by strong straps of tissue called **ligaments**.
· Skeletal muscles are attached to bones by tough cords called **tendons**. Tendons and bones move along with your muscles, such as when you wave your hand or tilt your head.
· Slippery, rubbery **cartilage** covers the ends of bones at joints. It makes the connections between the bones flexible. Cartilage also protects bones from wear and tear at joints.
· Muscles contain fibers. **Slow-twitch muscle fibers** can work hard for a long time without getting tired on a long run or bike ride. **Fast-twitch fibers** help with quick movements, such as jumping to catch a ball or sprinting. Most muscles are a mixture of slow- and fast-twitch fibers.
1. According to the text, what are the three types of muscle in the human body?
   A. arm, leg, and wrist
   B. sprains, strains, and aches
   C. ligaments, tendons, and joints
   D. skeletal, smooth, and cardiac

2. The author divides the text into sections with subheadings. What does the author describe in the section with the subheading "Muscles: A Lot of Work!"?
   A. how to strengthen muscles and prevent injuries
   B. different kinds of muscles and how they work
   C. what makes up the musculoskeletal system
   D. the difference between muscle aches, sprains, and strains

3. Muscles can be injured if you don't take proper care of them.
   What evidence from the text supports this statement?
   A. "Smooth and cardiac muscles work without you having to control them."
   B. "The body's largest muscle is the gluteus maximus muscle in the buttocks."
   C. "To avoid hurting your muscles, warm them up before exercising."
   D. "Your body moves by using muscles, bones, tendons, and ligaments."

4. What is an example from the text of a way that people can strengthen muscles and prevent injuries?
   A. overusing muscles during hard physical activities
   B. exercising regularly to strengthen muscles
   C. making the same motions again and again
   D. being active by picking up heavy things
5. What is the main idea of this text?

A. Muscles keep our body going as long as we take proper care of them.
B. Sprains and strains keep our body moving as long as we keep getting them.
C. Vessels keep our bodies moving as long as we keep taking care of them.
D. Tendons keep our bodies moving as long as we keep injuring them.

6. Read this sentence from the text.

Sprains and strains can also result from being active. A sprain is a stretched or torn ligament. Such an injury might happen if you trip or fall. A strain is a torn or pulled muscle or tendon. It can happen when you pick up something heavy.

Based on these sentences, what does the word "active" mean?

A. in the middle of falling down on the floor
B. in the middle of doing something with energy
C. in the middle of sleeping deeply
D. in the middle of lying down comfortably

7. Choose the answer that best completes the sentences.

To avoid hurting your muscles, warm them up before exercising, says David Waymann, an exercise physiologist at the University of Michigan Health System. __________, walk or jog in place for at least five minutes to get blood to your muscles.

A. Earlier
B. In contrast
C. However
D. For example
8. Give two examples of how we can take proper care of our muscles. Support your answer with evidence from the text.

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9. Give two examples of the kinds of injuries you might feel if you don't take proper care of your muscles. Support your answer with evidence from the text.

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10. Why might it be especially important for active people to take care of their muscles? Support your answer with evidence from the text.

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David and Charlie were setting off on a hiking trip with their uncle Max.

They had packed all of the essential items they would need for their day of hiking. Inside their backpacks were sandwiches, water, sunscreen, bug spray, a long sleeve shirt for the cold, and sunglasses for the sun.

Before they started on their trip, they gathered around a picnic table with their uncle. He showed them what was inside his own backpack. His bag was heavier. He had all the same things David and Charlie had in their bags, except he also had a first aid kit, extra water bottles, a flashlight and a bunch of folded papers.

"What is with all the papers, Uncle Max?" asked David. "Are you going to be doing some homework at the top of the mountain?"

Uncle Max and the boys laughed.

"No," said Uncle Max, spreading out the folded papers. "These are all maps. They will show us where we are headed."
"Why don't you just look up the map on your phone?" asked Charlie.

"Well, we can do that too," said Uncle Max. "But just in case the phone battery dies or we lose service, we will have these maps on paper. Plus a few of these maps show specific trails for the park that may not be listed on your phone." Uncle Max opened one of the maps even wider and pointed to a spot with his finger. "This is where we are," he said. "See all of the trees around us? And this is the trail we are going to take up the mountain and then back." Uncle Max pointed at a mountain to the right. Sure enough, it was on the map in the same spot.

The boys adjusted their bags, tied their shoes tight, and started off down the trail following behind Uncle Max.

"How do the people who make the maps know where everything is?" asked Charlie.

"Well, there is something called cartography," said Uncle Max. "Cartography is the study and making of maps. Cartographers use science and exploration to establish where certain parts of the earth are."

Uncle Max and the boys hiked around a bunch of trees and followed a path over a small river.

"Do maps tell you about what is under the water too?" asked David.

"Some of them do," said Uncle Max. "Not all maps show all bodies of water. But bigger bodies of water like oceans and lakes are often mapped out. If you are exploring in the ocean and you want to find a coral reef or a sunken ship, then that would be included on a map."

The three walked for another hour. As they went, they looked at all the trees and plants. They also saw a deer and a few frogs.

After a few more minutes, the boys stopped and had some water, while Uncle Max showed them where they were on the map. They were almost at the bottom of the mountain-they could see it right up in front of them.

"In school we learned that the earth's surface moves," said David, as they started walking again. "Because the earth is made up of plates."

"Plates?" asked Charlie. "Like the plates we use to eat lunch?"

Uncle Max laughed. "Sort of," he said. "More like puzzle pieces that fit together. And yes, they do move, but usually they move very slowly. If you look at maps that scientists have created
of what the earth looked like many, many years ago, you can see that countries and islands on the earth were in different places. Land masses broke apart and floated."

"So then maps change," said Charlie.

"Yes, they have to be updated to reflect any changes," said Uncle Max. "Not that those changes happen very fast."

"Earthquakes happen fast, though," said David.

"Definitely," said Uncle Max. "Very fast. An earthquake is the result of a sudden release of energy in the earth's crust that creates something called seismic waves. That is why the machine used to measure an earthquake is called a seismometer. This machine helps scientists figure out what is going on in the earth and helps predict any future earthquakes, since they sometimes come in patterns."

"That's scary," said Charlie.

"It is. But that shows you how powerful the earth's movements can be," said Uncle Max.

The three hikers reached the mountain.

David looked up. "We are going all the way up there?" he asked. He was tired from his first hike and was not looking forward to heading up the mountain.

Uncle Max laughed. "How about we have our sandwiches down here instead?" he suggested. "Then we can go back and swim in the lake."

The boys agreed. So Uncle Max laid a blanket on a big flat rock, and the three had their sandwiches in the sun. Then they took a photo in front of the mountain, so they could show their mom. Maybe next time they came back, they could use the map to climb the mountain.
1. What is the name of the study and creation of maps?
   A. circumnavigation
   B. tectonics
   C. cartography
   D. exploration

2. In the passage, Uncle Max describes a number of things to the boys. How does he describe earthquakes?
   A. a sudden release of energy in the earth's crust that creates seismic waves
   B. a slow event that occurs over many years
   C. a gradual release in pressure that rarely causes problems
   D. an unexpected natural disaster that could happen at any time

3. The movement of the earth's plates has changed the way that the earth looks over many years. What evidence from the text supports this conclusion?
   A. Science and exploration is used to establish where certain parts of the earth are.
   B. Some maps show where a coral reef is located or where a sunken ship can be found.
   C. Maps of the earth many years ago show countries and islands in different places.
   D. Earthquakes sometimes come in patterns.

4. Based on the information Uncle Max explains, what can be concluded about the impact of the movement of the earth's plates?
   A. The movement of the earth's plates does not affect the location of lands and oceans.
   B. The movement of the earth's plates affects the location of lands and oceans.
   C. The movement of the earth's plates only affects the location of the oceans.
   D. The movement of the earth's plates only affects the location of islands.

5. What is the main idea of this story?
   A. Maps can help predict the movement of Earth's plates.
   B. Maps can help show you where you are and where you are headed.
   C. Maps can replace your cell phone if it runs out of battery.
D. Maps can make hiking easier.

6. Uncle Max compares the earth's plates to puzzle pieces. Why does Mr. Max compare the earth's plates to puzzle pieces?
   A. to show that the earth's plates are as confusing as puzzle pieces
   B. to show that the earth's plates fit together like puzzle pieces
   C. to show that the earth's plates need to be put together by humans just like puzzle pieces
   D. to show that the earth's plates are made of the same material as puzzle pieces

7. Choose the answer that best completes the sentence below.
   While the earth's plates move very slowly, some changes in the earth happen very quickly, _____ earthquakes.
   A. consequently
   B. notably
   C. finally
   D. initially

8. According to Uncle Max, what do maps show?
9. Describe the earth's plates based on the information Uncle Max gives to David and Charlie.

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10. Explain the reason that maps must change over time. Use information from the text to support your answer.

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Name:

Who is your favorite teacher? Write to describe which teacher you like best and explain what makes him or her special.

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Imagine one of your teachers asks you to bring something special to show the class. Write to describe the item and explain why you would like to show it.
Think about a pet you would like to own. Write to explain what you would choose and why.

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Imagine you are going on a field trip in a bus created especially for kids. Describe this bus and explain why kids will like it.
Think about a favorite toy you have now and had when you were younger. Describe the toy and tell why it is your favorite.

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Interpret the Remainder

Interpret the remainder to solve.

1. Hakeem has 100 tomato plants. He wants to plant them in rows of 8. How many full rows will he have? Think: $100 \div 8$ is 12 with a remainder of 4. The question asks “how many full rows,” so use only the quotient.

2. A teacher has 27 students in her class. She asks the students to form as many groups of 4 as possible. How many students will not be in a group?

3. A sporting goods company can ship 6 footballs in each carton. How many cartons are needed to ship 75 footballs?

4. A carpenter has a board that is 10 feet long. He wants to make 6 table legs that are all the same length. What is the longest each leg can be?

5. Allie wants to arrange her flower garden in 8 equal rows. She buys 60 plants. What is the greatest number of plants she can put in each row?

Problem Solving

6. Joanna has 70 beads. She uses 8 beads for each bracelet. She makes as many bracelets as possible. How many beads will Joanna have left over?

7. A teacher wants to give 3 markers to each of her 25 students. Markers come in packages of 8. How many packages of markers will the teacher need?
Lesson Check (CC.4.OA.3)

1. Marcus sorts his 85 baseball cards into stacks of 9 cards each. How many stacks of 9 cards can Marcus make?
   - A 4
   - B 8
   - C 9
   - D 10

2. A minivan can hold up to 7 people. How many minivans are needed to take 45 people to a basketball game?
   - A 3
   - B 5
   - C 6
   - D 7

Spiral Review (CC.4.OA.1, CC.4.NBT.4, CC.4.NBT.5, CC.4.NBT.6)

3. Mrs. Wilkerson cut some oranges into 20 equal pieces to be shared by 6 friends. How many pieces did each person get and how many pieces were left over? (Lesson 4.2)
   - A 2 pieces with 4 pieces left over
   - B 3 pieces with 2 pieces left over
   - C 3 pieces with 4 pieces left over
   - D 4 pieces with 2 pieces left over

4. A school bought 32 new desks. Each desk cost $24. Which is the best estimate of how much the school spent on the new desks? (Lesson 3.2)
   - A $500
   - B $750
   - C $1,000
   - D $1,200

5. Kris has a box of 8 crayons. Sylvia’s box has 5 times as many crayons as Kris’s box. How many crayons are in Sylvia’s box? (Lesson 2.1)
   - A 48
   - B 42
   - C 36
   - D 4

6. Yesterday, 1,743 people visited the fair. Today, there are 576 more people at the fair than yesterday. How many people are at the fair today? (Lesson 1.8)
   - A 1,167
   - B 2,219
   - C 2,319
   - D 2,367
Name ___________________

**Divide Tens, Hundreds, and Thousands**

Use basic facts and place value to find the quotient.

1. \(3,600 \div 4 = \underline{900}\)

   **Think:** 3,600 is 36 hundreds.
   Use the basic fact \(36 \div 4 = 9\).
   So, 36 hundreds \(\div 4 = 9\) hundreds, or 900.

2. \(240 \div 6 = \underline{40}\)

3. \(5,400 \div 9 = \underline{600}\)

4. \(300 \div 5 = \underline{60}\)

5. \(4,800 \div 6 = \underline{800}\)

6. \(420 \div 7 = \underline{60}\)

7. \(150 \div 3 = \underline{50}\)

8. \(6,300 \div 7 = \underline{900}\)

9. \(1,200 \div 4 = \underline{300}\)

10. \(360 \div 6 = \underline{60}\)

**Find the quotient.**

11. \(28 \div 4 = \underline{7}\)

12. \(18 \div 3 = \underline{6}\)

13. \(45 \div 9 = \underline{5}\)

14. \(280 \div 4 = \underline{70}\)

15. \(180 \div 3 = \underline{60}\)

16. \(2,800 \div 4 = \underline{700}\)

17. \(1,800 \div 3 = \underline{600}\)

18. \(4,500 \div 9 = \underline{500}\)

**Problem Solving**

14. At an assembly, 180 students sit in 9 equal rows. How many students sit in each row?

15. Hilary can read 560 words in 7 minutes. How many words can Hilary read in 1 minute?

16. A company produces 7,200 gallons of bottled water each day. The company puts 8 one-gallon bottles in each carton. How many cartons are needed to hold all the one-gallon bottles produced in one day?

17. An airplane flew 2,400 miles in 4 hours. If the plane flew the same number of miles each hour, how many miles did it fly in 1 hour?
Lesson Check (CC.4.NBT.6)

1. A baseball player hits a ball 360 feet to the outfield. It takes the ball 4 seconds to travel this distance. How many feet does the ball travel in 1 second?
   - A 9 feet
   - B 40 feet
   - C 90 feet
   - D 900 feet

2. Sebastian rides his bike 2,000 meters in 5 minutes. How many meters does he bike in 1 minute?
   - A 4 meters
   - B 40 meters
   - C 50 meters
   - D 400 meters

Spiral Review (CC.4.OA.2, CC.4.OA.3, CC.4.NBT.5, CC.4.NBT.6)

3. A full container of juice holds 64 ounces. How many 7-ounce servings of juice are in a full container? (Lesson 4.3)
   - A 1
   - B 8
   - C 9
   - D 10

4. Paolo pays $244 for 5 identical calculators. Which is the best estimate of how much Paolo pays for one calculator? (Lesson 4.1)
   - A $40
   - B $50
   - C $60
   - D $245

5. A football team paid $28 per jersey. They bought 16 jerseys. How much money did the team spend on jerseys? (Lesson 3.5)
   - A $44
   - B $196
   - C $408
   - D $448

6. Suzanne bought 50 apples at the apple orchard. She bought 4 times as many red apples as green apples. How many more red apples than green apples did Suzanne buy? (Lesson 2.2)
   - A 10
   - B 25
   - C 30
   - D 40
Estimate Quotients Using Compatible Numbers

Use compatible numbers to estimate the quotient.

1. \(389 \div 4\) \hspace{1cm} 2. \(358 \div 3\) \hspace{1cm} 3. \(784 \div 8\) \hspace{1cm} 4. \(179 \div 9\)

\[400 \div 4 = 100\]

5. \(315 \div 8\) \hspace{1cm} 6. \(2,116 \div 7\) \hspace{1cm} 7. \(4,156 \div 7\) \hspace{1cm} 8. \(474 \div 9\)

Use compatible numbers to find two estimates that the quotient is between.

9. \(1,624 \div 3\) \hspace{1cm} 10. \(2,593 \div 6\) \hspace{1cm} 11. \(1,045 \div 2\) \hspace{1cm} 12. \(1,754 \div 9\)

13. \(2,363 \div 8\) \hspace{1cm} 14. \(1,649 \div 5\) \hspace{1cm} 15. \(5,535 \div 7\) \hspace{1cm} 16. \(3,640 \div 6\)

Problem Solving \(\text{REAL WORLD}\)

17. A CD store sold 3,467 CDs in 7 days. About the same number of CDs were sold each day. About how many CDs did the store sell each day?

18. Marcus has 731 books. He puts about the same number of books on each of 9 shelves in his bookcase. About how many books are on each shelf?
Lesson Check (CC.4.NBT.6)

1. Jamal is planting seeds for a garden nursery. He plants 9 seeds in each container. If Jamal has 296 seeds to plant, about how many containers will he use?
   - A. about 20
   - B. about 30
   - C. about 200
   - D. about 300

2. Winona purchased a set of vintage beads. There are 2,140 beads in the set. If she uses the beads to make bracelets that have 7 beads each, about how many bracelets can she make?
   - A. about 30
   - B. about 140
   - C. about 300
   - D. about 14,000

Spiral Review (CC.4.NBT.1, CC.4.NBT.3, CC.4.NBT.5, CC.4.NBT.6)

3. A train traveled 360 miles in 6 hours. How many miles per hour did the train travel? (Lesson 4.4)
   - A. 60 miles per hour
   - B. 66 miles per hour
   - C. 70 miles per hour
   - D. 600 miles per hour

4. An orchard has 12 rows of pear trees. Each row has 15 pear trees. How many pear trees are there in the orchard? (Lesson 3.6)
   - A. 170
   - B. 180
   - C. 185
   - D. 190

5. Megan rounded 366,458 to 370,000. To which place did Megan round the number? (Lesson 1.4)
   - A. hundred thousands
   - B. ten thousands
   - C. thousands
   - D. hundreds

6. Mr. Jessup, an airline pilot, flies 1,350 miles a day. How many miles will he fly in 8 days? (Lesson 2.11)
   - A. 1,358 miles
   - B. 8,400 miles
   - C. 10,800 miles
   - D. 13,508 miles
Name ____________________________

**Division and the Distributive Property**

Find the quotient.

1. $54 \div 3 = (\frac{30}{3} \div 3) + (\frac{24}{3} \div 3)$
   
   $= 10 + 8$
   
   $= 18$

2. $81 \div 3 = \underline{27}$
3. $232 \div 4 = \underline{58}$
4. $305 \div 5 = \underline{61}$

5. $246 \div 6 = \underline{41}$
6. $69 \div 3 = \underline{23}$
7. $477 \div 9 = \underline{53}$

8. $224 \div 7 = \underline{32}$
9. $72 \div 4 = \underline{18}$
10. $315 \div 3 = \underline{105}$

**Problem Solving**

11. Cecil picked 219 apples. She divided the apples equally into 3 baskets. How many apples are in each basket?

12. Jordan has 260 basketball cards. He divides them into 4 equal groups. How many cards are in each group?

13. The Wilsons drove 324 miles in 6 hours. If they drove the same number of miles each hour, how many miles did they drive in 1 hour?

14. Phil has 189 stamps to put into his stamp album. He puts the same number of stamps on each of 9 pages. How many stamps does Phil put on each page?
Lesson Check (CC.4.NBT.A)

1. A landscaping company planted 176 trees in 8 equal rows in the new park. How many trees did the company plant in each row?
   - A 18
   - B 20
   - C 22
   - D 24

2. Arnold can do 65 pushups in 5 minutes. How many pushups can he do in 1 minute?
   - A 11
   - B 13
   - C 15
   - D 17

Spiral Review (CC.4.OA.3, CC.4.NBT.B, CC.4.NBT.C)

3. Last Saturday, there were 1,486 people at the Cineplex. There were about the same number of people in each of the 6 theaters. Which is the best estimate of the number of people in each theater? (Lesson 4.3)
   - A between 20 and 30
   - B between 80 and 90
   - C between 100 and 200
   - D between 200 and 300

4. Nancy walked 50 minutes each day for 4 days last week. Gillian walked 35 minutes each day for 6 days last week. Which statement is true? (Lesson 3.7)
   - A Gillian walked 10 minutes more than Nancy.
   - B Gillian walked 20 minutes more than Nancy.
   - C Nancy walked 10 minutes more than Gillian.
   - D Nancy walked 15 minutes more than Gillian.

5. Three boys share 28 toy cars equally. Which best describes how the cars are shared? (Lesson 4.2)
   - A Each gets 3 cars with 1 left over.
   - B Each gets 8 cars with 2 left over.
   - C Each gets 9 cars with 1 left over.
   - D Each gets 10 cars with 2 left over.

6. An airplane flies at a speed of 474 miles per hour. How many miles does the plane fly in 5 hours? (Lesson 2.11)
   - A 2,070 miles
   - B 2,140 miles
   - C 2,370 miles
   - D 2,730 miles
Divide Using Repeated Subtraction

Use repeated subtraction to divide.

1. \(42 \div 3 = 14\)  
2. \(72 \div 4 = \)  
3. \(93 \div 3 = \)  

\[
\begin{array}{r}
3)42 \\
\underline{-30} & 10 \\
\underline{12} & 10 \\
\underline{-12} & 4 \\
0 & 4 \\
\end{array}
\]

4. \(35 \div 4 = \)  
5. \(93 \div 10 = \)  
6. \(86 \div 9 = \)  

Draw a number line to divide.

7. \(70 \div 5 = \)  

Problem Solving

8. Gretchen has 48 small shells. She uses 2 shells to make one pair of earrings. How many pairs of earrings can she make?

9. James wants to purchase a telescope for $54. If he saves $3 per week, in how many weeks will he have saved enough to purchase the telescope?
Lesson Check (CC.4.NBT.6)

1. Randall collects postcards that his friends send him when they travel. He can put 6 cards on one scrapbook page. How many pages does Randall need to fit 42 postcards?
   - A 3
   - B 4
   - C 6
   - D 7

2. Ari stocks shelves at a grocery store. He puts 35 cans of juice on each shelf. The shelf has 4 equal rows and another row with only 3 cans. How many cans are in each of the equal rows?
   - A 6
   - B 7
   - C 8
   - D 9

Spiral Review (CC.4.OA.3, CC.4.NBT.1, CC.4.NBT.5, CC.4.NBT.6)

3. Fiona sorted her CDs into separate bins. She placed 4 CDs in each bin. If she has 160 CDs, how many bins did she fill?
   (Lesson 4.4)
   - A 4
   - B 16
   - C 40
   - D 156

4. Eamon is arranging 39 books on 3 shelves. If he puts the same number of books on each shelf, how many books will there be on each shelf? (Lesson 4.6)
   - A 11
   - B 12
   - C 13
   - D 14

5. A newborn boa constrictor measures 18 inches long. An adult boa constrictor measures 9 times the length of the newborn plus 2 inches. How long is the adult? (Lesson 2.12)
   - A 142 inches
   - B 162 inches
   - C 164 inches
   - D 172 inches

6. Madison has 6 rolls of coins. Each roll has 20 coins. How many coins does Madison have in all? (Lesson 2.3)
   - A 110
   - B 120
   - C 125
   - D 130