Student Name: _____

WVES 4th Grade Packet
Academic Homework Calendar

Week of: May 12- May 18

Theme: How have our energy resources changed over the years?

Date	Activities
Tuesday, May 12	**Reading:** Read introduction, chapter 1 and answer questions **Writing:** Complete Day 1 **Math:** Visual Division Math Booklet Questions #61-#63 **Science:** Read Solar Oven Challenge
Wednesday, May 13	**Reading:** Read chapter 2 and answer questions **Writing:** Complete Day 2 **Math:** Vertical Division with Helper Grid Math Booklet Questions #64-#66 **Science:** Complete STEM Design Sheet
Thursday, May 14	**Reading:** Read chapter 3, conclusion and answer questions **Writing:** Complete Day 3 **Math:** Dividing Whole Numbers #1 Math Booklet Questions #67-#69 **Science:** Start building and testing solar oven
Friday, May 15	**Reading:** Read Helios and Phaeton and answer questions **Writing:** Complete Day 4 **Math:** Dividing Whole Numbers #2 Math Booklet Questions #70-#72 **Science:** Continue building solar oven
Monday, May 18	**Reading:** Read fluency passage twice and complete chart in part B. **Writing:** Complete Day 5 *Possible to type in Google Classroom **Math:** Division Word Problems Math Booklet Questions #73-#75 **Science:** Test your solar oven

Extra Online Options	
Wonders (Official Reading Program) Into Math (Official Math Program) Prodigy (Math Program) Xtra Math (Basic Facts- Math Program)	ReadWorks (Reading- Google Classroom) SpellingCity (Spelling and Vocabulary Words) Keyboarding without Tears (Typing Practice)

STRATEGIES & SKILLS

Comprehension
Strategy: Ask and Answer Questions
Skill: Main Idea and Key Details

Vocabulary Strategy
Latin and Greek Prefixes

Vocabulary
coincidence, consequences, consume, converted, efficient, incredible, installed, renewable

Content Standards
Science
Earth Science

Word Count: 1,365**

Photography Credit: Robert Glusic/CORBIS

**The total word count is based on words in the running text and headings only. Numerals and words in captions, labels, diagrams, charts, and sidebars are not included.

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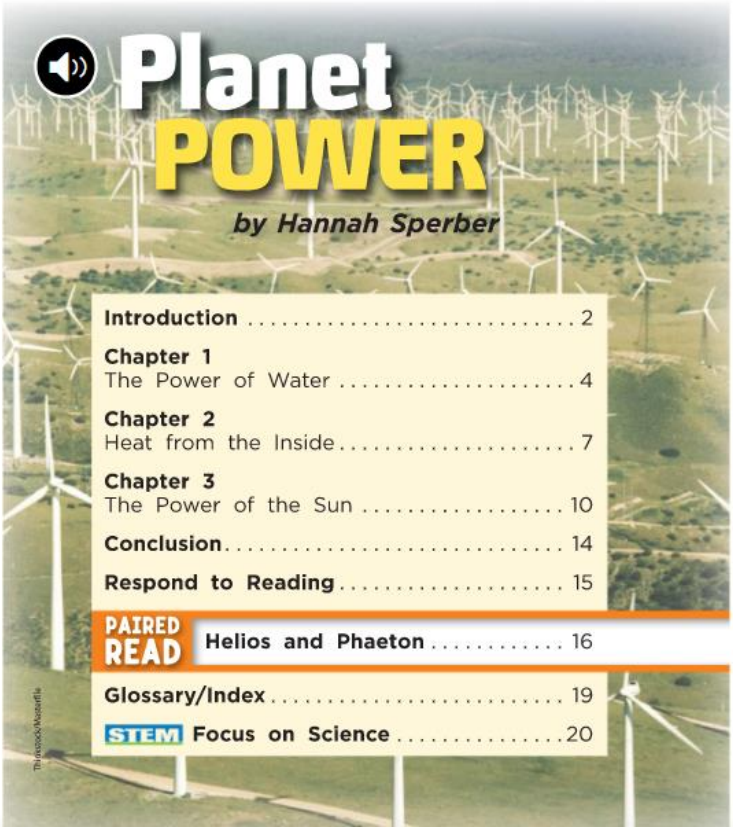
Genre Narrative Nonfiction

Essential Question
How have our energy resources changed over the years?



Genre Preview:
This story is a narrative nonfictional story. Narrative nonfiction is a story that presents facts and information about a topic. The story includes text features such as sidebars.

Note Taking:
Take notes as they read.
Remember to record:
• ideas they think are important
• unfamiliar words
• sections of text that are unclear or confusing
• any questions about the text they have students can also fill in a graphic organizer, noting the important events for each section.

Introduction

Energy is incredible. We use it to light and heat our homes. It powers our TVs and computers. So much of what we do depends on energy!

Most of the energy we consume today comes from **fossil fuels**, such as oil, gas, or coal. Fossil fuels were formed from plants and animals that lived millions of years ago. Fossil fuels lie buried deep under the ground. Burning fossil fuels releases their energy.

Burning fossil fuels such as coal pollutes the air.

Larry Lee Photography/CORBIS

In the United States, giant wind farms produce enough electricity for about 19 million homes.

Thinkstock/Wavebreak

However, burning fossil fuels pollutes the air. Fossil fuels are also not renewable. They can only be used once. They will run out in the future.

The sun, water, and wind are all renewable sources of energy. We can use renewable energy over and over again. Renewable energy doesn't pollute the air.

It's no coincidence that more people are trying to use renewable energy these days. Technology is opening up exciting new possibilities. We can use energy from the wind to power our homes. We can use energy from the sun to power cars and houses. We can use energy from water to produce electricity.

1. This passage is narrative nonfiction. Describe the purpose of this genre. Identify what the purpose of this text will be based on the introduction.

_____

_____

2. In the last paragraph on page 3 technology is the practical application of knowledge, usually involving tools and engineering. What does the author mean when she says, "technology is opening up exciting new possibilities"?

_____

_____

_____

_____

3. What are some key details about fossil fuels? Cite text evidence in your answer.

_____

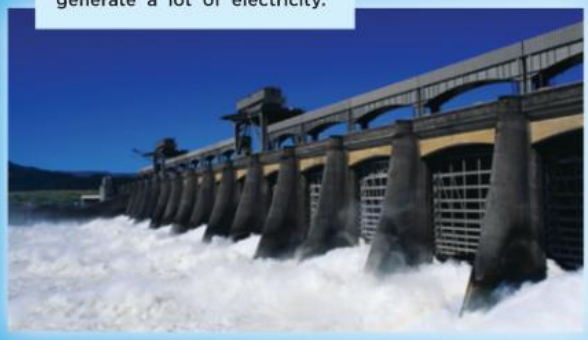
CHAPTER 1

The Power of Water

Since ancient times, people have used water as a source of energy. Waterwheels use the energy from water moving in rivers. They have been used to mill flour and do other work.

Later, people built dams across rivers to generate hydropower. They used the energy from the water that was released from the dam to generate electricity. The movement of the water can turn machines called **turbines**. When the turbines move, they **generate** electricity.

Dams across rivers can generate a lot of electricity.



Richard Gross/CORBIS

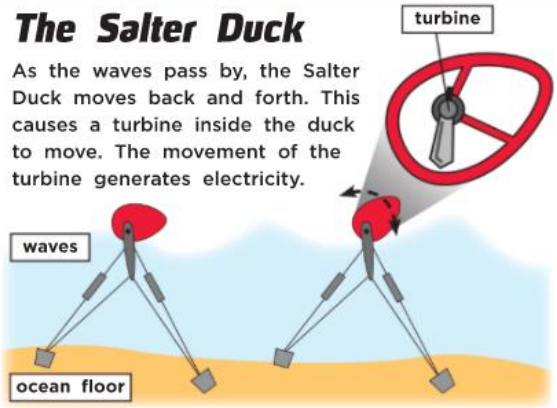
In the 1970s, the supply of oil decreased, and there was an oil **crisis**. Oil is one of our main sources of energy. A scientist named Stephen Salter began searching for a different source of energy. He looked at the ocean waves.

Salter worked with other scientists to develop the Salter Duck. This machine bobbed up and down on the ocean waves. A turbine inside the machine converted each movement into electricity.

However, people didn't think that the Salter Duck would be strong enough to survive ocean storms. Scientists around the world continued working to improve Salter's idea.

The Salter Duck

As the waves pass by, the Salter Duck moves back and forth. This causes a turbine inside the duck to move. The movement of the turbine generates electricity.



4. The prefix hydro- means "water". What does hydropower mean on page 4. Use context clues and the meaning of the prefix.

_____

_____

5. Which key details support the main idea that it is hard to capture the energy of ocean waves?

_____

_____

_____

_____

It's hard to capture the energy of ocean waves. Ocean storms produce strong winds and waves that can be destructive. The ocean can become flat when the wind drops.

However, these problems haven't kept people from trying to figure out better ways to generate wave energy. The first commercial wave farm in the United States was built off the coast of Oregon in 2010. The challenge for scientists is to make wave energy efficient and less expensive.

Up, Up, and Away!

Imagine putting a jet pack on your back and flying like a superhero. The water-powered jet pack lets you do that. Water jet packs use water pressure to lift a person into the air. A water jet pack's top speed is almost 30 miles per hour.

Water jet packs can lift people 30 feet into the air.

Sun Sentinel/McClatchy-Tribune/MCT via Getty Image

CHAPTER 2

Heat from the Inside

Water, wind, and solar energy rely on the weather. We can't have wind energy without wind. We can't generate solar energy when the sun isn't shining. However, there is one renewable energy source that doesn't rely on the weather.

Geothermal energy comes from the heat inside Earth. Some geothermal energy comes to the surface of Earth in geysers or hot springs. People began using geothermal energy from hot springs for cooking, washing, and keeping warm thousands of years ago.

Many hot springs are in volcanic areas. They release hot water from the ground.

Robert Glusic/CORBIS

6. Reread what you learned about geothermal energy in Chapter 2. Why doesn't geothermal energy have the same problems as water, wind, and solar energy?

_____

_____

_____

_____

People began to explore more ways of tapping into geothermal energy in the nineteenth century.

In 1931, a plumber named Charlie Lieb used a hot-water well to heat a home in Klamath Falls, Oregon. Lieb ran a series of pipes filled with water into the hot-water well. The water inside the pipes heated up in the well, and the hot water was then carried back inside the house.

In a home that uses geothermal energy, pipes carry the heat from under the ground into the house.

Lieb's system was an important development in the history of geothermal heating systems.

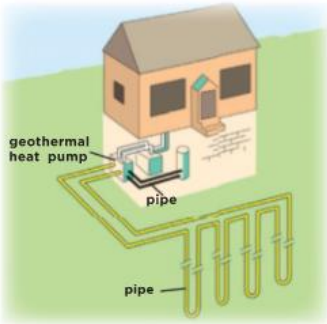
MONPIX/Alamy

These days, geothermal systems are installed in many different kinds of buildings, from small homes to large buildings such as schools and offices. Geothermal heating is efficient, clean, and less expensive than heating using fossil fuels.

Geothermal systems in houses use heat pumps. In winter, heat is absorbed from under the ground and carried through pipes to the heat pump. In summer, the heat pump removes the heat from the home and returns it to the ground.

A Home Geothermal Heating System

Heat travels from under the ground to the geothermal heat pump. The heat pump sends the warmed air through the house.



7. What details support the idea Charlie Lieb's system was an important development for geothermal heating?

_____

_____

8. What is the main idea of the first paragraph on page 9? What key details helped you figure out the main idea?

_____

_____

_____

_____

CHAPTER 3

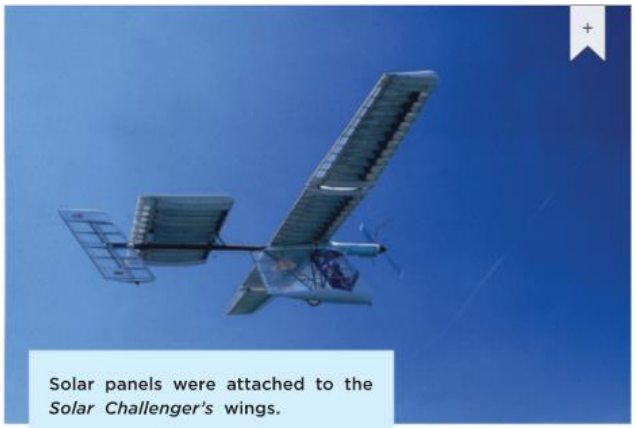
The Power of the Sun

Solar energy is plentiful, it doesn't pollute the environment, and it is renewable. People have used the sun's energy since ancient times. The ancient Greeks built their homes facing the sun for warmth. The ancient Romans used glass windows to trap the heat of the sun inside buildings.

Today some homes and buildings have solar panels on their roofs. Solar panels trap the sun's rays. The panels convert the energy in the sun's rays into hot water or electricity.

This roof has solar panels to capture the sun's energy.

Eco Images/Universal Images Group/Getty Images



Solar panels were attached to the *Solar Challenger's* wings.

John Reader/Time & Life Pictures/Getty Images

Engineer Paul MacCready dreamed of making an aircraft that would be powered only by the sun. MacCready set up a company that created a solar-powered aircraft.

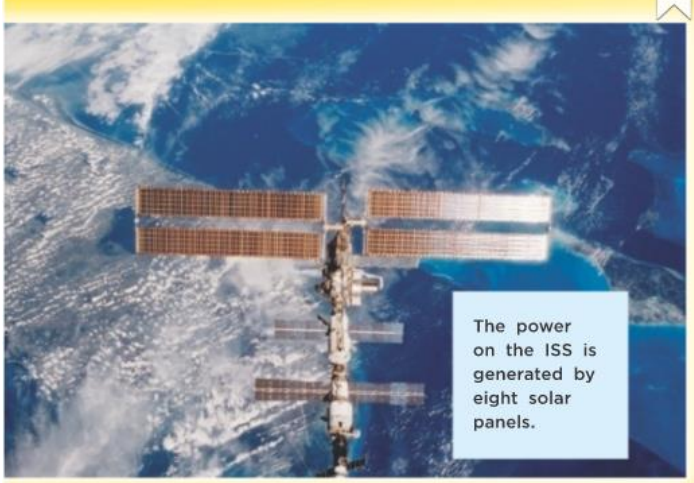
The aircraft was called the *Solar Challenger.* In 1981, it flew 163 miles (262 kilometers) from France to England. The flight took around five and a half hours. The aircraft was powered by energy from solar panels. The *Solar Challenger* set a world record for the longest solar-powered flight with a pilot.

Since then, more solar aircraft have been developed. Some collect information to help scientists study the weather. These aircraft are controlled from Earth, and they don't have pilots.

9. Read the first sentence on page 10. Find the word plentiful that is used to describe solar energy. Break the word into its parts to help determine its meaning.

_____

_____



The power on the ISS is generated by eight solar panels.

Sometimes we use machines that we can't plug into a regular power supply. In 1998, the International Space Station (ISS) was launched into space.

The station had to be self-sufficient once it was launched because it can't be plugged into a regular power supply. Instead, it runs on solar energy. The station has solar panels along its wings. The solar panels **absorb** energy from the sun's rays. The panels convert the energy into electricity.

Purestock/SuperStock

Now there is new, exciting research into solar energy. Scientists are exploring the possibility of using solar panels in space to help power machines back on Earth.

Solar panels in space would collect solar energy 24 hours a day. On Earth, we can only collect solar energy during the day. Weather would not affect solar panels in space. Scientists are working hard to figure out how to send energy from solar panels in space back to Earth in a safe and affordable way.

THE RACE IS ON!

Could you design a house that's beautiful, cheap to run, and uses energy efficiently? The Department of Energy runs the Solar Decathlon challenge. Teams of university students from around the world compete to build the best solar-powered house.

The Solar Decathlon gives the students a chance to find creative ways to use renewable energy. The teams work hard to design environmentally friendly houses that could be built in the future.

10. Find the sidebar at the bottom of page 13. Why did the author include this information about the Solar Decathlon challenge? What does she want the reader to know?

_____

_____

_____

_____

11. Use key details from the passage to show some ways that people use solar energy.

_____

_____

_____

Conclusion

An urgent issue facing the world today is how to find enough energy sources to meet our needs. There are negative consequences if we use nonrenewable energy sources, such as fossil fuels, because they cause pollution. Fossil fuel supplies are also dwindling. People around the world are working to find ways to replace these energy sources with renewable energy sources.

Today we are using more renewable energy sources than ever before. It will still be a long time before we can use renewable energy for all our needs. However, it's fun to wonder what might be invented next. The future looks bright for renewable energy!

This solar power plant in the Mojave Desert in California can provide electricity for thousands of people.

Calvin Larsen/Photo Researchers/Getty Images

Respond to Reading

Summarize

Use important details from *Planet Power* to summarize the selection. Your graphic organizer may help you.

Main Idea
Detail
Detail
Detail

Text Evidence

1. How do you know that this is informational text? GENRE
2. What is the main idea of the first paragraph on page 9? What key details helped you figure out the main idea? MAIN IDEA AND KEY DETAILS
3. The prefix *hydro-* means "water." What does *hydropower* mean on page 4? Use context clues and the meaning of the prefix. LATIN AND GREEK PREFIXES
4. Write about how the International Space Station runs. Include key details from the text. WRITE ABOUT READING

12. Reread first paragraph on page 14. What will be some "negative consequences" of using non-renewable energy sources?

_____

_____

_____

13. What is the main idea of the conclusion? Cite evidence from the text to support your answer.

_____

_____

_____

_____

Genre Myth

Compare Texts

Read a Greek myth about the sun and how it moves across the sky.

Helios and Phaeton

Ancient Greeks believed that Helios, their sun god, was very powerful. Helios's body glowed with yellow, orange, and red light and energy.

Every morning, Helios came out of his cave below the ocean. He stepped into a golden chariot, which was pulled by four horses. Helios provided light for all of Earth as he streaked across the sky in his chariot.

Illustration: Dennis Juan Ma

One day, Helios noticed a figure coming toward him from Earth. The figure glowed like Helios. Helios realized that it was his long-lost son, Phaeton. He was delighted. "Welcome Phaeton!" Helios shouted. "What can I do for you?"

"I want to drive your golden chariot," replied Phaeton. Helios was horrified. He knew that not even Zeus, ruler of all the gods, would dare to drive his golden chariot. The flame-breathing horses were too hot and wild. However, Phaeton wouldn't listen.

Illustration: Dennis Juan Ma

14. Find evidence that shows the power of the sun. How did ancient Greeks likely view the sun, based on the myth and what you learned in Planet Power?

_____

_____

_____

_____

Helios painted oil on his son's head to protect Phaeton from the burning heat. Then Phaeton took the horses' reins from his father. The horses bolted, and Phaeton couldn't control them.

The horses pulled the chariot high into space. Earth began to freeze. Then the horses plunged toward Earth. This started fires and made the oceans and rivers dry up.

Zeus panicked. He threw a lightning bolt to stop Phaeton, who was thrown out of the chariot and fell to Earth. His father, Helios, returned to his rightful place as driver of the golden chariot.

Illustrations: Dennis Juan Ma

Make Connections

What does *Helios and Phaeton* tell you about the importance of the power of the sun to ancient Greeks? **ESSENTIAL QUESTION**

Compare the importance of energy from the sun in ancient Greece to modern sources of energy. Why is the sun still so important? **TEXT TO TEXT**

Glossary

absorb *(ab-ZOHRB)* to soak up ***(page 12)***

crisis *(KRIGH-sis)* an unstable time ***(page 5)***

fossil fuels *(FOS-uhl fyewlz)* fuels, including oil, natural gas and coal, that were formed from living things a long time ago ***(page 2)***

generate *(JEN-uh-rayt)* make or produce ***(page 4)***

geothermal *(jee-oh-THUR-muhl)* having to do with the heat from within Earth ***(page 7)***

turbines *(TUR-bighnz)* machines that use flowing water, steam, or air to turn blades and produce electricity ***(page 4)***

Index

15. What does Helios and Phaeton tell you about the importance of the power of the sun to ancient Greeks?

_____

_____

_____

16. Compare the importance of energy from the sun in ancient Greece to modern sources of energy. Why is the sun still so important?

_____

_____

_____

_____

Name _____

Read the passage. Ask and answer questions to understand new information in the text.

Energy from the Sea

As I sat on the beach the other day, I saw the power of the waves
16 crash on the sand. The water splashed around me. Then the water
28 pulled along the shells that lay around me. This got me thinking.
40 We can use the wind and the sun to make power. We can use water,
55 too. Waterpower is also a renewable resource. It should be able to
67 help us solve our energy problems.

73 Waterpower has been in use for thousands of years. The earliest
84 use of hydropower can be traced to the waterwheel. It is a big wheel
98 with paddles on the rim. The force of the water turns the wheel. Then
112 the wheel runs machinery that is linked to it. Ancient Egyptians
123 used river currents to turn wheels way back in 2500 B.C. The ancient
136 Greeks and Romans used hydropower, too. It survived all the way
147 through medieval times.

150 But waterpower has evolved since then. Way back in 1628, the
161 Pilgrims used it to grind corn in mills. But by the 1800s, hot steam
175 replaced waterpower as the main power source. People used burning
185 coal to heat water. The boiling water then produced steam, which
196 ran engines and other machines.

201 By the end of the 1800s, waterpower came back into fashion.
212 Demand rose for electric energy. In 1882, the first hydroelectric plant
223 was built in Appleton, Wisconsin. It could make enough energy to light
235 a house and two paper mills. That's not much if you think about it. But
250 it was a start! As time went on, the demand for hydropower steadily
263 increased. One power plant now has the capacity of 7,600 megawatts.

Name _____

How Dams Work

You may think dams just hold water. But some dams are used to make waterpower. The amount of power they make depends on the height of the water. When the water is high, more pressure is put on the turbines down below. The more the turbines turn, the more power there is.

But there is a problem with hydropower. It is only useful in certain parts of the country. If there is not a large moving water source, then hydropower will not work. This is why some people believe waterpower is all nonsense. But there are states that do make lots of hydropower. Areas in California and the Pacific Northwest produce the most power.

I went to the library to find out how much of our energy comes from waterpower. About 7.8 percent of the power made in the United States is from hydropower. To my disbelief, a lot comes from fossil fuels and nuclear power, too. I had hoped to see higher numbers for renewable resources.

Perhaps one day we can learn to rely just on renewable resources. Look at countries like Brazil and Iceland. Iceland relies on geothermal power from hot springs. Brazil has one of the biggest dams in the world. These countries can give us a preview of how the United States can become a greener nation.

Name _____

A. Reread the passage and answer the questions.

1. What are three key details in paragraph 2?

_____

_____

_____

2. How are these details connected?

_____

_____

3. What is the main idea of the whole passage?

_____

_____

B. Work with a partner. Read the passage aloud. Pay attention to expression. Stop after one minute. Fill out the chart.

	Words Read	–	Number of Errors	=	Words Correct Score
First Read		–		=	
Second Read		–		=	

Writing/Grammar Activities Checklist
Week of May 11th

This week you will write a friendly letter to your teacher describing your experiences and feelings while completing the fourth quarter of school at home instead of in your classroom.

Day 1 (Grammar):

- *Review: comparative adjectives compare two nouns and often use the suffix -er. Superlative adjectives compare three or more nouns and often use the suffix -est.*
- Complete Grammar pages 112, 116, and 117, but make sure to read the new information in the boxes at the top first!

Day 2 (Prewrite):

- Brainstorm your experiences and feelings. Use the graphic organizer to help you.

Day 3 (Draft):

- There are five parts of a friendly letter: heading, greeting, body, closing, and signature. Watch the links below and/or use the sample to study the format, capitalization, and punctuation.
  https://www.youtube.com/watch?v=Qw3c5FRyBm4
  https://www.youtube.com/watch?v=3dYTsqqeH7g
- Using the information from your graphic organizer, use the friendly letter template to write your draft.

Day 4 (Revise and Edit):

- Reread your letter. Are there any ideas or words you should change or add? Try to include interesting adjectives while describing your experiences.
- Check for correct capitalization, punctuation, and spelling in **all five parts** of your letter.

Day 5 (Publish)

- Use the lined notebook paper to write your final copy in your nicest handwriting. Pay attention to formatting! Look at the sample and video links as needed.
- Share it with your teacher in your student portfolio on Class Dojo, in Google Classroom, or during a Zoom meeting!

Extensions

- Underline any adjectives in your final copy.
- Read the story Dear Mr. Blueberry below:
  https://www.youtube.com/watch?v=bjBum_cTAcg

Name _____

- **Comparative** and **superlative adjectives** compare things. They usually end in *-er* or *-est*, or they include the words *more/most* or *less/least*.
- The comparative form of *good* is *better*. The superlative form of *good* is *best*.
- The comparative form of *bad* is *worse*. The superlative form of *bad* is *worst*.

A. Complete each sentence with *better* or *best*, based on whether a comparative or superlative form is needed.

1. This meal was _____ than the last one we ate.

2. You are the _____ friend I could ever have.

3. He had the _____ score in the entire class.

4. Tomorrow's weather will be _____ than today's.

5. I hope I feel _____ than this soon.

B. Complete each sentence with *worse* or *worst*, based on whether a comparative or superlative form is needed.

6. That is the _____ smell in the world!

7. I did _____ on the test than I thought.

8. Khalil is _____ at English than math.

9. This photo is the _____ of the three.

10. My aunt is a _____ cook than my mother.

Name _____

- For most adjectives with two or more syllables, add *more* to compare two nouns.
- Add *most* to compare more than two nouns.

Write *more* or *most* to correctly complete each sentence.

1. This book is _____ exciting than the last one I read.

2. I am _____ nervous about the race than you are.

3. Which city is the _____ crowded of all?

4. I am _____ talented in art than in music.

5. That is the _____ ridiculous thing I have ever seen.

6. This is the _____ interesting magazine available for nature lovers.

7. I am _____ flexible after stretching than before.

8. Of all of us, she is the _____ eager to see the dolphins.

9. Soccer is _____ popular than basketball in Brazil.

10. The ice cream was the _____ popular dessert at the party.

Name _____

- For most adjectives with two or more syllables, add *more* to compare two nouns. Add *most* to compare more than two nouns.
- Use *-er* or *-est* with many common two-syllable adjectives, but not all. If you are unsure whether to use *-er*/*-est* or *more*/*most*, look in a dictionary.
- When you add *more* or *most*, do not use the *-er* or *-est* form of the adjective.

Rewrite each sentence. Use the correct form of the adjective.

1. The roller coaster is the most thrillingest ride in the entire theme park!

_____

2. I think this pattern is more ugly than the last one we saw.

_____

3. She was the carefullest volunteer at the shelter.

_____

4. This is the most hungry I've been all day.

_____

5. You are more considerater than I am.

_____

6. That was the most amazingest sight I've ever seen!

_____

My Experiences and Feelings While Completing the Fourth Quarter of School at Home

Brainstorm Graphic Organizer-Use single words, phrases, or pictures

What does your daily routine look like?	How have you continued learning at home?
What do you miss about school?	**What positives or fun activities have come from being home?**

FRIENDLY LETTER

October 12, 2014

Heading

Dear Sara,

Greeting

Body

How are you? I hope you are having fun in school. Have you made any new friends? I have made lots of friends at school. I am playing football this year. Are you playing any sports? I hope that you will write back soon. I miss you!

Closing Your friend,

Signature Howie Smith

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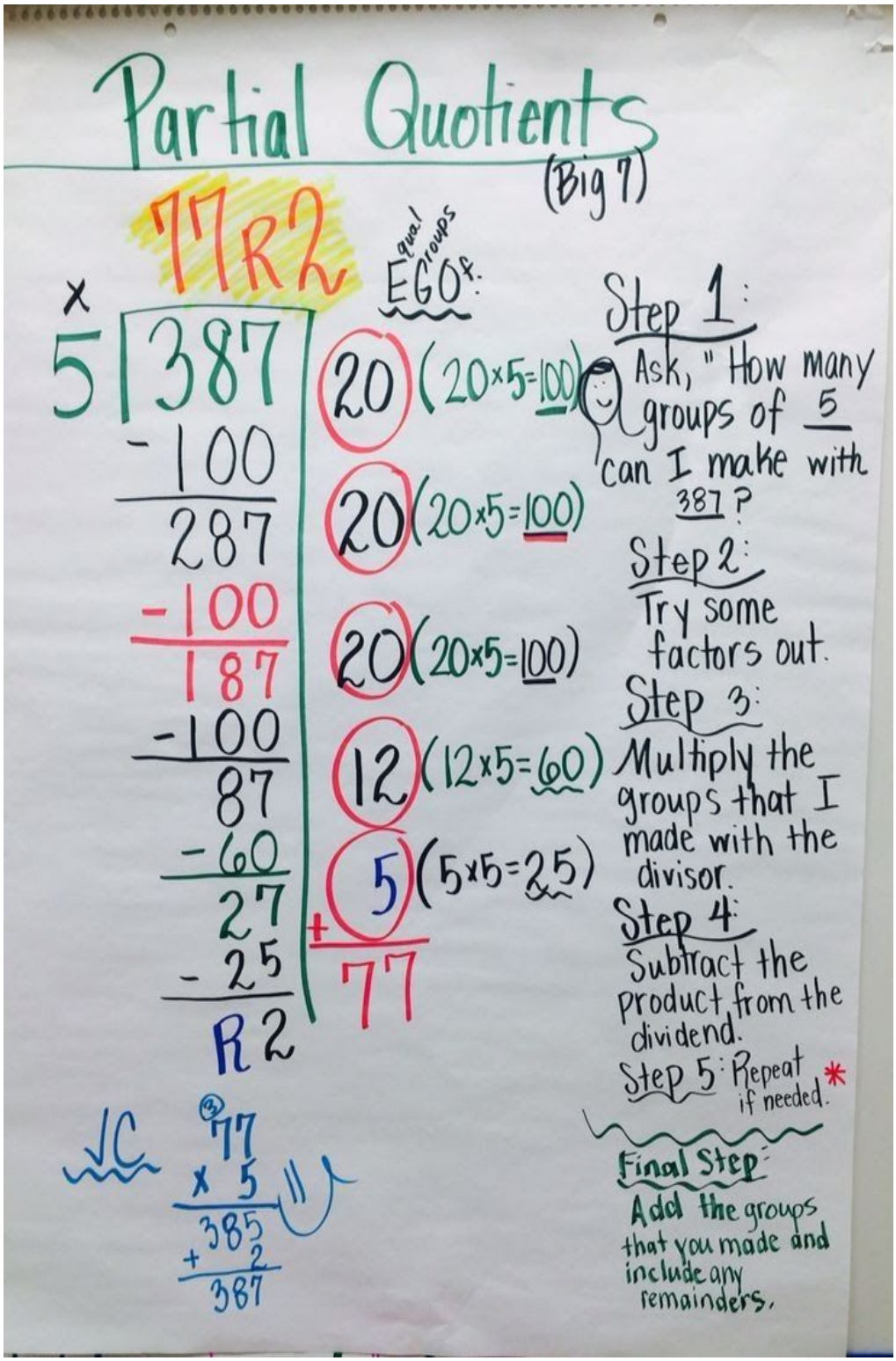
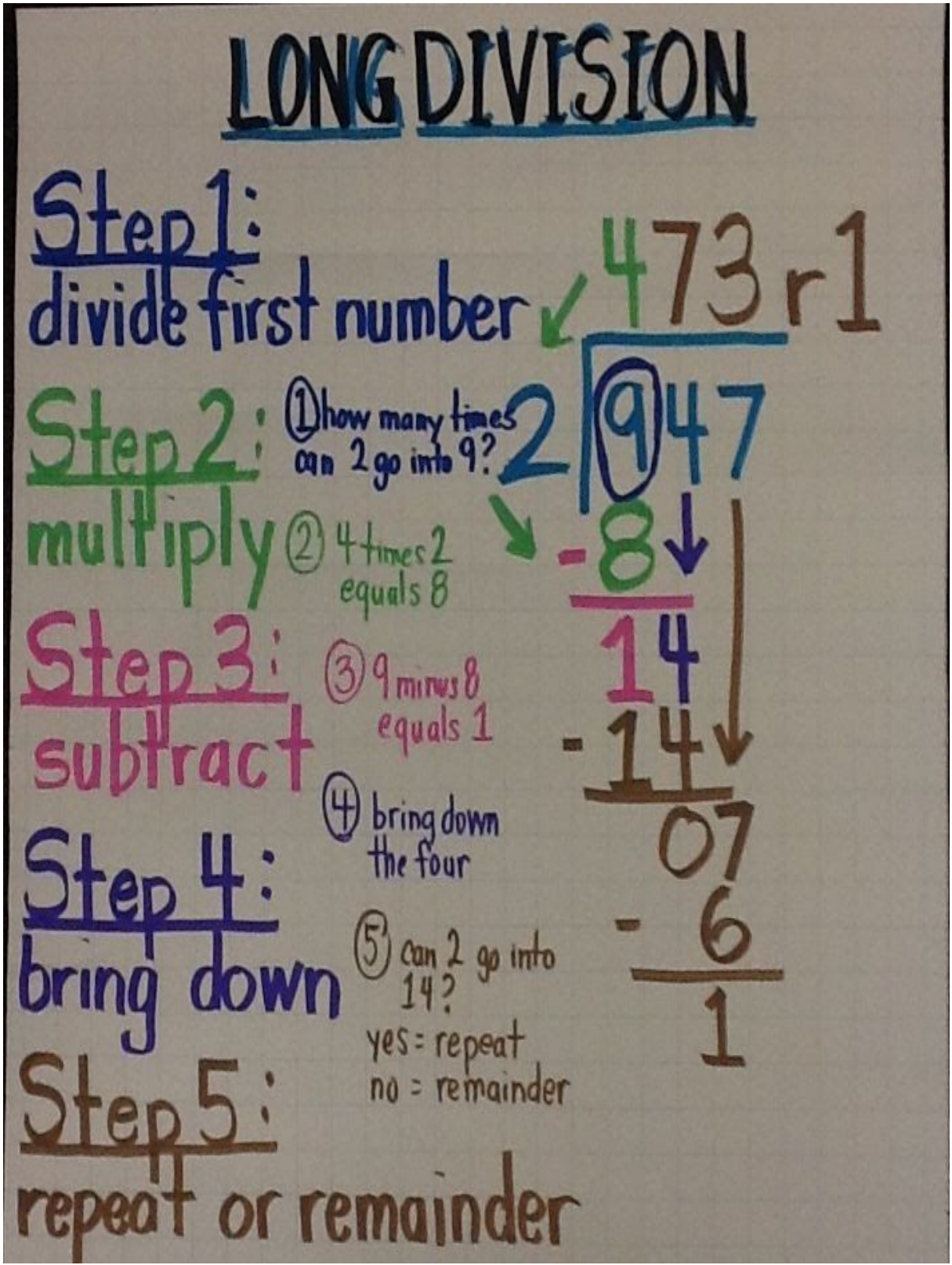
Here are some reminders to help you with division
We know you can do it!

The Big 7



Long Division: Dad (Divide)
Mom (Multiply)
Sister (Subtract)
Brother (Bring Down)
Rover (Repeat or Remainder)

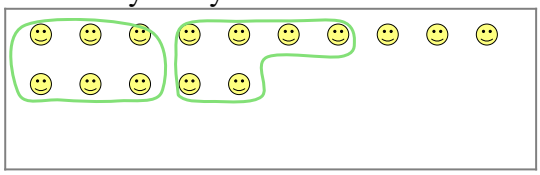


Visual Division

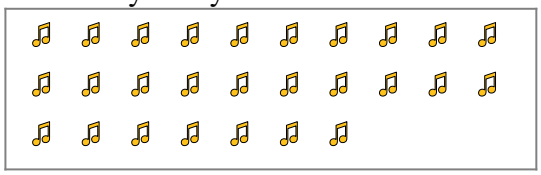
Name:

Use the shapes provided to answer the questions.

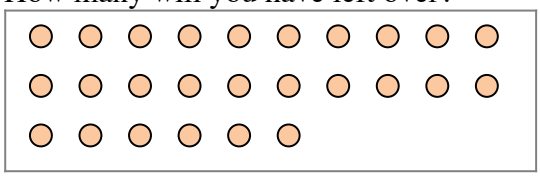
Ex) There are 15 shapes below. How many groups of 6 can you make with them? How many will you have left over?



1) There are 27 shapes below. How many groups of 5 can you make with them? How many will you have left over?

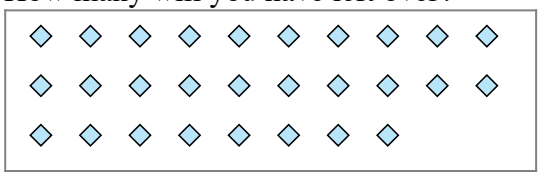


2) There are 26 shapes below. How many groups of 4 can you make with them? How many will you have left over?



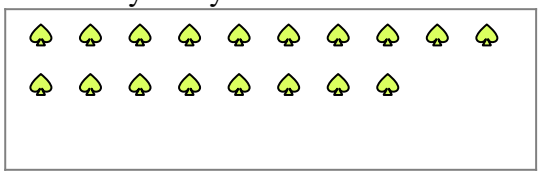
3) There are 23 shapes below. How many groups of 9 can you make with them? How many will you have left over?

4) There are 28 shapes below. How many groups of 2 can you make with them? How many will you have left over?

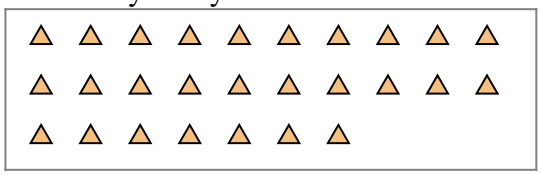


5) There are 14 shapes below. How many groups of 4 can you make with them? How many will you have left over?

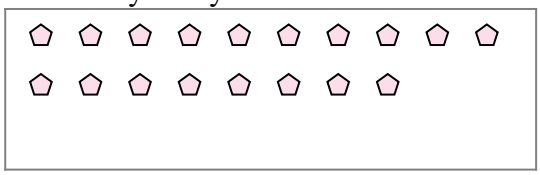
6) There are 18 shapes below. How many groups of 5 can you make with them? How many will you have left over?



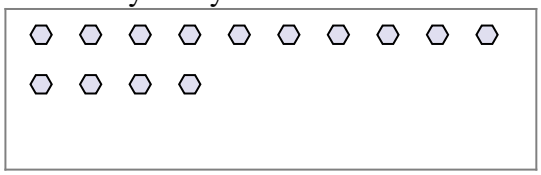
7) There are 27 shapes below. How many groups of 6 can you make with them? How many will you have left over?



8) There are 18 shapes below. How many groups of 3 can you make with them? How many will you have left over?



9) There are 14 shapes below. How many groups of 3 can you make with them? How many will you have left over?



Answers

Ex. 2

Ex. 3

1a. _____

1b. _____

2a. _____

2b. _____

3a. _____

3b. _____

4a. _____

4b. _____

5a. _____

5b. _____

6a. _____

6b. _____

7a. _____

7b. _____

8a. _____

8b. _____

9a. _____

9b. _____

1-10	94	89	83	78	72	67	61	56	50	44
11-18	39	33	28	22	17	11	6	0		

Vertical Division with a Helper Grid

Name:

Solve each problem.

1) 6 | 3 7 2

2) 4 | 9 7 5

3) 7 | 9 3 9

4) 6 | 1 1 8

5) 6 | 1 4 4

6) 6 | 8 6 4

7) 6 | 7 1 0

8) 7 | 7 2 1

9) 2 | 5 3 3

Answers

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

1-9	89	78	67	56	44	33	22	11	0

Dividing Whole Numbers

Name:

Solve each problem.

1) $2\overline{)379}$

2) $7\overline{)444}$

3) $8\overline{)188}$

4) $5\overline{)479}$

5) $5\overline{)369}$

6) $7\overline{)991}$

7) $8\overline{)204}$

8) $7\overline{)463}$

9) $2\overline{)303}$

10) $8\overline{)706}$

Answers

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

Dividing Whole Numbers

Name:

Solve each problem.

1) $9\overline{)314}$

2) $3\overline{)224}$

3) $7\overline{)982}$

4) $3\overline{)619}$

5) $8\overline{)434}$

6) $4\overline{)271}$

7) $2\overline{)599}$

8) $2\overline{)791}$

9) $5\overline{)203}$

10) $7\overline{)283}$

Answers

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

1-10	90	80	70	60	50	40	30	20	10	0

Division Word Problems (3÷1)

Name:

Solve each problem.

1) Gwen had 474 video games. If she placed the games into 2 different stacks, how many games would be in each stack?

2) Henry made 532 dollars mowing lawns over the summer. If he only had 7 customers and each person paid the same amount, how much did each person pay?

3) An industrial machine made 348 shirts. If it made one minute to make 6 shirts, how many minutes was it working?

4) Tom was reading through his favorite book. The book had 256 pages and it took Tom 8 days to finish the book. How many pages did he read per day?

5) Isabel received 990 dollars for her birthday. Later she found some toys that cost 5 dollars each. How many of the toys could she buy?

6) Robin is making bead necklaces. She has 328 beads and is making 8 necklaces with each necklace using the same number of beads. How many beads will each necklace use?

7) Sarah bought 675 bottles of water when they were on sale. If she drank 9 bottles a day how many days would they last her?

8) Emily had 693 quarters. If it costs 7 quarters for each coke from a coke machine, how many could she buy?

9) John played 2 rounds of a trivia game and scored 600 points. If he gained the same number of points each round, how many points did he score per round?

10) The roller coaster at the state fair costs 6 tickets per ride. If you had 636 tickets, how many times could you ride it?

Answers

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

1-10	90	80	70	60	50	40	30	20	10	0

Name _____ Date _____

STEM Design Challenge
Brainstorm and Reflection Sheet

STEM design challenges are prompts that encourage learners to build something new for a specific reason or purpose. They include ideas from science, technology, engineering, and mathematics.

Directions: Complete this worksheet to help you think about your creation during your design process. Write down information or use check marks to show you have finished the step.

1. **Plan:** Sketch or write about what you will create.

What is the challenge?

Materials:

Ideas:

Blueprint: Sketch what your creation will look like.

2. **Create:** Build your creation based on your plan.

3. **Play**: Try out your creation. Swap with another person so they can try it too. Ask them what they would change to make your creation better.

Name _____ Date _____

STEM Design Challenge
Brainstorm and Reflection Sheet

4. **Adjust:** Make changes to your creation if you need to.

What changes did you make? Why?

5. **Share:** Show off your creation! Draw a picture of your finished design.

… and Reflect: Jot down notes about what you will share.

What worked for you? What was a challenge you had during your design process? What did you learn? How did you make changes based on what you learned?

_____

_____

_____

_____

_____

_____

Name _____ Date _____

Design Challenge: Making a Solar Oven

In this fun activity, your child will create their very own solar oven to bake cookies or s'mores! We have given instructions which you can use to guide your child through the design thinking process. Since this is a design challenge, your child can be entirely creative with how they choose to make their oven using typical household items. However, we have also given a step-by-step procedure for making a solar oven in case your child is struggling to come up with ideas. Feel free to rely entirely on your child's creativity, take some inspiration from our procedure, or follow our procedure exactly. Be sure to engage your child by asking them questions that have them think critically about the design process.

What You Need:

- Cardboard pizza box
- Box cutter or scissors
- Aluminum foil
- Plastic wrap
- Black construction paper
- Ruler
- Cooking ingredients of your choice (Some options are s'mores or nachos; avoid cooking raw meat or raw eggs using your solar oven.)
- Any other household items
- Pen and paper for taking notes

What You Do:

1. First, explain to your child their task in this activity. Explain to them that their job is to create a solar oven out of a cardboard pizza box in order to cook the food of their choice.
2. Ask your child what they would like to cook in their solar oven. Prepare the ingredients.
   a. Some ideas are s'mores, nachos, and cookies (if possible, use edible cookie dough in case the oven doesn't work very well).
3. Ask your child the following questions so that they begin thinking critically about the design process:
   a. What does your oven need in order to cook the food? (Answer: heat)
   b. What are some of the best objects or colors that absorb heat? (Answer: The color black is good at absorbing heat.)
4. Show your child the materials they have, but don't have them start building just yet. Instead, ask them to **brainstorm** how they will use these materials in order to create a solar oven. Have them write out or draw their ideas on a piece of paper.
5. After your child has finished brainstorming, ask them to choose the design they think will work best. Remind them of the purpose of their oven: to cook the food of their choice.

Name _____ Date _____

Design Challenge: Making a Solar Oven

a. This is an important step of the design thinking process because it teaches your child to prioritize the functionality of their design over personal preferences, and it prevents them from getting too emotionally attached to one design.

6. Once your child has decided on a design, they can start **building**. Be sure to supervise and help out as needed.
7. After your child is done building, it's time to **test** it out! The best time to use your solar oven is between 11 a.m. and 2 p.m. when the sun's rays are strongest. Make sure to set the food on a dish so you don't make a mess inside the oven.
8. Depending on the food your child has decided to make, the cooking process will vary.
   a. To make a solar s'more: Place one or two marshmallows on top of a graham cracker. Put two to three squares of chocolate on top of the marshmallow. Wait until the chocolate and marshmallow are done cooking to top them with the second graham cracker.
      i. Ask your child why it might be a good idea to have the chocolate on top. (Answer: Dark colors, like brown or black, are best at absorbing heat. If the chocolate is on top, it will absorb heat into the entire s'more.)
   b. To make nachos: Place grated cheese on top of tortilla chips and wait for the sun to melt the cheese.
9. Wait for your child's oven to cook the food. (Timing will vary depending on the oven and food choice.) Be sure to frequently check back on the oven and observe whether the food is gradually cooking.
   a. If your child's oven eventually cooks the food, congratulate your child on their success!
   b. If your child's oven doesn't work, help them find out what went wrong. You could ask them if they think there was a mistake with the way they constructed the oven or if they forgot to add a necessary material. Then, encourage your child to go back and repeat this process until they make an oven that works.

Here is a procedure for creating a solar oven in case your child is struggling to come up with designs:

1. Take an empty pizza box and clean out any stray bits of cheese, sauce, or crumbs.
2. Using a ruler and pencil, draw a square that is one inch from the edges of the top of the box.

Name _____ Date _____

Design Challenge: Making a Solar Oven

3. Use a box cutter or knife to cut out three of the four sides of the square, leaving the crease-side of the box attached.
4. Make a crease along the uncut side of the square to create a flap that stands up.
5. Cut a piece of aluminum foil that is large enough to cover the inner side of the cardboard flap.
6. Wrap the foil tightly and secure with tape.
   a. Ask your child what they think the purpose of the foil is. (Answer: Aluminum foil reflects sunlight and brings heat into the oven.)
7. Line the bottom of the pizza box with black construction paper.
   a. Ask your child why they think black paper is useful and if white paper would work as well. Why or why not? (Answer: The color black absorbs sunlight best, and therefore black paper absorbs the sun's heat. White paper would not work well because it would reflect a lot of sunlight instead of absorbing it.)
8. Cut two pieces of plastic wrap that are the same size as the top of the pizza box.
9. Use tape to secure the plastic wrap to the inside edges of the square window you cut into the box. You are creating an airtight window.
   a. Ask your child why they think it's important to create an airtight oven. (Answer: Your oven should be airtight in order to prevent any of the sun's heat from escaping it.)
10. Roll up some newspaper pages into tubes to stuff into the sides of the box. Make sure you are still able to close the lid of the pizza box.
    a. Ask your child what they think the purpose of the newspaper is. (Answer: Newspaper insulates the oven and prevents heat loss.)
11. Finally, it's time to test out your oven by cooking something!

Student Name: _____

WVES 4th Grade Packet
Academic Homework Calendar

Week of: May 19- May 25

Theme: What has been the role of money over time?

Date	Activities
Tuesday, May 19	**Reading:** Read Chapter 1 and answer questions **Writing:** Complete Day 1 **Math:** Converting Decimals to Fractions #1 Math Booklet Questions #76-#79 **Science:** The Force Be with You!
Wednesday, May 20	**Reading:** Read Chapter 2 and answer questions **Writing:** Complete Day 2 **Math:** Converting Decimals to Fractions #2 Math Booklet Questions #80-#84 **Science:** Magnetic Attraction
Thursday, May 21	**Reading:** Read Chapter 3 and answer questions **Writing:** Complete Day 3 **Math:** Fraction, Decimal, and Percent (Visual) Math Booklet Questions #85-#88 **Science:** Magnetism Experiment
Friday, May 22	**Reading:** Read The Shirt of Happiness and answer questions **Writing:** Complete Day 4 **Math:** Ordering Decimals Math Booklet Questions #89-#95 **Science:** Magnetism Questions
Monday, May 25	**Reading:** Read fluency passage twice and complete chart in part B. **Writing:** Complete Day 5 *Possible to type in Google Classroom **Math:** Ordering Money Math Booklet Questions #96-#100 **Science:** Magnetism Scavenger Hunt

Extra Online Options	
Wonders (Official Reading Program) Into Math (Official Math Program) Prodigy (Math Program) Xtra Math (Basic Facts- Math Program)	ReadWorks (Reading- Google Classroom) SpellingCity (Spelling and Vocabulary Words) Keyboarding without Tears (Typing Practice)

Have A Great Summer!

Ms. Gill, Mrs. Gardner, Ms. O'Neil, and Mrs. Wallin

STRATEGIES & SKILLS

Comprehension
Strategy: Ask and Answer Questions
Skill: Main Idea and Key Details

Vocabulary Strategy
Proverbs and Adages

Vocabulary
currency, economics, entrepreneur, global, invest, marketplace, merchandise, transaction

Content Standards
Social Studies
Economics

Word Count: 1,683**

Photography Credit: (t) Design Pics/Don Hammond , (c) Design Pics/Darren Greenwood, (b) Ben Blankenburg/CORBIS
**The total word count is based on words in the running text and headings only. Numerals and words in captions, labels, diagrams, charts, and sidebars are not included.

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The McGraw-Hill Companies

Genre Expository Text

Essential Question
What has been the role of money over time?

The Bike Company

by Yvonne Morrin

(t) Design Pics/Don Hammond, (c) Design Pics/Darren Greenwood

Genre Preview:
This story is an expository text. Expository text is facts and information about a specific topic. The story includes text features such as headings and glossaries.

Note Taking:
Take notes as they read.
Remember to record:
• ideas they think are important
• unfamiliar words
• sections of text that are unclear or confusing
• any questions about the text they have students can also fill in a graphic organizer, noting the important events for each section.

Chapter 1

Getting Started

Long ago, people didn't use money. If they couldn't grow, gather, or make something, they traded or exchanged goods with other people.

Over time people began to exchange items such as shells or stones for other items they wished to buy. This was the first currency.

Today we use currency, such as cash, as well as debit or credit cards to pay for things. We use money to buy things we need, such as food and clothing, as well as things we want, such as toys and music. We also use money to pay for **services**, such as repairing a computer.

Before you can spend money, you need to make money. People make money in all kinds of ways. Some people work for other people or for companies and get paid **wages**. Other people work for themselves, making and selling products or providing a service.

Money passes from person to person as it is earned and spent. There is an old saying: "Money makes the world go around." This means that our global society relies on money to keep running.

These people work in an office for wages.

1. How do you know that The Bike Company is an example of informational text?

_____

_____

_____

_____

Hector's Idea

One way to make money is to **manufacture** goods to sell. Hector is an entrepreneur. He wants to start a bicycle manufacturing company. Hector knows a lot about bikes, but that isn't enough to start a company. First he has to make sure that people will want to buy his bikes.

Hector does some market research. He finds out what makes people choose one bike over another. Some people want a bike that is lightweight; others want a bike that is good for rough trails. Some people want a cheap bike; others are prepared to pay more money for a bike that is well made.

Hector also investigates the **competition**. He visits bicycle stores to see what merchandise sells well in the marketplace.

Hector's market research shows that none of the local stores sells environmentally friendly bikes that are made from natural products. Hector researches bikes that are made from renewable materials.

Hector concludes that if he makes an environmentally friendly bike using a bamboo frame, there is a good chance it will be popular. A bamboo frame is strong and durable. It is also lightweight. He decides to go ahead with his idea and begins designing the bike.

Getting Around on a Bike

There are almost twice as many bikes as cars in the world. More than 100 million new bikes are manufactured every year.

Bike sharing is becoming a popular way to get around. Many cities provide bikes for people to use for short trips.

There are many different types of bikes, such as commuter bikes, racing bikes, and BMX bikes.

2. Reread the second paragraph on page 4. Use a semicolon to combine two related independent clauses that are not connect by a conjunction such as or, and, or but. Explain why semicolons are used in the third and fourth sentences of this paragraph.

_____

_____

3. The example of Hector and his bike company is used to help illustrate how businesses start. Why does Hector decide to design an environmentally friendly bike after he noticed that no local stores sell this type of bike?

_____

_____

_____

Chapter 2

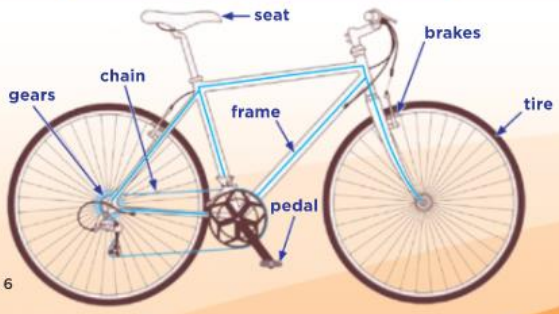
Getting It Together

Hector uses his design to make a **prototype** of his bike. This prototype is a working model of the bike. It gives Hector a chance to see how the bike works and to fix any problems. It also gives him an idea of how the bike will be constructed.

Hector decides that his company will make only the bike frames and gears. It will be too expensive to buy the equipment needed to make all the bike parts. He will buy **components**, such as the wheels, tires, chains, seats, and brakes from other manufacturers.

Hector has to make many decisions. He starts to write a list. Hector soon realizes he will have a lot of **expenses**!

The frame holds the bike together. All the bike's parts fit onto the frame.



Hector Needs Investors

There is another saying: "It takes money to make money." Hector realizes that he doesn't have enough money to set up his factory.

He decides to show his bike design to some people. He hopes they will invest in, or lend money to, his company. Then he will have enough money to open a factory and manufacture the bikes. If the people invest in Hector's company, they will get a share of the money he makes. Luckily, the people like Hector's idea for an environmentally friendly bike.

4. Which key details support the idea that money is important in our world? Use text evidence to support your answer.

_____

_____

_____

5. When you come across an unfamiliar word, you can search nearby text for a restatement to learn its definition. Find the word invest in the second paragraph on page 7. What does the word invest mean in this context? How do you know?

_____

_____

6. Reread the information on page 7. Investing is a common part of business. Why would an investor give money to Hector's business? How do investors help Hector and his business?

_____

_____

_____

How Many Bikes?

After months of hard work, Hector's factory is ready to begin producing bikes. How many bikes should Hector make? Bike sales follow the law of supply and demand. Hector must produce enough bikes to meet the needs of customers. However, if the bikes are too expensive, the demand for them will be low, and he won't sell enough bikes to make a profit.

A profit is the money a company makes after all the expenses have been paid. Hector needs to make a profit so he can return some money to his investors and pay himself a wage.

Supply and Demand

Supply and demand is about setting prices. Both sellers and buyers affect prices. Supply is how much of a good or service the seller has. Demand is how much buyers want that good or service.

Suppose you sell headphones. You set a price, and some people buy them. Word gets out: these headphones are great! Everybody wants them. This high demand means that you need more supplies. You could also raise the price.

Later, it turns out that the headphones break easily. Fewer people want them, so you have high supplies and low demand. You might have to lower the price to get people to buy the headphones.

Hector must figure out how many bikes he needs to sell to make a profit. He does some research using sales information from another bike company. He plots this information on a graph.

Maria's company earned the most in the summer and during the winter holiday season (November and December). However, during January, February, March, and September, the company did not make a profit.

The graph shows Hector that although his expenses will stay the same for most of the year, his sales will vary depending on the season. More people buy bikes in the summer and during holidays. In those times, his company will make a profit.

However, for part of the year, Hector will spend more money than he will earn. He will not make a profit during those months. He must remember to save money during the good times to pay his bills during the bad times. Hector remembers one more old saying: "Money doesn't grow on trees."

7. Read the caption for the bar graph on page 9. Look at the text in parentheses. What is the purpose of parentheses? What does the text in parentheses in this sentence help to explain?

_____

_____

8. Which key details in the sidebar on page 8 support the main idea that "supply and demand is about setting prices"? Use evidence from the passage to support your answer.

_____

_____

_____

_____

9. What does the saying "Money doesn't grow on trees" on page 9 mean?

_____

_____

Chapter 3

Getting into the Marketplace

Hector's company starts making the bike frames. As each frame comes off the production line, Hector's workers put the components onto the frame. The completed bikes are tested to make sure they work properly. Finally, they are packed up for shipping.

Hector considered different ways to sell his bikes. First he thought about opening his own store. He would make more money on each bike this way, but running a bike store would also cost more money.

Hector also thought about selling his bikes online. However, Hector realized that people usually want to ride a bike before they buy it. They can't do that if they're buying online.

It's a good idea to try out a new bicycle before buying it.

Stores have sales to encourage more people to buy their products.

Hector decided to sell his bikes to other stores. He would sell his bikes to them at a low price. The stores could sell the bikes to customers at a higher price. The selling price would need to be high enough for the stores to cover their costs and to make a profit. Although Hector will make less money on each transaction, he will sell more bikes.

The stores decide how they want to sell Hector's bikes. They might offer special **discounts** to attract buyers. Some shoppers always look for sales. They believe the old saying: "A penny saved is a penny earned."

10. Reread the saying "A penny saved is a penny earned" on page 11. Review the purpose of sales and ask students what the saying means in this context.

_____

_____

_____

_____

Advertising

The stores that sell Hector's bikes sell many different brands of bikes. Hector knows that he needs to convince people to choose his bike over the competition's. Hector decides to spend some money on advertising. He designs posters and supplies them to the stores selling his bikes.

Advertisements for bikes have been around a long time.

Advertising is done in many different ways. Every day we are exposed to hundreds of advertisements online, in magazines, on TV and the radio, and on billboards. Some ads suggest that buying the product will make you more attractive or more popular. This usually isn't true. There is a saying about that, too: "All that glitters isn't gold."

Hector thinks about paying a celebrity to say that he or she likes his bike. This sometimes convinces people who admire the celebrity to buy a product. However, Hector considers the economics and decides that this is too expensive.

Instead, Hector sponsors a sports event. He gives the event organizers some money to run the event, and in return, they put his logo on all of their event information. This advertises his bikes to the people who take part in the event.

Innovative Bicycles

All bikes have the same basic design. Some entrepreneurs have come up with different kinds of bicycles to persuade people to buy their products. Some bikes fold up so that they are easy to carry, while others are made of unusual materials, such as plywood.

11. Point out to students that there are many different things to consider when working to make a successful business. How important is advertising to a business? Why?

_____

_____

_____

_____

12. What is the main idea of the section titled "Advertising" on pages 12 and 13? What key details support the main idea?

_____

_____

_____

When Hector's bikes begin to sell, he is able to pay his expenses, pay staff wages, return some money to investors, and keep some for himself. This money moves through the economy as Hector, his workers, and the investors spend it on other products and services.

Hector has taught his daughter, Eva, all about economics. Eva wants to buy a soccer ball. She has already saved some money for it, and Hector agrees to pay her to do some extra household chores. Soon she has earned enough to buy the ball.

Hector and Eva have a great time playing soccer at the park. Hector thinks of his favorite saying: "The best things in life are free." It costs nothing to spend time with friends and family!

(t) Design Pics/Don Hammond, (bl) Bensenstock/Alamy

Before you spend money on things, such as sports gear, you need to make money.

Respond to Reading

Summarize

Use important details from *The Bike Company* to summarize the selection. Your graphic organizer may help.

Main Idea
Detail
Detail
Detail

Text Evidence

1. How do you know that *The Bike Company* is an example of informational text? **GENRE**
2. What is the main idea of the section titled "Advertising" on pages 12 and 13? What key details support the main idea? **MAIN IDEA AND KEY DETAILS**
3. What does the saying "Money doesn't grow on trees" on page 9 mean? **PROVERBS AND ADAGES**
4. Write about the main idea of the section titled "Hector's Idea." Use details from the text. **WRITE ABOUT READING**

13. Which key details support the main idea that Hector has taught his daughter Eva about economics? Use text evidence to support your answer.

_____

_____

_____

_____

Genre Folktale

Compare Texts
Read about a king who learned that money can't buy happiness.

The Shirt of Happiness

Once there was a wealthy king who lived in Mexico. He lived in an elegant palace and owned many beautiful things. Although he was rich, the king wasn't happy.

"I'm so miserable!" the king wailed one night.

One of the king's advisers began telling jokes. The king growled, "No, jokes will not make me happy."

Another adviser began to juggle some oranges. The king sobbed, "No, juggling will not make me happy."

Then a servant said, "I know how to cure you. You must wear the shirt of a truly happy man for a day."

"Excellent!" said the king, and he ordered the servant to give him his shirt.

"But I am not truly happy," said the servant, "because my dog has run away."

The king asked the cook for his shirt. "I'm sorry," he replied, "but my son has lost his job. I am not truly happy either!"

The king asked everyone at the palace, but no one was truly happy. So the king called for the captain of the army. "Go and find the happiest man in the kingdom!" he commanded.

The soldiers searched everywhere. Finally they saw a poor farmer who was digging in a field and whistling merrily to himself. "Are you truly happy?" the captain called.

"I sure am!" the man replied.

Relieved, the captain asked the man to follow him to the palace. The man laughed and agreed.

Illustration: Caroline Hu

14. Find evidence in both texts that shows how money is both good and bad for society because of what it represents. Record your findings below.

_____

_____

_____

_____

Back at the palace, the captain announced, "I present to you the happiest man in the kingdom!"

The king's jaw dropped when he saw the poor farmer. "Where's your shirt?" he asked.

The happy man chuckled. "I have a shack, a shovel, and some trousers … but no shirt!"

"How can you be happy when you own so little?" the king asked.

"Because I have everything I need," the man replied.

And so the king learned that happiness comes not from what you have, but how you look at life!

Illustration: Caroline Hu

Make Connections

How does *The Shirt of Happiness* illustrate the role of money in finding happiness? **ESSENTIAL QUESTION**

Compare the way Hector used money in *The Bike Company* with the way the king used his wealth in *The Shirt of Happiness*. **TEXT TO TEXT**

Glossary

competition *(kom-puh-TI-shuhn)* other businesses that offer similar goods or services for sale ***(page 4)***

components *(kuhm-POH-nuhnts)* parts that make up something else ***(page 6)***

discounts *(DIS-kownts)* amounts subtracted from the regular prices ***(page 11)***

expenses *(eks-PEN-sez)* costs ***(page 6)***

manufacture *(man-yew-FAK-chur)* make something out of raw materials ***(page 4)***

prototype *(PROH-tuh-tighp)* a model that is made to test a new design ***(page 6)***

services *(SUR-vis-ez)* work done for other people ***(page 2)***

wages *(WAYJ-ez)* money that is paid for work ***(page 3)***

Index

15. How does The Shirt of Happiness illustrate the role of money in finding happiness?

_____

_____

_____

16. Compare the way Hector used money in The Bike Company with the way the king used his wealth in The Shirt of Happiness.

_____

_____

_____

Name _____

Read the passage. Use the ask and answer questions strategy to better understand key details in the text.

American Money

Think about a dollar bill. On it is an image of George Washington. But Washington was not always on the dollar. And the dollar was not always green. American money has changed over time.

Continental Currency

The American Revolution cost money. The colonists thought of a way to pay for the war. They printed a kind of paper money. These bills were called Continentals. But Continentals were not backed by gold or silver. After the war they lost their worth.

A New Country, A New Currency

If at first you don't succeed try, try again. The United States had won the war. Now they needed their own money. The dollar became the United States unit of currency in 1785. The first United States pennies were made in 1793. They were worth one cent each. One hundred pennies equaled one dollar. The first pennies showed a woman with flowing hair. She was called Lady Liberty. Today, President Lincoln is on the penny. Other presidents are on our money too. George Washington is on the quarter. Thomas Jefferson is on the nickel. Andrew Jackson is on the $20 bill.

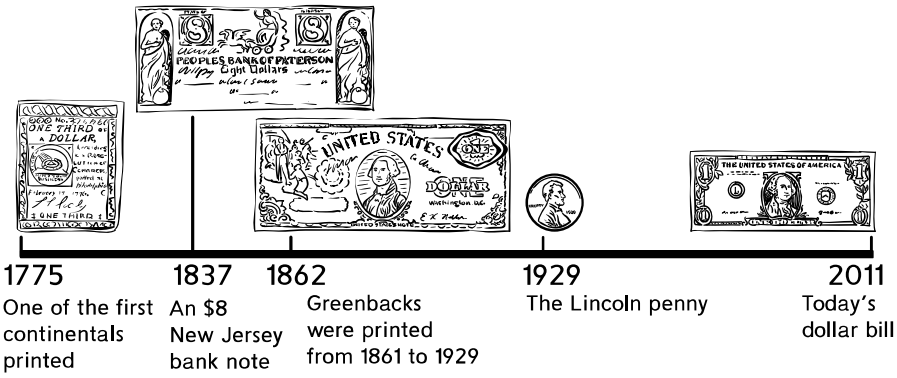
Honoring American Leaders

Ben Franklin was a famous author, scientist, and statesman. He is on the $100 bill. Sacagawea was a Native American woman. She helped Lewis and Clark reach the West Coast of North America. She is on a special dollar coin.

Name _____

Free Banking Era

A good name is better than riches. In 1836 most banks did not have good reputations. Any bank could print money called bank notes. Bank notes came in many colors, shapes, and sizes. A dollar note in Maine did not look the same as a dollar note in New York. Often bank notes could only be turned in for coins at the bank that made them. Some banks did not have gold or silver to back them up. There is a proverb that says, "Don't put all your eggs in one basket." Many people only had dollars from one bank. Soon people had dollars that they could not use.



Greenbacks

In 1861 the first greenbacks were made. These notes used green ink. They were the same in all the states. $5, $10, and $20 bills were the first greenbacks. Later, $1, $2, $50, $100, $500, and $1000 bills were printed too. The faces of presidents were shown on them. George Washington was on the dollar bill for the first time in 1862. The North used greenbacks during the Civil War. The South used their own paper money called Confederate dollars. History repeats itself. Just like Continentals, Confederate dollars lost their worth when the war ended.

American Money Today

The Federal Reserve is in charge of printing money today. In 1929, it started printing smaller dollars. We still use these dollars today. Our money has changed over time. Who knows what the dollar will look like in 100 years!

Name _____

A. Reread the passage and answer the questions.

1. What are two key details in paragraph 3?

_____

_____

2. What kind of money was being printed during the Free Banking Era?

_____

_____

3. Name two key details from the section called "Greenbacks."

_____

_____

4. What is the main idea of the whole passage?

_____

_____

B. Work with a partner. Read the passage aloud. Pay attention to accuracy. Stop after one minute. Fill out the chart.

	Words Read	–	Number of Errors	=	Words Correct Score
First Read		–		=	
Second Read		–		=	

Writing/Grammar Activities Checklist
Week of May 18th

Imagine you were walking down the street and found a $50 bill? What would you do? Would you save it, donate it, or spend it? This week you will write an imaginary first-person narrative.

Day 1 (Grammar):

- *Review: Comparative adjectives compare two nouns and often use the suffix -er. Superlative adjectives compare three or more nouns and use the suffix -est.*
- *Review: If an adjective has two or more syllables do not use the suffixes -er or -est, use the words more or most.*
- *Review:* ***Good:*** *Better Best* ***Bad:*** *Worse, Worst*
- Read the attached directions for comparative and superlative speaking strips. To make it more fun, cut out the strips and put them in a bag to pull out game style with your family!

Day 2 (Prewrite):

- Complete the Story Grammar Chart using the prompt at top. Don't forget it can be pictures, single words, or phrases. It shouldn't be complete sentences yet.

Day 3 (Draft):

- Using your Story Grammar Chart to help you, write your draft in complete sentences in the Beginning, Middle, End graphic organizer.

Day 4 (Revise and Edit):

- Reread your story. Are there any ideas or words you should change or add? Try to include interesting comparative adjectives while describing your experiences.
- Check for correct capitalization, punctuation, and spelling.

Day 5 (Publish)

- Use the lined notebook paper to write your final copy in your nicest handwriting. Draw a scene from your story or draw a $50 bill in the box!
- Share it with your teacher in your student portfolio on Class Dojo, in Google Classroom, or during a Zoom meeting!

Extensions

- Watch a video about how to earn and save money. https://www.youtube.com/watch?v=xQTLrSJttPM
- Watch a video about the history of Piggy Banks. https://www.youtube.com/watch?v=PZGBwd81Gqw

Directions:

Comparatives and Superlatives Speaking Strips

What's included:

- 22 different comparative adjective speaking strips
- 22 different superlative adjective speaking strips

How to use them:

Each strip has an adjective and one or two nouns that can be used to make either a complete Comparative or Superlative sentence. Use these cards to practice grammar and improve speaking fluency. To encourage more speaking practice, have your students also tell you why!

Example: I am taller than my brother because he is 4 feet tall and I am 5 feet tall.

Don't let the sentence end here. **Why?**

If you enjoyed using these speaking strips, they are also available in:

Present Tenses

Past Tenses

HOT CHOCOLATE printables

Use These Words | Comparatives

cold	>>>	Africa - Europe	Why?
short	>>>	a crayon - a pencil	Why?
interesting	>>>	a book - a movie	Why?
large	>>>	an elephant - a mouse	Why?
wet	>>>	a rainy day - a sunny day	Why?
heavy	>>>	a hippo - a feather	Why?
good	>>>	going to bed early - going to bed late	Why?
exciting	>>>	an action film - a romance film	Why?
bad	>>>	eating broccoli - eating chocolate	Why?
expensive	>>>	gold - plastic	Why?
hot	>>>	summer - winter	Why?

Use These Words | Comparatives

big	>>>	an ant - a dog	Why?
difficult	>>>	oral exam - written exam	Why?
intelligent	>>>	dogs - cats	Why?
long	>>>	a worm - a snake	Why?
dangerous	>>>	sky diving - bungee jumping	Why?
dirty	>>>	my room - my best friend's room	Why?
easy	>>>	learning to swim - learning to read	Why?
noisy	>>>	a party - a library	Why?
funny	>>>	a joke - a scary story	Why?
old	>>>	me - my mother	Why?
cheap	>>>	a bus ticket - an airplane ticket	Why?

Use These Words | Superlatives

cold	>>>	Antartica	Why?
short	>>>	grass	Why?
interesting	>>>	documentary	Why?
large	>>>	dinosaur	Why?
delicious	>>>	pizza	Why?
heavy	>>>	an elephant	Why?
good	>>>	day	Why?
exciting	>>>	vacation	Why?
happy	>>>	person	Why?
expensive	>>>	shoes	Why?
safe	>>>	city in my country	Why?

Use These Words | Superlatives

big		planet	Why?
difficult		subject	Why?
intelligent		person I know	Why?
long		movie	Why?
dangerous		place I've been	Why?
strange		experience	Why?
easy		recipe	Why?
noisy		place	Why?
talkative		person in the class	Why?
old		person in my family	Why?
beautiful		time of day	Why?

Story Grammar Chart

1. _____ 2. _____

1. Main Characters 2. When, Where

3. Kickoff Event (Suddenly…)

4. Emotion 5. Plan

6. First, 6. Next,

6. Then, 6. After that,

7. Ending

8. Reflection/Lesson/Message

Write your draft in complete sentences.

Beginning- Numbers 1, 2, 3, 4, and 5 from your Story Grammar Chart
Middle-Number 6 from your Story Grammar Chart
End-Numbers 7 and 8 from your Story Grammar Chart

Name _____

Name

Page

Converting Decimals to Fractions

Name:

Convert each decimal to a fraction.

Converting from a decimal to a fraction is simple as long as you remember the place values.

___ ___ . ___ ___

tens ones tenths hundredths

0.9

The example above is nine-tenths. Lets look at how we'd write that as a fraction.

$^{9}/_{10}$

0.63

We do the same thing for the problem above. But because it is into the hundredths place we put our number over 100.

$^{63}/_{100}$

Ex) 0.8 = $\frac{8}{10}$

1) 0.4 = ____

2) 0.03 = ____

3) 0.9 = ____

4) 0.55 = ____

5) 0.5 = ____

6) 0.45 = ____

7) 0.82 = ____

8) 0.15 = ____

9) 0.3 = ____

10) 0.08 = ____

Answers

Ex. $^{8}/_{10}$

1. ____
2. ____
3. ____
4. ____
5. ____
6. ____
7. ____
8. ____
9. ____
10. ____

1-10	90	80	70	60	50	40	30	20	10	0

Converting Decimals to Fractions

Name:

Convert each decimal to a fraction.

Converting from a fraction to a decimal is simple as long as you remember the place values.

tens	ones	tenths	hundredths
___	___ .	___	___

$^{9}/_{10}$

The example above is nine-tenths. Lets look at how we'd write that as a decimal.

tens	ones	tenths	hundredths
___	0 .	9	___

$^{63}/_{100}$

We do the same thing for the problem above only make sure we're in the hundredths place.

tens	ones	tenths	hundredths
___	0 .	6	3

Ex) $\frac{9}{100}$ = 0.09

1) $\frac{27}{100}$ = _____

2) $\frac{4}{10}$ = _____

3) $\frac{97}{100}$ = _____

4) $\frac{2}{10}$ = _____

5) $\frac{98}{100}$ = _____

6) $\frac{8}{10}$ = _____

7) $\frac{3}{100}$ = _____

8) $\frac{65}{100}$ = _____

9) $\frac{7}{100}$ = _____

10) $\frac{2}{100}$ = _____

Answers

Ex. 0.09

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

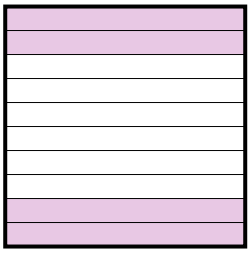
1-10	90	80	70	60	50	40	30	20	10	0

Fraction, Decimal & Percent (Visual)

Name:

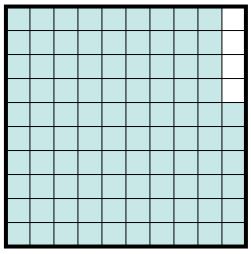
Determine the value written as a fraction , decimal & a percent.

Ex)



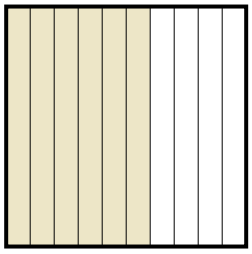
Fraction $\frac{4}{10}$
Decimal 0.4
Percent 40%

1)



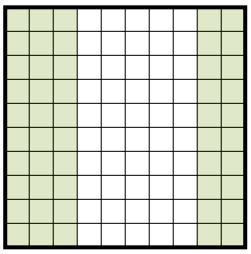
Fraction _____
Decimal _____
Percent _____

2)



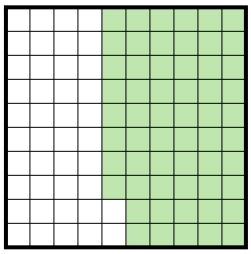
Fraction _____
Decimal _____
Percent _____

3)



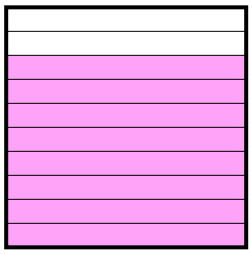
Fraction _____
Decimal _____
Percent _____

4)



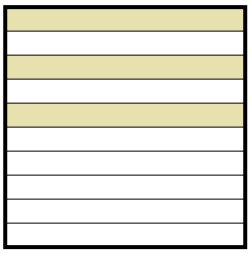
Fraction _____
Decimal _____
Percent _____

5)



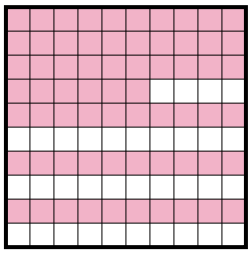
Fraction _____
Decimal _____
Percent _____

6)



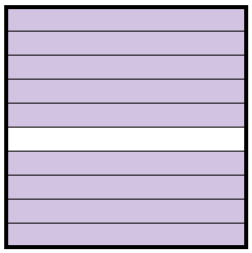
Fraction _____
Decimal _____
Percent _____

7)



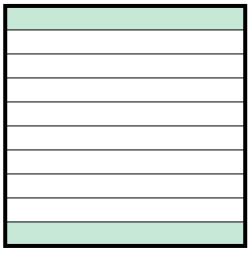
Fraction _____
Decimal _____
Percent _____

8)



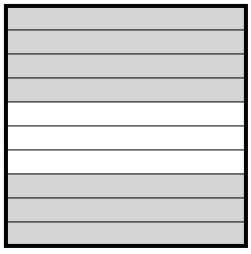
Fraction _____
Decimal _____
Percent _____

9)



Fraction _____
Decimal _____
Percent _____

10)



Fraction _____
Decimal _____
Percent _____

Answers

Ex.	$\frac{4}{10}$	0.4	40%
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Ordering Decimals

Name:

Solve each problem.

1) Which option shows the numbers ordered smallest to largest?
A. 3.7, 3.78, 3.45, 3.8
B. 6.07, 6.69, 6.14, 6.67
C. 8.22, 8.2, 8.02, 8
D. 1.09, 1.24, 1.44, 1.85

2) Which option shows the numbers ordered largest to smallest?
A. 1.7, 2, 1.94, 1.18
B. 2.57, 2.43, 2.4, 2.33
C. 4.86, 5, 4.6, 4.63
D. 3.78, 3.52, 3.7, 4

3) Which option shows the numbers ordered smallest to largest?
A. 5.86, 5.67, 5.09, 5.22
B. 8, 8.22, 8.2, 8.32
C. 9.44, 9.3, 9.78, 9.22
D. 7.3, 7.56, 7.7, 7.73

4) Which option shows the numbers ordered largest to smallest?
A. 9, 8.91, 8.6, 8.46
B. 2.99, 3, 2.73, 2.87
C. 8.23, 8.2, 8.21, 8.94
D. 6.79, 6.68, 6.8, 7

5) Which option shows the numbers ordered smallest to largest?
A. 4.59, 4.53, 4.35, 4.8
B. 2, 2.16, 2.2, 2.25
C. 1.64, 1.25, 1.45, 1.6
D. 5, 5.1, 5.02, 5.13

6) Which option shows the numbers ordered largest to smallest?
A. 4.67, 4.3, 4.05, 4.51
B. 1.54, 1.9, 2, 1.85
C. 6.32, 6.71, 6.34, 6.3
D. 4, 3.61, 3.6, 3.58

7) Which option shows the numbers ordered smallest to largest?
A. 3.76, 3.72, 3.9, 3.16
B. 6.48, 6.79, 6.8, 6.81
C. 4.8, 5, 4.24, 4.91
D. 5.6, 5.65, 5.37, 5.08

8) Which option shows the numbers ordered largest to smallest?
A. 6.68, 6.57, 6.6, 7
B. 2.5, 2.46, 2.24, 2.59
C. 2.41, 2.68, 2.7, 3
D. 2.74, 2.64, 2.47, 2.4

9) Which option shows the numbers ordered smallest to largest?
A. 8.3, 8.63, 8.88, 8.9
B. 1.74, 1.7, 1.44, 1.66
C. 9.11, 9.62, 9.96, 9.48
D. 4.44, 4.81, 4.73, 4.7

10) Which option shows the numbers ordered largest to smallest?
A. 3, 2.5, 2.4, 2.55
B. 7.69, 7.54, 8, 7.7
C. 6.99, 6.96, 6.59, 6.41
D. 4.88, 4.84, 4.83, 5

Answers

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

1-10	90	80	70	60	50	40	30	20	10	0

Ordering Money

Name:

Order from least to greatest.

1) A. $95.14
B. $94.72
C. $94.30
D. $94.28

2) A. $88.03
B. $88.16
C. $87.98
D. $88.00

3) A. $4.72
B. $3.79
C. $3.60
D. $3.04

4) A. $97.52
B. $98.98
C. $97.98
D. $97.89

5) A. $3.21
B. $2.43
C. $3.34
D. $2.89

6) A. $49.40
B. $49.24
C. $49.22
D. $50.17

7) A. $63.42
B. $64.16
C. $63.22
D. $63.43

8) A. $40.67
B. $39.99
C. $39.50
D. $39.65

9) A. $24.88
B. $23.14
C. $23.53
D. $24.35

10) A. $90.92
B. $89.51
C. $89.24
D. $90.44

Answers

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

1-10	90	80	70	60	50	40	30	20	10	0

Name: _____

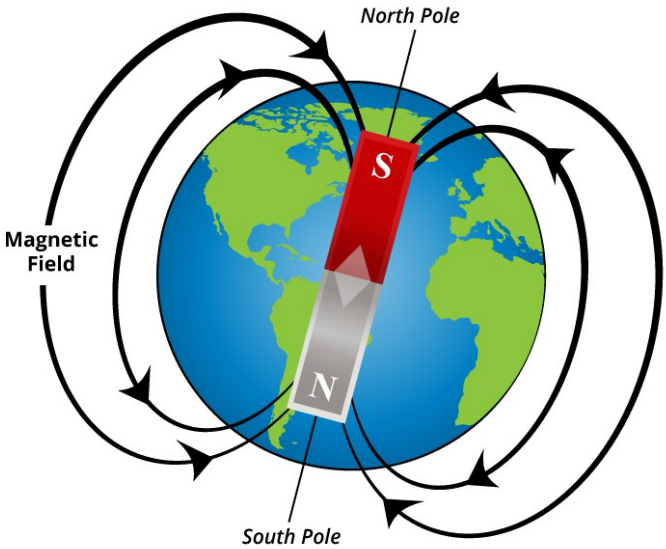
The Force Be with You!

by Cindy Sherwood

After you draw a special picture, you might display it on your refrigerator so everyone can admire it. Chances are, you will place a magnet over the drawing to hang it up. But how does that work? Why does the magnet stick to the refrigerator and not just drop to the ground?

A magnet has special invisible powers that produce a magnetic field. You can feel the force from this field when you hold two magnets together. The magnets will either attract—meaning they will pull toward one another—or they will repel, meaning they will push away from one another. Although it may seem like magic, that force comes from tiny particles called electrons inside an atom. In certain types of metals, electrons spin around and pair off in different ways than they do for other types of materials. That activity is what creates the magnetic field.

You will not have any luck if you try to make a magnet out of plastic or rubber or wood or glass. Only certain kinds of metals are magnetic. The most common metals attracted to magnets are iron, nickel, and cobalt. Other metals, including gold, silver, and copper, are not attracted to magnets.



So what is the biggest magnet on Earth? If you guessed Earth itself, you would be right. Scientists believe that the deepest part of the Earth, its core, is made up of a mixture of iron and nickel. That gives Earth its own magnetic field which extends far into space. The magnetic field acts as a giant stop sign against solar wind, high-speed particles that blow from the sun.

Thanks to the earth's magnetic field, we are protected from danger from this solar wind.

Magnets help us in our daily lives, too. Just about anything with an electric motor uses magnets. So do computers and cell phones. When doctors need to find out why a patient is sick, they may order magnetic resonance imaging, or a MRI, to give them a peek inside the body without having to do surgery. And if you have ever used a compass while on a hike, you are actually using a small magnet that always points north.

What if you tried that magnet-refrigerator trick and your picture fell down right away? It probably means that your fridge is made of stainless steel, which contains a high amount of a nonmagnetic material. To hang up your picture, you will have to use old-fashioned scotch tape.

Name: _____

The Force Be with You!

by Cindy Sherwood

1. Where does the force that creates a magnetic field come from?

- **a.** the activity of protons in atoms
- **b.** the activity of neutrons in atoms
- **c.** the pairing off of atoms in certain types of metals
- **d.** the pairing off of electrons in certain types of metals

2. Describe what happens when magnets attract? What happens when magnets repel?

_____

_____

3. According to the information in the article, the Earth acts like a giant magnet. Which of the following is correct about the Earth's magnetism?

- **a.** Earth's mantle is made up of silver and nickel, which gives it a magnetic sphere.
- **b.** Earth's core is comprised of iron and nickel, which causes its magnetic field.
- **c.** The core of the Earth is made up of iron and copper, giving it a magnetic field.
- **d.** The mantle of the Earth is comprised of gold and cobalt, causing its magnetic sphere.

4. Magnets can be used in everyday life. What does MRI stand for? What does the magnetism in an MRI help accomplish?

_____

_____

5. A magnet will attract to many types of surfaces. Which of the following surfaces will a magnet not be attracted to?

- **a.** iron
- **b.** cobalt
- **c.** stainless steel
- **d.** nickel

Name: _____

The Force Be with You!

by Cindy Sherwood

The following terms are vocabulary words from the article. Match the vocabulary word with its correct definition by writing the corresponding letter on the line.

1. _____ magnetic field

2. _____ electrons

3. _____ force

4. _____ solar wind

5. _____ magnet

6. _____ core

7. _____ attract

8. _____ atom

9. _____ metals

10. _____ repel

a. charged particles that stream out from the Sun

b. the basic unit of all elements; a very small particle

c. to push back from something; resist

d. the area around a magnetic material in which a magnet will be close enough to react to that material

e. materials that are often characterized as hard, shiny, and conductive; magnets are attracted to many types of these

f. the strength or energy of something

g. negatively charged particles inside an atom

h. the deepest layer of the Earth

i. A piece of material whose atoms are arranged so that it attracts other materials with the same atomic pattern

j. to pull something closer; draw something in

Name: _____

The Force Be with You!

by Cindy Sherwood

In the article, "The Force Be with You," you learned about magnets and how they work. In addition to learning how the Earth operates as a giant magnet, you discovered how magnets can be used in everyday life, such as magnetic resonance imaging (MRI) that helps doctors see inside patients without surgery.

Using the Internet or your science textbook, research one example of magnets being used in everyday life. Describe what the magnetic item does and why it's important. Be sure you ask for adult permission before using the Internet. Write the name of the website or book you used to help you answer this question on the bottom of the page.

ANSWER KEY

The Force Be with You!

by Cindy Sherwood

1. Where does the force that creates a magnetic field come from? **d.**

- **a.** the activity of protons in atoms
- **b.** the activity of neutrons in atoms
- **c.** the pairing off of atoms in certain types of metals
- **d. the pairing off of electrons in certain types of metals**

2. Describe what happens when magnets attract? What happens when magnets repel?

When magnets attract, they will pull toward one another.
When magnets repel, they will push away from one another.

3. According to the information in the article, the Earth acts like a giant magnet. Which of the following is correct about the Earth's magnetism? **b.**

- **a.** Earth's mantle is made up of silver and nickel, which gives it a magnetic sphere.
- **b. Earth's core is comprised of iron and nickel, which causes its magnetic field.**
- **c.** The core of the Earth is made up of iron and copper, giving it a magnetic field.
- **d.** The mantle of the Earth is comprised of gold and cobalt, causing its magnetic sphere.

4. Magnets can be used in everyday life. What does MRI stand for? What does the magnetism in an MRI help accomplish?

MRI stands for magnetic resonance imaging. The MRI helps doctors see inside patients without surgery.

5. A magnet will attract to many types of surfaces. Which of the following surfaces will a magnet not be attracted to? **c.**

- **a.** iron
- **b.** cobalt
- **c. stainless steel**
- **d.** nickel

ANSWER KEY

The Force Be with You!

by Cindy Sherwood

The following terms are vocabulary words from the article. Match the vocabulary word with its correct definition by writing the corresponding letter on the line.

1. d. magnetic field

2. g. electrons

3. f. force

4. a. solar wind

5. i. magnet

6. h. core

7. j. attract

8. b. atom

9. e. metals

10. c. repel

a. charged particles that stream out from the Sun

b. the basic unit of all elements; a very small particle

c. to push back from something; resist

d. the area around a magnetic material in which a magnet will be close enough to react to that material

e. materials that are often characterized as hard, shiny, and conductive; magnets are attracted to many types of these

f. the strength or energy of something

g. negatively charged particles inside an atom

h. the deepest layer of the Earth

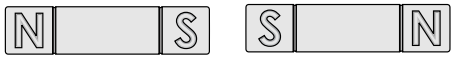
i. A piece of material whose atoms are arranged so that it attracts other materials with the same atomic pattern

j. to pull something closer; draw something in

Name: _____

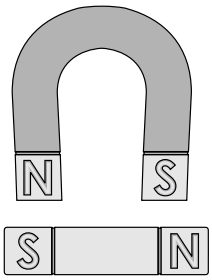
Magnetic Attraction

Tell whether each pair of magnets will **attract** or **repel**.

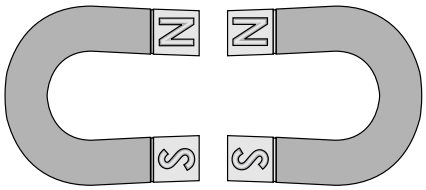


attract repel

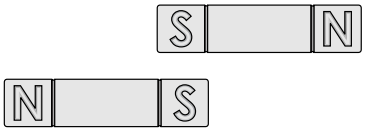
attract repel



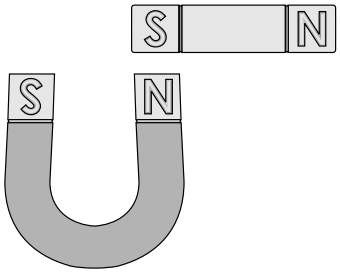
attract repel



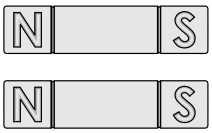
attract repel



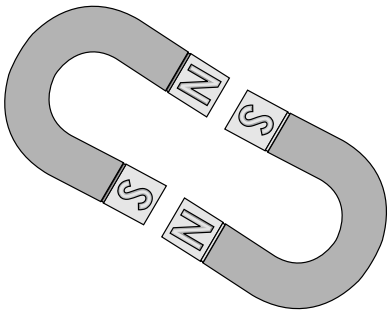
attract repel



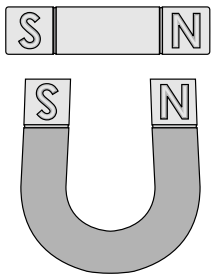
attract repel



attract repel



attract repel

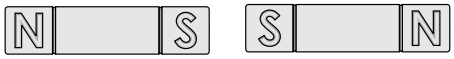


attract repel

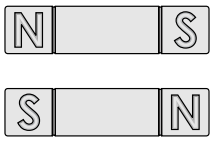
ANSWER KEY

Magnetic Attraction

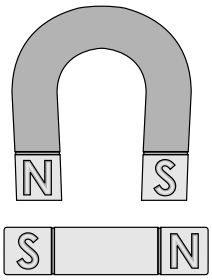
Tell whether each pair of magnets will **attract** or **repel**.



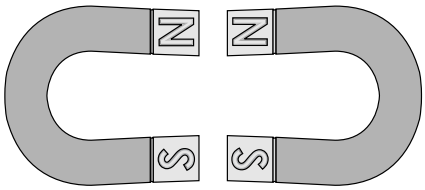
attract **repel**



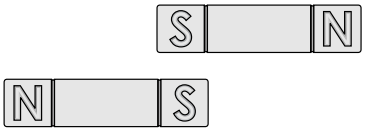
attract repel



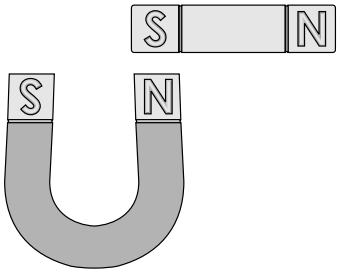
attract repel



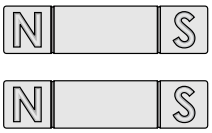
attract **repel**



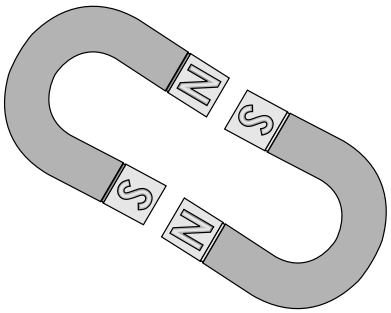
attract **repel**



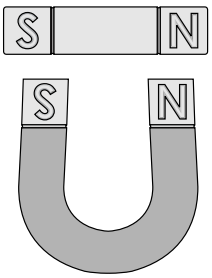
attract repel



attract **repel**



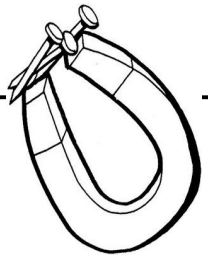
attract repel



attract **repel**

Name: _____

Metals and Magnetism



Question: Do magnets attract all metals?

Materials: samples of different metals (copper, iron, aluminum, brass, and stainless steel);
coins (penny, nickel, dime, and quarter);
bar magnet or horseshoe magnet

Step 1:

Predict

Examine the sample of each metal. Predict which types of metals will attract to the magnet.

copper	yes	no
iron	yes	no
aluminum	yes	no
brass	yes	no
stainless steel	yes	no

Step 2:

Find the Result

Touch the magnet to each metal sample to determine which metals actually attract to the magnet.

copper	yes	no
iron	yes	no
aluminum	yes	no
brass	yes	no
stainless steel	yes	no

Step 3:

Predict

Examine each coin. Predict which coins will attract to the magnet.

penny	yes	no
nickel	yes	no
dime	yes	no
quarter	yes	no

Step 4:

Find the Result

Touch the magnet to each coin to determine which coins actually attract to the magnet.

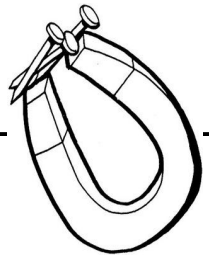
penny	yes	no
nickel	yes	no
dime	yes	no
quarter	yes	no

Conclusion: _____

_____

ANSWER KEY

Metals and Magnetism



Question: Do magnets attract all metals?

Materials: samples of different metals (copper, iron, aluminum, brass, and stainless steel);
coins (penny, nickel, dime, and quarter);
bar magnet or horseshoe magnet

Step 1:

Predict

Examine the sample of each metal. Predict which types of metals will attract to the magnet.

copper	yes	no
iron	yes	no
aluminum	yes	no
brass	yes	no
stainless steel	yes	no

Step 2:

Find the Result

Touch the magnet to each metal sample to determine which metals actually attract to the magnet.

copper	yes	no
iron	yes	no
aluminum	yes	no
brass	yes	no
stainless steel	yes	no

Step 3:

Predict

Examine each coin. Predict which coins will attract to the magnet.

penny	yes	no
nickel	yes	no
dime	yes	no
quarter	yes	no

Step 4:

Find the Result

Touch the magnet to each coin to determine which coins actually attract to the magnet.

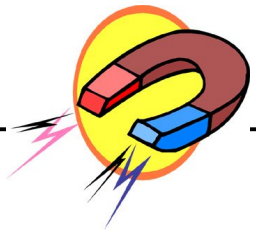
penny	yes	no
nickel	yes	no
dime	yes	no
quarter	yes	no

***Note: Answers may vary, depending on the country and year of the coins.**

Conclusion: **Only some metals are attracted to magnets.**

Name: _____

Magnetism Questions



1. List six things in your home or classroom that are made of metal that are <u>not</u> magnetic.

_____ _____ _____

_____ _____ _____

2. Describe some things in nature that are magnetic.

_____

_____

_____

_____

3. When a magnetic compass points north, is it pointing to the true North Pole of the Earth? Explain.

_____

_____

_____

_____

4. Describe how you would build an electromagnet.

_____

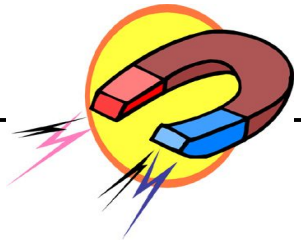
_____

_____

_____

ANSWER KEY

Magnetism Questions



1. List six things in your home or classroom that are made of metal that are not magnetic.

Answers will vary. Sample answers listed.

penny	**aluminum can**	**aluminum foil**
copper pipe	**brass doorknob**	**silver bracelet**

2. Describe some things in nature that are magnetic.

The Earth is magnetic because it has a North Pole and a South Pole.

Also, lodestones are magnetic stones.

Iron and nickel are metals in the Earth that are magnetic.

3. When a magnetic compass points north, is it pointing to the true North Pole of the Earth? Explain.

No, it's pointing to the magnetic North Pole. The geographic North Pole and the magnetic North Pole are in different places.

4. Describe how you would build an electromagnet.

Wrap copper wire around an iron nail. Connect the copper wire to the positive and negative ends of a battery. The nail wrapped with wire will become a magnet because of the electricity flowing through it.

Magnetism Scavenger Hunt Activity

Materials:

- Magnetism questions worksheet(pages 2-3)
- 18 Magnetism fact cards (pages 4-8)
- scissors and scotch tape

Preparation

Print the fact cards and cut them apart.

Make copies of the magnetism questions worksheet (2-sided). Each student will need his or her own copy.

Hide the 18 magnetism fact cards around your classroom where students will be able to find them. You can put them on the back of your classroom door, on chairs, on the computer keyboard, on the sides of student desks, or wherever you like.

Activity

Students receive copies of the question worksheet. They have to search the classroom to find the fact cards to answer the questions.

After they have completed the question sheet, you can go over the answers together with the class.

Management tips

You may want to make this a silent activity so students don't share answers with each other.

You can have the kids work by themselves or with partners.

Don't be afraid to hide the facts in tough places. Kids think it's more fun when they have to search around a little.

Examples of good hiding spots might include:

- sticking out of a book, like a bookmark
- the back of the classroom door
- laying flat on the bookshelf
- on the back of the teacher's chair
- on the side of your computer monitor

Have a plan for students who finish early. You may want to have an assignment for them to complete when they're done, or you may have them help other students find fact cards.

Name: _____ Side A

Magnetism Scavenger Hunt

Fact Card 1: Which parts of a magnet have the strongest pull?

_____

Fact Card 2: A train that uses magnets to float above the track is called...

_____

Fact Card 3: What type of magnet is made from a coil of wire, wrapped around a piece of metal?

_____

Fact Card 4: Many scientists believe that birds have a special sense that allows them to...

_____

Fact Card 5: What are lodestones?

_____

Fact Card 6: Can magnetic fields be seen by the human eye?

_____

Fact Card 7: Name two metals that are not attracted to magnets.

_____

Fact Card 8: What two metals most likely make up the core of the earth?

_____

Fact Card 9: What is a compass?

_____

Magnetism Scavenger Hunt

Fact Card 10: Name three things that you can do to a magnet to weaken its magnetic force.

_____

Fact Card 11: What does an MRI machine do?

_____

Fact Card 12: What type of magnet can repel sharks?

_____

Fact Card 13: Name five household items that have magnets in them.

_____

Fact Card 14: What happens if you cut a magnet in half?

_____

Fact Card 15: What units are used for measuring the power of a magnet?

_____

Fact Card 16: The word magnet in ancient Greek meant...

_____

Fact Card 17: Name three places where magnets were used in ancient times.

_____

Fact Card 18: Temporary magnets lose their magnetism when...

_____

Scavenger Hunt

Magnetism

Fact Card **1**

A magnet's pull is strongest on the two ends: its north pole and its south pole.

Scavenger Hunt

Magnetism

Fact Card **2**

A type of train, called a Maglev train, uses magnets to lift it off the track so that it floats. Floating reduces friction and allows the train to run smoothly and efficiently.

Scavenger Hunt

Magnetism

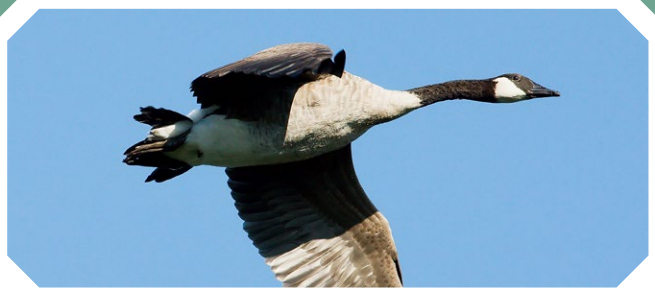
Fact Card **3**

A coil of wire, wrapped around a piece of metal, becomes a magnet when electricity is run through the wire. This type of magnet is called an electromagnet. It can be turned on and off, by turning the electricity on and off.

Scavenger Hunt

Magnetism

Fact Card **4**



Many scientists believe that some birds have a special sense that allows them to feel the earth's magnetic field. They might use this to find their way when they migrate long distances.

Scavenger Hunt

Magnetism

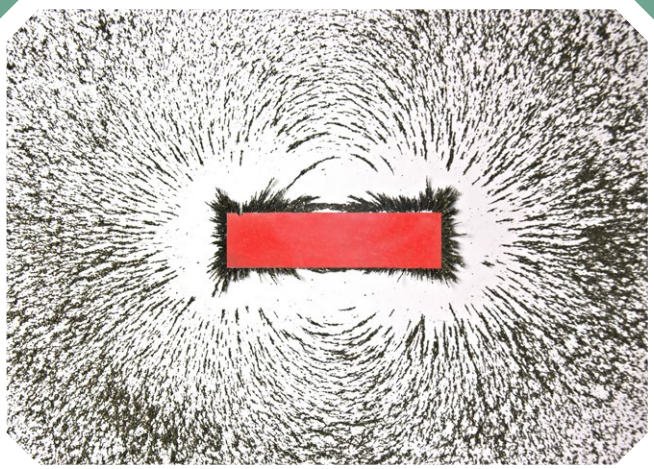
Fact Card **5**

Lodestones are magnetic stones found in the earth.

Scavenger Hunt

Magnetism

Fact Card **6**



Magnetic fields are invisible to the human eye.

Scavenger Hunt

Magnetism

Fact Card **7**

Some metals, like iron and nickel, are attracted to magnets. Other metals, like copper and aluminum, are not.

Scavenger Hunt

Magnetism

Fact Card **8**

Scientists believe that the core of earth is made of iron and nickel. This is why the earth acts like a giant magnet with a north pole and a south pole.

Scavenger Hunt

Magnetism

Fact Card **9**

A compass is an instrument with a magnetic pointer that points to the magnetic North Pole of the earth.

Scavenger Hunt

Magnetism

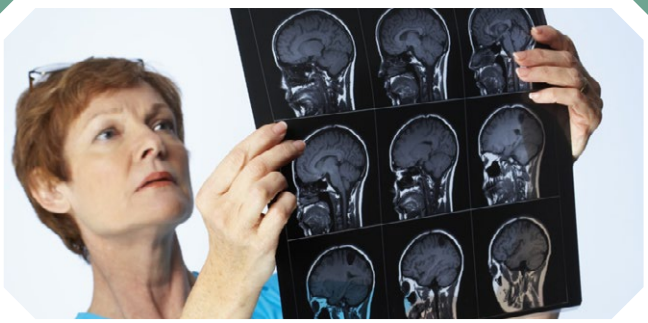
Fact Card **10**

Dropping, hammering, or heating up a magnet will cause its magnetic force to weaken.

Scavenger Hunt

Magnetism

Fact Card **11**



Doctors use MRI machines to see inside of people's bodies. MRI machines use large, strong magnets to make pictures of the inside of your body.

Scavenger Hunt

Magnetism

Fact Card **12**

A neodymium magnet is a very strong type of magnet made from rare-earth elements. They are known to repel certain species of sharks.

Scavenger Hunt

Magnetism

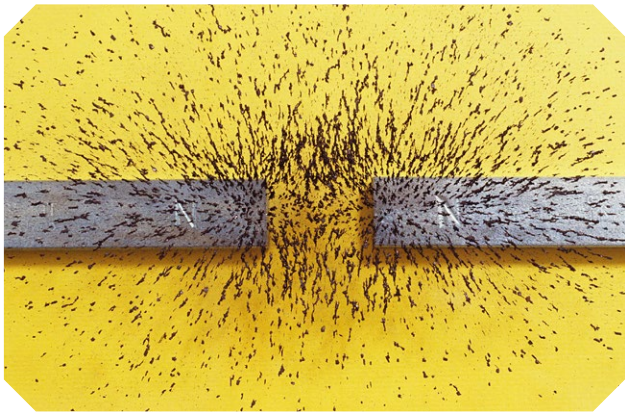
Fact Card **13**

Magnets are used in many household items, such as refrigerators, microphones, speakers, vacuum cleaners, and televisions.

Scavenger Hunt

Magnetism

Fact Card **14**



If you cut a magnet in half, you get two smaller magnets. Each one has its own north and south pole.

Scavenger Hunt

Magnetism

Fact Card **15**

The units for measuring the power of a magnet is called a Tesla (T).

A refrigerator magnet has a force of 0.0005 T.

The world's strongest magnet is in Talahassee, Florida. It is 22 feet (7 meters) tall and has a force of 45 T.

Scavenger Hunt

Magnetism

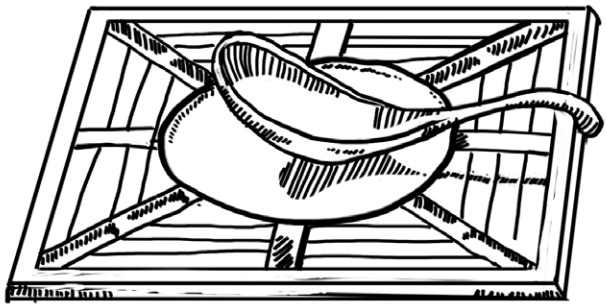
Fact Card **16**

The word magnet in ancient Greek meant "stone from Magnesia." Magnesia was a city in Greece where magnetic lodestones were found.

Scavenger Hunt

Magnetism

Fact Card
17



Magnetic compasses were used over 2,500 years ago in China, India, and Greece.

Scavenger Hunt

Magnetism

Fact Card
18

Permanent magnets hold their magnetism.

Temporary magnets lose their magnetism when they are not near other magnets.

ANSWER KEY

Side A

Magnetism Scavenger Hunt

Fact Card 1: Which parts of a magnet have the strongest pull?

the two ends; North and South Poles

Fact Card 2: A train that uses magnets to float above the track is called...

Maglev train

Fact Card 3: What type of magnet is made from a coil of wire, wrapped around a piece of metal?

electromagnet

Fact Card 4: Many scientists believe that birds have a special sense that allows them to...

feel the earth's magnetic fielda

Fact Card 5: What are lodestones?

magnetic stones found in the earth

Fact Card 6: Can magnetic fields be seen by the human eye?

no

Fact Card 7: Name two metals that are not attracted to magnets.

copper and aluminum

Fact Card 8: What two metals most likely make up the core of the earth?

iron and nickel

Fact Card 9: What is a compass?

an instrument with a magnetic pointer that points to the magnetic North pole of the earth

Magnetism Scavenger Hunt

Fact Card 10: Name three things that you can do to a magnet to weaken its magnetic force.

Drop it. Hammer it. Heat it up.

Fact Card 11: What does an MRI machine do?

It uses magnets to makes pictures of the insides of people's bodies.

Fact Card 12: What type of magnet can repel sharks?

neodymium magnets

Fact Card 13: Name five household items that have magnets in them.

refrigerators, microphones, speakers, vacuum cleaners, televisions

Fact Card 14: What happens if you cut a magnet in half?

You get two smaller magnets, each with a north and south pole.

Fact Card 15: What units are used for measuring the power of a magnet?

Teslas

Fact Card 16: The word magnet in ancient Greek meant...

stone from Magnesia

Fact Card 17: Name three places where magnets were used in ancient times.

China, India, Greece

Fact Card 18: Temporary magnets lose their magnetism when...

they are not near other magnets