### Weekly Focus:
- NS:6.RP.1 Divide Fractions using reciprocals
- NS:6.NS.4 GCF Distributive Property
- NS:6.NS.6a Points on the Coordinate Plane

#### Questions:

1. \[ \frac{5}{8} \div \frac{3}{4} = \]

2. How would you write the following phrase as a number expression?
   
   Seven more than \( c \)

3. Which shows \( 24 + 54 \) written using the GCF and the distributive property?
   - a. \( 12(2 + 4) \)
   - b. \( 6(4 + 9) \)
   - c. \( 2(12 + 27) \)
   - d. \( 3(8 + 51) \)

4. Simplify the expression using the distributive property.
   
   \[ 9(4y - 7) \]

5. Solve: 26% of 523

6. Find the unit rate.
   
   294 miles every 14 gallons
<table>
<thead>
<tr>
<th>7. ( \frac{3}{5} \div \frac{9}{12} = )</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. How would you write the following phrase as a number expression? eight more than triple a number</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Rewrite the following expression using the GCF and the distributive property.</th>
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<tbody>
<tr>
<td>10. Simplify the expression using the distributive property.</td>
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<tr>
<th>11.</th>
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<td>11.</td>
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<table>
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<tr>
<th>12. Find the unit rate.</th>
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<td>12. Find the unit rate.</td>
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<table>
<thead>
<tr>
<th>13. ( \frac{9}{10} \div \frac{3}{5} = )</th>
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<tbody>
<tr>
<td>14. Which statement represents the expression ( 3r - 5 )?</td>
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</table>

<table>
<thead>
<tr>
<th>14. Which statement represents the expression ( 3r - 5 )?</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. The product of 3 and a number less than 5</td>
</tr>
<tr>
<td>b. 5 minus the product of 3 and a number</td>
</tr>
<tr>
<td>c. 5 less than the product of 3 and a number</td>
</tr>
<tr>
<td>d. The product of 3 and a number subtracted from 5</td>
</tr>
</tbody>
</table>
16. Simplify the expression using the distributive property.

\[ 16m + 4(3m - 2a) + 3^2 \]

17. Simplify the expression.

\[ 6(4m + 3a) + m \]

18. Simplify the expression

\[ 5m + 3(8m + 7) + 4^2 \]

19. Which is the lower rate?
   - 165 students on 5 buses
   - 140 students on 4 buses

20. The length of a swimming pool is 4 feet shorter than triple the width. Let \( n \) represent the width. Which expression gives the length of the swimming pool?

a. \( 3n - 4 \)
b. \( 3n + 4 \)
c. \( 3(n - 4) \)
d. \( 3(n + 4) \)
21. Which is the better buy:
   3 pints of oil at $3.60
   or
   6 pints of oil at $8.10

22. \[
\frac{6}{10} \div \frac{9}{12} = 
\]

23. Rewrite the following expression using the GCF and the distributive property:
   \[36 + 18\]

24. How would you write the following phrase as a number expression:
   twelve more than the quotient of a number and five

25. Use the following data to find the statistical measures:
   \[4, 2, 7, 2, 2, 12, 3, 6, 10, 6, 8, 9, 5\]
   Mean:
   Median:
   Mode:
   Interquartile Range:
1. \[3501 \div 3\]

2. Solve the following equation.
\[c - 248 = 137\]

3. What is the Least Common Multiple (LCM) of 8 and 24?
   a. 8
   b. 24
   c. 48
   d. 72

4. Solve the following equation.
\[p + \frac{2}{5} = \frac{7}{10}\]

5. Simplify:
\[9b + 4a + 3a - 4b\]
   a. 13b + 7a
   b. 12ab
   c. 5b + 7a
   d. 12a + b

6. Manny worked as a produce manager for Harris Teeter. If 32 out of 50 customers purchased bananas, what percent of customers purchased bananas?
   a. 32%
   b. 64%
   c. 28%
   d. 56%

7. Mrs. Kales would like to save money from each paycheck for her son's college fund. This year, she hopes to save $4,000, and she will receive 16 paychecks. Solve the problem below to find the amount that Mrs. Kales should save from each paycheck.
\[4,000 \div 16 = \underline{250}\]

8. Elizabeth collected 87 pennies fewer than Maria. Elizabeth collected 350 pennies. How many pennies did Maria collect? Use the equation below to solve.
\[p - 87 = 350\]

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9. Mark purchased a PlayStation on sale at a 40% discount. The original list price was $350. What was the amount of the discount?
   a. $40
   b. $140
   c. $390
   d. $490

10. Which expression is equivalent to $9(3c + 6) - 4p$?
   a. $27c + 6$
   b. $27c + 54$
   c. $27c + 38$
   d. $27c + 70$

11. 16 is 50% of what number?
   a. 16
   b. 32
   c. 50
   d. 84

12. Solve the following equation.
    $$j - 87.4 = 115.06$$

13. What is 30% of 65?
   a. 7
   b. 19.5
   c. 25
   d. 195

14. Camryn has 612 photos she needs to put into albums. If each album holds 36 pictures, how many albums will it take to hold all the photos?

15. Solve the following equation:
    \[ p + \frac{3}{5} = \frac{8}{10} \]

16. Which expression is equivalent to the expression below?
    \[ 2^3(9x + 3x) - 12 \]
   a. $96x - 12$
   b. $88x - 12$
   c. $72x - 12$
   d. $24x - 12$
17. Are the expressions equivalent? Explain your answer using algebraic properties and/or combining like terms.

\[ 7 + 8k + 5 + k \]
\[ 3(3k + 4) \]

18. What is the Least Common Multiple (LCM) of 6, 18, and 36?

a. 3  
b. 30  
c. 36  
d. 72

19. Solve the following equation.

\[ j - 37.4 = 105.29 \]

20. There are 5 questions on our weekly warm-ups. If you missed two, and you received a percentage score, what would your grade be?

21. Carrie purchased a DVD on sale at a 30% discount. The original list price was $150. What was the amount of the discount?

a. $30  
b. $45  
c. $105  
d. $195

22. Are the expressions equivalent? Explain your answer using algebraic properties and/or combining like terms.

\[ 6(2c + 1) + 3^2 \]
\[ 8c + 2^3 + 4c + 7 \]
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. What is the Least Common Multiple (LCM) of 15, 30, and 45?</td>
<td></td>
</tr>
<tr>
<td>24. [6,300 \div 18]</td>
<td></td>
</tr>
<tr>
<td>25. Solve the following equation.</td>
<td></td>
</tr>
<tr>
<td>[37.5 = k + 18.19]</td>
<td></td>
</tr>
<tr>
<td>26. Which expression is equivalent to [5(n + 3m) + m^2]?</td>
<td></td>
</tr>
<tr>
<td>a. [5n + 3m]</td>
<td></td>
</tr>
<tr>
<td>b. [5n + 15m]</td>
<td></td>
</tr>
<tr>
<td>c. [5n + 16m]</td>
<td></td>
</tr>
<tr>
<td>d. [5n + 9m^2]</td>
<td></td>
</tr>
<tr>
<td>27. Mya has 20 songs on her iPod. She created a new playlist with 14 songs. What percentage of her songs did Mya include on her new playlist?</td>
<td></td>
</tr>
<tr>
<td>a. 7%</td>
<td></td>
</tr>
<tr>
<td>b. 14%</td>
<td></td>
</tr>
<tr>
<td>c. 70%</td>
<td></td>
</tr>
<tr>
<td>d. 20%</td>
<td></td>
</tr>
<tr>
<td>28. Which expression is equivalent to the expression below? [3^2(7x + 2x) - 18]</td>
<td></td>
</tr>
<tr>
<td>a. [23x - 18]</td>
<td></td>
</tr>
<tr>
<td>b. [54x - 18]</td>
<td></td>
</tr>
<tr>
<td>c. [65x - 18]</td>
<td></td>
</tr>
<tr>
<td>d. [81x - 18]</td>
<td></td>
</tr>
</tbody>
</table>
1. Mary buys a sweater for $17.95 and a pair of pants for $28.49. She pays with a $50 bill. How much change should Mary get back?

2. Each of Mrs. Leonard's math students solve an average of 150 problems per year. This year, Mrs. Leonard's students solved 1800 problems. Solve the equation below for $p$ to find the number of students Mrs. Leonard has.

\[ 150p = 1800 \]

3. \[
\begin{array}{c}
456.04 \\
-102.78
\end{array}
\]

4. Find the greatest common factor (GCF) of the two terms in the expression below:

\[ 54 + 27 \]

Using the GCF and the distributive property, write an equivalent expression.

a. \[ 18(2 + 0) \]
b. \[ 27(2 + 0) \]
c. \[ 27(2 + 1) \]
d. \[ 9(6 + 3) \]

5. \[ 162 + 3.12 = \]

6. The manager at a local car rental store recorded the number of each type of vehicle rented last month.

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corollas</td>
<td>20</td>
</tr>
<tr>
<td>Altimas</td>
<td>12</td>
</tr>
<tr>
<td>Camaros</td>
<td>3</td>
</tr>
<tr>
<td>Escapes</td>
<td>10</td>
</tr>
<tr>
<td>Mustangs</td>
<td>5</td>
</tr>
</tbody>
</table>

Express the ratio that compares the number of Escapes rented to the total number of vehicles rented.
7. If it takes Bianca 30 minutes to bake 2 pans of brownies, how many pans of brownies could she bake in 7 hours?

8. Mark purchased a Playstation on sale at a 30% discount. The original list price was $250. What was the amount of the discount?

9. At the concession stand, medium sodas cost $1.25 and hot dogs cost $2.50. Mark decides to buy 1 soda and 2 hotdogs. If he pays with a $10 bill, how much change will he receive?

10. A local grocery store kept track of the types of items sold in 2 hours.

<table>
<thead>
<tr>
<th>Grocery Item</th>
<th># Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produce</td>
<td>15</td>
</tr>
<tr>
<td>Deli</td>
<td>4</td>
</tr>
<tr>
<td>Dry Goods</td>
<td>20</td>
</tr>
<tr>
<td>Frozen Food</td>
<td>11</td>
</tr>
</tbody>
</table>

Express the ratio that compares the amount of produce sold to the total number of grocery items sold.

11. Find the greatest common factor (GCF) of the two terms in the expression below:

\[48 + 60\]

Using the GCF and the distributive property, write an equivalent expression.

12. Find the area.

\[A = \frac{1}{2}bh\]
13. Each bag of candy the factory makes contains 120 pieces of chocolate candy. This week, the factory produced 1800 pieces. Solve the equation below for \( p \) to find the number of bags of candy the factory produced.

\[ 120p = 1800 \]

14. \[ 3^5 + (16 - 2) = \]

15. Jay purchased a new leather jacket on sale at a 40% discount. The original list price was $320. What was the amount of the discount?

a. $12.80
b. $128
c. $1,280
d. $360

16. Casey had $21.75. She bought a bag of chips for $1.45 and a large soft drink for $1.65. How much did she have left?

a. $3.10
b. $20.30
c. $20.10
d. $18.65

17. \[
\begin{array}{c}
123.7 \\
\times 62.9
\end{array}
\]

18. Find the greatest common factor (GCF) of the two terms in the expression below:

\[ 84 + 96 \]

Using the GCF and the distributive property, write an equivalent expression.

19. A department store tracked the amount of makeup sold in 1 day.

<table>
<thead>
<tr>
<th>Beauty Product</th>
<th>Amount Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powder</td>
<td>5</td>
</tr>
<tr>
<td>Blush</td>
<td>9</td>
</tr>
<tr>
<td>Eye shadow</td>
<td>20</td>
</tr>
<tr>
<td>Lipstick</td>
<td>8</td>
</tr>
</tbody>
</table>

Express the ratio that compares the amount of eye shadow sold to the amount of lipstick sold.

a. 8:20
b. 5:2
c. 20:28
d. 8:28
20. Find the surface area of the prism.

```
10 cm
5 cm
5 cm
```

21. Each bag of popcorn the movie theater sells contains 540 pieces of popcorn. Today, the theater sold 7020 pieces of popcorn. Solve the equation below for \( p \) to find the number of bags of popcorn the theater sold.

\[ 540p = 7020 \]

22. Find the greatest common factor (GCF) of the two terms in the expression below:

\[ 64 + 96 \]

Using the GCF and the distributive property, write an equivalent expression.

23. The train to Hogwarts is moving at a speed of 120 mph. If Hogwarts is 420 miles away, how long will the students' train ride be?

24. A pet store tracked the number of pets sold in 1 day.

<table>
<thead>
<tr>
<th>Pets</th>
<th>Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td>5</td>
</tr>
<tr>
<td>Fish</td>
<td>9</td>
</tr>
<tr>
<td>Hamsters</td>
<td>20</td>
</tr>
<tr>
<td>Birds</td>
<td>8</td>
</tr>
</tbody>
</table>

Express the ratio that compares the number of birds sold to the number of hamsters sold.

25. Emma had $28.75. She bought a sandwich for $3.25 and a large iced tea for $1.15. How much did she have left?
CHAPTER 32
QUEBEC SEeks INDEPENDENCE

How the Dispute Started

The province of Quebec is in eastern Canada. It has the most land and the second-biggest population of Canada’s ten provinces and three territories. Differing sharply from most of Canada, Quebec’s official language is French, not English.

Since the 1960s, many residents of Quebec have argued their province should separate from Canada and become an independent country. Why are they unhappy? To answer that question, you need to look back to the 1750s, well before Canada became a nation!

Conflict with Britain

France wound up on the losing side in the French and Indian War. “New France,” as France called its territory in today’s eastern Canada and central United States, went to English control in 1763 under the Treaty of Paris. However, French settlers did not abandon the area after the war. Today, nearly one-fourth of Canadian citizens have French ancestors!

In 1791, the British government drew new boundaries and divided the territory into an “Upper Canada” and “Lower Canada.” Upper Canada was mainly populated by the British, Lower Canada mainly by the French. The two colonizing nations would leave lasting imprints on Canadian culture in language and religion (Protestant from England and Catholic from France). They also shaped the foods, traditions, architecture, etc. popular in Canada today.

For about 50 years, Upper Canada and Lower Canada grew in their own ways. But in 1837, colonists grew unhappy with the British government and began to rebel. The British did not want a repeat of the American Revolution and in 1867 created the Dominion of Canada. Canada would be independent and self-governing, but still part of the British Empire. At the beginning, Canada had four provinces: Ontario (formerly Upper Canada), Quebec (formerly Lower Canada), New Brunswick, and Nova Scotia.
Resentment Grows

Over the years, many people moved from France to Quebec. French became the official language of the province, spoken by 90 percent of the people. French-speaking Quebecers became known as francophones, and the English-speaking citizens as anglophones. The francophones tried hard to preserve their cultural, religious, and ethnic identity. They had not forgotten the war with Great Britain and the resentment that followed!

Preserving their French ways was not easy. Canada's dominant language and culture were both English. Quebecers began to feel like an island of second-class citizens in Canada.

After decades of resentment, the francophones finally had had enough. By the 1960s, they were ready to launch an independence movement. They were ready to break Quebec away from Canada's central government and form an independent nation!

Point of View

Write a newspaper opinion article about why Quebec should become independent. Try to be very persuasive with readers. Use strong arguments, emotion, or other strategies you think will win over people.

Inference

Do you think this political cartoon is favorable or unfavorable to Quebec separatists? Why or why not?
Supporters of independence rallied behind a political party called Parti Québécois. While some extreme people resorted to violence, for the most part separatists tried to get their way through peaceful political means (sometimes called a “quiet revolution”).

In 1980 and 1995, they were able to get referendums called on whether Quebec should secede from Canada. The national government argued against secession. Most English Canadians felt that French Canadians had always had equal rights and enough representation in the government. Plus, the rest of Canada did not want to lose Quebec’s natural resources, high-tech industries, and control of the St. Lawrence River shipping channel.

In both referendums, Quebeckers voted to stay part of Canada (although the 1995 election was very close). In 1988, the national government tried to please Quebeckers by passing a law giving all Canadians the right to preserve their cultural heritage. But 10 years later, Canada’s Supreme Court ruled that Quebec could not secede without consent from the other provinces.

Today, the separatist movement has become weaker and more divided. Secession will be even harder to achieve.

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**Vocabulary**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>referendum</td>
<td>a public vote</td>
</tr>
<tr>
<td>secede</td>
<td>to break away from a country to form another country</td>
</tr>
</tbody>
</table>

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**Point of View**

Write NG next to quotations that would have come from the Canadian national government. Write QG next to quotations that would have come from the Quebec government.

1. “We need their natural resources and major waterway to continue having a successful country.”

2. “We are very different from the rest of the country and we should therefore be independent.”

3. “We appreciate new laws that recognize our unique culture, religion, and ethnic identity.”

4. “No province may secede without the consent of the other provinces.”

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**Express Your Opinion**

Do you think it is a good idea or a bad idea for Quebec to become independent? Explain your answer.

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CHAPTER 33

POLITICAL AND PHYSICAL FEATURES OF AUSTRALIA

Welcome to Australia!

G'day, and welcome to Australia, the smallest continent on Earth! Australia is located in the Southern and Eastern Hemispheres, just southeast of the continent Asia.

It is surrounded by the Pacific Ocean to the east and the Indian Ocean to the west. Australia is part of the Pacific region, along with New Zealand and many smaller islands known as Oceania.

Fascinating Fact

Australia is the only continent in the world that is also a country! In fact, it is the sixth-largest country in the world. It is approximately the same size as the continental United States, which excludes Alaska and Hawaii.

Australia States and Territories

Australia is divided into six states and two territories. Several smaller islands surrounding the mainland are also part of Australia, including the island state of Tasmania.

Canberra is the capital of Australia. It is located in the Australian Capital Territory, which is a separate territory within the state of New South Wales.
Physical Features of Australia

Australia is a land of many contrasts and fascinating landscapes. From dry, barren deserts to vibrant underwater reefs, this continent has it all!

Coral Sea and Great Barrier Reef

The Coral Sea lies along Australia’s northeast coast, and it contains several small islands called the Coral Islands. It gets its name from the many coral reefs found in its waters, including the Great Barrier Reef.

The Great Barrier Reef is an amazing underwater world. This living coral reef extends more than 1,400 miles along Australia’s northeast coast. It is the largest of its kind in the world! There are more than 1,500 types of fish living on the reef, along with sea turtles, starfish, and giant clams.

Ayers Rock (Uluru)

Ayers Rock, also known as Mount Uluru, is Australia’s most famous natural landmark. This massive red sandstone rock formation is located in the barren lands of central Australia. Rising 1,142 feet (348m) in the air, Ayers Rock is a sacred site for the local Aboriginal people. Visitors can enjoy its many rock wall paintings, caves, and natural springs.

Great Dividing Range

The Great Dividing Range is Australia’s longest mountain range. It is approximately 2,300 miles long and divides Australia’s eastern coastal region from the inland desert region. Many of Australia’s important rivers begin within the mountains of the Great Dividing Range.

The range includes a wide variety of environments, from lush rainforests to snow-capped mountains. Australia’s highest peak, Mount Kosciusko, is located in the Great Dividing Range.

Today, the region is valuable to Australia’s economy since many natural resources (like lumber and minerals) have been found here. There are also many different types of agriculture (like growing crops or grazing animals) that take place along the fertile regions of the Great Dividing Range.

Great Victoria Desert

The Great Victoria Desert is the largest desert in Australia. Located in southern and western Australia, this desert is a barren area of hills, salt lakes, and dry grasslands. The average rainfall is less than 10 inches per year. As a result, very few people live in the Great Victoria Desert. The animals and plants living here have adapted to survive the extremely hot, dry desert habitat.
Examine the map of Australia and answer the questions.

Find and highlight the following physical features on the map:

- Great Dividing Range
- Great Victoria Desert
- Coral Sea
- Ayers Rock (Uluru)
- Great Barrier Reef
- Pacific Ocean
- Indian Ocean

1. The _________________________ is the largest coral reef system in the world.

2. This body of water lies along Australia’s northeast coast. _________________________

3. These two large oceans surround the island of Australia. _________________________

4. This dry, barren area covers much of southern and western Australia. _________________________

5. This famous landmark is a sacred site for the local Aboriginal people. _________________________

6. The _________________________ is a long mountain range that stretches along Australia’s east coast.
Can you identify each of Australia’s major physical features on the map?

**Physical Features**

A.  
B.  
C.  
D.  
E.  
F.  
G.  

**Express Your Opinion**

If you had to choose one physical feature to live near, which one would you choose? Why?

**Writing Prompt**

Choose one of the following: Great Barrier Reef, Ayers Rock, or the Great Victoria Desert. Envision being a tourist visiting that location in Australia. Using the text and at least one other resource, write a letter to your parents or a best friend back home describing the location. Use descriptive adjectives and words that address the sights, sounds, and smells of that location.
Impact of Climate

Where people live and how people trade is greatly influenced by location, climate, and natural resources.

Australia's climate is dramatically different depending on which region you are in. Two-thirds of Australia is covered in either deserts or arid grasslands. These large areas are dry and receive very little rainfall year-round. Because of the extreme temperatures and lack of water, very few people live in the middle of Australia. This flat, dry interior region is known by most Australians as the "outback."

Australia's eastern coast is completely different! Most of its population lives along the coastal regions due to the typically mild temperatures, plentiful rainfall, and access to fresh water. For example, the climate of southeast Australia has made the area well-suited for agriculture. As a result, many people living here take advantage of the region's fertile soil to grow crops and raise livestock.

Assess Your Understanding

Use the map about Australia's climate and what you learned to answer the questions.

1. In terms of climate, explain why so few people live in the interior (middle) of Australia.

2. Most of Australia's largest and most populous cities are located on the __________

   western coast           northern coast           southeastern coast

3. In terms of climate, explain why Australia's coastal areas have higher population than its interior.

   ____________________________________________

   ____________________________________________
Influence of Natural Resources

Because of Australia's climate, most of its fertile land is found on the east coast. Many coastal farms produce vegetables, fruits, and nuts for the citizens of Australia to eat. Some farmers have switched to growing wheat since it has become Australia's most valuable crop. However, Australia's most important agricultural good is livestock—specifically cattle and sheep.

Cattle ranchers and sheep farmers often live on the dry grasslands in Australia's interior regions. Even though these areas receive less rainfall than the coastal regions, they are perfect for grazing animals. Why? Because the ranchers can let their animals roam free to find new areas to graze in! Some of these ranches can cover more than 500,000 acres each!

Australia is rich in metal ores, including iron, gold, and copper. There is also an abundance of energy resources, such as coal, petroleum oil, and uranium. Many of these resources are found along Australia's coastal regions, but there are also mining communities scattered throughout the outback.

Australia trades its mineral and fuel resources to other nations for a profit. Australian coal, oil, and uranium power the homes, factories, and transportation systems of many neighboring nations, while its mineral resources are manufactured into steel (from iron), electronic parts, and much more!

Location Matters!

Australia is located in the southeast Pacific Ocean, and its closest neighbors include the countries of Southern and Eastern Asia. As a result, Australia has created trade partnerships with several of Asia's most powerful nations, including China, India, South Korea, and Japan since they are located so close to Australia. Australia also ships goods across the Pacific Ocean to countries like the United States and Canada.

Since Australia is surrounded by water, fishing and shipping are important parts of Australia's economy. Sydney, Brisbane, Melbourne, and other large cities first developed as port cities that exported wool, coal, and iron ore to nearby nations. Today, these large port cities continue to have thriving shipping and fishing industries, but they have grown to include millions of Australians that work in manufacturing, retail, and service industries.
Reading for Information

Circle the correct answers.

1. Australia's most valuable crop is ________________
   corn  potatoes  wheat  nuts

2. Large areas of the Australian outback are used for ____________.
   fruit orchards  vegetable gardens  raising livestock

3. Because Australia is an island nation, _____________ are important industries.
   mining and manufacturing  fishing and shipping  banking and finance

4. Australia has enough energy resources, such as ____________, to sell large amounts of these goods to other nations.
   potassium and zinc  coal and oil  gold and iron

5. Because of Australia's location, most of its top trade partners are in ____________.
   Africa  Asia  Europe  North America

6. Australia and the United States are trade partners. Many goods are shipped back and forth by boat across the ____________.
   Atlantic Ocean  Indian Ocean  Pacific Ocean

7. Australia supplies more than half of the world's supply of __________, most of which is sold to steel manufacturers.
   copper  gold  iron ore  zinc

8. Australians raise sheep for their wool, which is sold to __________ in neighboring nations.
   textile industries  retail stores  auto manufacturers

One More for Fun

Think about what you learned about Australia's location, climate, and natural resources to answer the question.

Imagine you are an entrepreneur in Australia. What kind of business would you start and where would you want to establish your business? Why? Use evidence to explain your business and the location you have chosen.

Writing Prompt

Imagine that you moved to Australia last year. Write an email to your friend back home, urging him or her to move to Australia. Explain why most Australians live along the coast. Include information in your email about Australia's climate, the job opportunities, and the availability of natural resources across Australia. Remember to be factual, yet persuasive in your email.
CHAPTER 35
GOVERNMENT OF AUSTRALIA

Blazing a New Path to Governing

Australia’s national government dates back to 1901. That is when six British colonies that were partially self-governing decided to unite and become states of a new nation. A constitution was written, and the modern government of Australia was launched.

Australia stayed in the British Commonwealth of nations after becoming independent. It also borrowed its parliamentary democracy government from Great Britain. Citizens elect representatives to the Parliament (legislature), which names a prime minister. The prime minister is the top leader of the Australian national government.

The Australian national government shares some of its power with six states and two of the country’s ten territories. It makes all important decisions for the other eight territories.

In Australia, individual rights and freedoms have been developed through separate laws, not a Bill of Rights like in the United States. Freedoms of speech, association, and religion, and freedom from discrimination are nearly identical to what Americans enjoy. However, rights and freedoms are not universal in Australia. Discrimination against the indigenous Australians, who lived there before colonization, continues to be a hot issue for the country.

Quick Review

Circle the correct word or phrase to complete each sentence.

1. In 1901, Australia gained independence from Great Britain and formed a new **democratic / autocratic** form of government.

2. Today, Australians elect representatives to a national legislature, which is the country’s **Congress / parliament**.

3. The **prime minister / queen** is the most influential person in Australian government.

4. Australia guarantees individual rights through **a Bill of Rights / laws**.

5. Some issues remain with discrimination toward **British tourists / indigenous peoples** in Australia.
Government Profile: Australia

Australia's government is a democracy in which citizens elect the legislature. It also is a constitutional monarchy because the queen of the United Kingdom continues to serve as the ceremonial head of state. However, that is largely a figurehead role. The real power in Australian government rests with the prime minister, and Queen Elizabeth II is represented in the government by a governor general.

In Australia, men and women ages 18 and older must vote in elections unless they have a good excuse. Otherwise, they can be fined! Citizens elect members to the two houses of the Federal Parliament: the Senate and House of Representatives. The leader of the majority political party, or majority coalition of parties, in the Federal Parliament becomes prime minister. The queen of the United Kingdom technically serves as head of state, although her appointed governor general actually fills the role. The prime minister is the powerful chief executive of the national government and suggests who should be governor general.

The governor general picks members from the Federal Parliament to serve in the national cabinet. Each of those cabinet ministers will help run a ministry (similar to a federal agency in the United States) and advise the governor general.

Classify Information

Match Australian leaders or entities with their responsibilities. Each leader will have letters for two responsibilities.

_____ 1. queen
_____ 2. governor-general
_____ 3. prime minister
_____ 4. ministry
_____ 5. Federal Parliament

A. gives the governor-general advice
B. makes new laws for Australia
C. leads the national government
D. represents the queen's interests
E. is a figurehead government leader
F. comes from the majority party in parliament
G. comes to the role by hereditary line
H. is led by people appointed by governor-general
I. is made up of elected representatives
J. chooses members of the cabinet
State and Territorial Governments

Australia has three other layers of government that give its citizens more opportunities to elect their leaders.

Australia has six states: Western Australia, Queensland, South Australia, New South Wales, Victoria, and Tasmania. These can be geographically massive places, even though most of Australia's population lives along the coast and in the eastern part of the continent. These states make their own laws over matters the national government does not control, have their own constitutions, and have their own three branches of government. In each state, the chief executive of government is the premier, and the queen's representative is the governor.

The Australian Capital Territory (ACT) and Northern Territory have been given limited self-government by the national government. A number of government functions are handled by locally elected parliaments in these two territories.

Under the national constitution, responsibilities for local matters officially lie with the state and territorial governments. That is why the roles and duties of local government (also called local councils) differ from state to state in Australia.

The state, territorial, and local governments give Australian citizens additional opportunities to vote for their representatives.

**True or False**

Write T for True and F for False. Correct any false statements to make them true.

1. The queen has considerable power in Australian government.

2. The governor-general is the queen's representative in the national government.

3. The prime minister is directly elected by the Australian people.

4. The Federal Parliament has only one house, the Senate.

5. In Australia, voting is mandatory.

6. The approach to local government powers tends to vary from state to state.

7. Ministries in the Australian government have lots of power and report to no one.
Chapter 36
Economic Influences in Australia

First, Choosing an Economy

Australia is a vast continent rich in minerals, many of which it exports to other parts of the world. However, it does not have much of an automobile industry. Australia imports almost all of its new cars and parts.

Why is this significant? Australia made a decision about how to handle scarcity of certain productive resources. It enjoys an abundance of minerals, so it decided to create an industry there. But Australia does not have the right combination of resources to efficiently meet its citizens' needs for cars. Instead, it buys most of its vehicles from other countries.

Like other countries, Australia had to answer three fundamental economic questions. The way it answered them helped it choose from one of three basic types of economic systems.

<table>
<thead>
<tr>
<th>Economic Questions</th>
<th>Types of Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>What to produce? (goods and services people need and want)</td>
<td>Traditional (answers economic questions based on customs and values)</td>
</tr>
<tr>
<td>How to produce it? (getting the right combination of natural resources, human capital, and capital goods)</td>
<td>Market (answers economic questions based on supply and demand factors)</td>
</tr>
<tr>
<td>For whom to produce it? (people, businesses, and organizations that will be customers)</td>
<td>Command (answers economic questions based on strict government control)</td>
</tr>
</tbody>
</table>

Mixed Economies

But it is not really practical for most countries to have either an entirely command or an entirely market economy. They pick a mixed economy. Neither the government nor the marketplace is completely in charge of the economy, but both play a role.
Classify Information

Identify each feature as a market element (ME) of an economy or a command element (CE).

1. A new shopping center is built on land taken away from private owners by the Australian government.
2. A new shopping center is built on land bought by the Australian companies building it.
3. Australian farmers decide what crop to plant this year and how to fertilize it.
4. Australian farmers can only produce as much of the crop as the regional government will allow.

Australia’s Approach to Economics

While Australia has a mixed economy, it is about 81 percent free and 19 percent command. That ranks it among the five freest national economies in the world. So it operates very much like a pure market economy. The government stays out of almost all parts of the marketplace.

Australia’s Economic System

In Australia, businesses respond to supply and demand forces to make most of the important decisions about what to produce. Citizens and businesses get a lot of economic freedom. Competition and investment are increasing in many industries. More than 75 percent of the land is owned by individuals and private businesses.

The government is committed to a free market. It does not have many laws and regulations on companies, and those it does use are very clear. The government does collect taxes, regulate trade to a certain degree, and provide certain services. It does not try to regulate what jobs people have and what they are paid.

Trade, Trade, Trade!

You think NAFTA was a big deal to the United States? As an island country, Australia must trade to survive. Its government is committed to making trade as free as possible. In 2015, it signed a free trade agreement (FTA) with China—but that was just part of the picture. At that time, Australia already had eight FTAs with other countries and was part of two regional trade pacts. Plus, it was negotiating trade agreements with two other countries and three huge regional FTAs. That’s a lot of trading!

Charts and Graphs

Identify where the economy of Australia lies on the continuum. Write Australia on the correct line.

Pure Command

A

B

C

Pure Market
GDP in Australia

Economists evaluate an economy's strength based on gross domestic product, or GDP. Think of the total value of all goods and services produced by an economy in a year. That is GDP. GDP per capita, or per person, is an indicator of the standard of living in that country. The chart on this page shows how GDP per capita stacks up in Australia versus that in some other developed countries.

Economists look at GDP per capita as a statistic that gives strong clues about a country's standard of living. Australia has one of the highest standards of living among all countries in the world! It helps that the average wage is high and the cost of living (e.g., housing and food) is very affordable compared with other developed countries like the United States.

What Else Drives Growth?

Actions by the government and decisions by private companies have an important impact on whether Australia's economy grows. But those people are influenced by factors already in place. Let's look at how those four fundamental factors—natural resources, human capital, capital goods, and entrepreneurship—affect growth and the standard of living in Australia.

---

Jog Your Memory

Forgotten about what GDP means? Look back at Chapter 7 to refresh your memory.

Vocabulary

standard of living: level of wealth and material comfort available in a country

---

GDP Per Capita (2015) for Select Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP Per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>$48,300</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>$42,000</td>
</tr>
<tr>
<td>Japan</td>
<td>$38,600</td>
</tr>
<tr>
<td>Russia</td>
<td>$26,300</td>
</tr>
</tbody>
</table>

---

Assess Your Understanding

Circle the correct answers using the information in the chart.

1. Gross domestic product is a measure of the **money / strength** in a nation's economy.
2. GDP per capita points to the **standard of living / inflation rate** in a country.
3. Based on GDP per capita, workers in Australia are nearly twice as productive as in **Russia / Japan**.

---

Classify Information

Identify whether each productive resource listed is an example of a natural resource (N), human capital (H), capital good (C), or entrepreneurship (E).

- a fund to help start-up companies (H)
- copper deposits (N)
- a patent for an invention (E)
- manufacturing workers (H)
- steel mills (C)
- scientists (E)
- fresh water (N)
- hardwood forests (N)
- college graduates (H)
- a new way to run businesses (E)
- experienced writers (H)
- fishing grounds (N)
Natural Resources

One of the four factors that affect a country’s economic growth is natural resources. Generally, natural resources include minerals, forests, water, and fertile land. Australia ranks seventh in the world in acres of arable farmland, has rich deposits of coal and other minerals, and vast ocean coastline. Based on resources like these, it has been able to create markets, both in Australia and overseas, for certain products.

### Inference

Use the information in the chart to circle the correct answers.

1. Based only on these key products, how competitive would you say these three countries are?
   - a) not very competitive
   - b) very competitive

2. On which key product would you expect Australia and the United Kingdom to compete for exports?
   - a) iron
   - b) coal
   - c) machinery

<table>
<thead>
<tr>
<th>Key Products</th>
<th>Australia</th>
<th>Japan</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>Rice</td>
<td>Cereals</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td>Fish</td>
<td>Potatoes</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>Vegetables</td>
<td>Cattle</td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>Electronics</td>
<td>Machine</td>
<td></td>
</tr>
<tr>
<td>Sugarcane</td>
<td>Textiles</td>
<td>Tools</td>
<td></td>
</tr>
</tbody>
</table>

### Investing in Human Capital and Capital Goods

As in the rest of the world, the government of Australia must decide whether to invest in human capital and capital goods and whether to encourage the private sector to put money into these areas.

Like the developed western countries, Australia governments devote a large piece of their budgets into human capital. The government invests about 5 percent of GDP (a little below the worldwide average) on education and offers free public schools. Education investment is producing results. The literacy rate (meaning, the percentage of adults who can read and write) is about 99 percent. Plus, the national government puts billions of dollars each year into job training programs. The Australian labor force tends to rate well on the abilities to communicate and be productive.

Australia also stacks up well against other developed countries in how much public and private investment goes into capital goods like production equipment. See the chart on investment.

### Investment in Fixed Capital Goods

<table>
<thead>
<tr>
<th></th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>24.3%</td>
</tr>
<tr>
<td>Japan</td>
<td>21.7%</td>
</tr>
<tr>
<td>Russia</td>
<td>21.6%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>17.4%</td>
</tr>
</tbody>
</table>
CHAPTER 37
SPECIALIZATION AND TRADE IN AUSTRALIA

Trade Is Essential

Australia is a major part of not only its regional economy, but also the global economy. It actively engages in global trade with other nations around the world for goods and services. That way, Australians can tap into more goods and services than they could ever make on their own. Trading with other countries helps keep the economies of Australia and its trading partners healthy. Plus, it benefits both buyers and sellers in each country.

Global Trade Benefits Buyers By...

$ allowing buyers to pick from a greater variety of goods and services

$ raising competition among providers, which forces down prices and lets buyers benefit from cheaper goods and services

Global Trade Benefits Sellers By...

$ giving sellers access to a greater variety of resources they need for production

$ giving sellers access to more customers, which means greater sales and higher profit

Case for Specialization

Countries and regions are limited in some productive resources (like natural resources, human capital, and capital goods). So they don't have all of the resources they would need to make all of the goods and services their people want and need. They face a big issue in how to use their limited productive resources most efficiently. Most countries and regions resolve that issue by deciding to specialize.

When nations specialize, they choose to make those goods and services that they can produce at a low opportunity cost. Then they trade for other goods and services that other countries can make at a low opportunity cost. The more countries specialize, the more they need trade! This is the reality that specialization encourages global trade.

Apply What You Learned

Read the specialization example and then answer the questions.

Australia and Japan both produce iron ore and financial services, but at different rates.

<table>
<thead>
<tr>
<th>Country</th>
<th>Tons of Iron Ore/hour</th>
<th>Financial Services/hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>200</td>
<td>175</td>
</tr>
<tr>
<td>Japan</td>
<td>400</td>
<td>125</td>
</tr>
</tbody>
</table>

1. Which country produces iron ore more efficiently? ________________

2. Which country produces financial services more efficiently? ________________

3. Explain why these countries should specialize and trade with each other?

__________
Australia’s Specialties

Australia’s economy is dominated by services. Sales of services generate almost 70 percent of the country’s GDP. Australia has a highly educated workforce, and its respected universities have sent talented Australians to some of the world’s most successful banks and business consulting firms.

The sixth-biggest country in terms of area, Australia enjoys abundant natural resources. Those resources have allowed Australia to become a leading producer in mining (coal, for example) and agriculture (products include wool and lamb meat). In each of those cases Australia made decisions about which specialty industries to develop based on its productive resources.

Countries that specialize need global trade to survive. Most of Australia’s leading trade partners—China, Japan, and South Korea—are in the same part of the world. Australia also does a lot of trade with the United States, far across the Pacific Ocean. Despite all its exports, in most years, the value of Australia’s imports is higher than its exports. Therefore, the country runs a negative trade balance. Australia exports many commodities like minerals; if their prices fall, the economy suffers!

Risks of Specialization

For several decades, exporting commodities such as iron ore, coal, and oil helped keep the Australian economy very healthy. As long as the economies of its trading partners were doing well, their things were good in Australia.

But in 2016, the economy slowed down in China. Demand for Australia’s commodities started to dry up. Australia’s economy began to feel the pinch!

One More for Fun

Imagine you are a young entrepreneur in Australia. Use the space below to dream up your new business! Choose a business that will use some of Australia’s abundant natural resources, and explain how those resources offer new, exciting opportunities for your business. Draw a logo for your business and come up with a clever name for your business.
What Australia Imports

Some of Australia's leading imports include cars, refined petroleum, computers, and pharmaceuticals. Australia drills for a lot of crude oil, but much of the refining of that oil into gasoline happens elsewhere. Australia also has never had much of a car manufacturing industry. Other countries in the Far East can make cars and medicines more efficiently than Australia can.

With each of these products, Australia concluded that other nations enjoy combinations of productive resources that give them an advantage over Australia. It has decided to import these products rather than manufacture them.

<table>
<thead>
<tr>
<th>Country</th>
<th>Specializes In...</th>
<th>Needs/Wants...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>iron ore, phosphate, financial services</td>
<td>wheat, clothing, fish</td>
</tr>
<tr>
<td>China</td>
<td>electronics, consumer goods, machinery</td>
<td>fish, machine parts, computers</td>
</tr>
<tr>
<td>Japan</td>
<td>computers, business consulting, fish</td>
<td>machine parts, clothing, financial services</td>
</tr>
<tr>
<td>South Korea</td>
<td>cars, clothing, machine parts</td>
<td>phosphate, cheese, beef</td>
</tr>
<tr>
<td>United States</td>
<td>software, corn, heavy equipment</td>
<td>consumer goods, machine parts, business consulting</td>
</tr>
</tbody>
</table>

Limiting Trade

No matter how friendly they are with trading partners, countries sometimes set up trade barriers. These barriers are usually created to shield the country's own provider of some goods and services from foreign competitors. The foreign companies may be able to make the product cheaper or of higher quality. That makes them tough competition! Examples of trade barriers are tariffs (taxes placed on imported goods that force the consumer to pay a higher price), quotas (restrictions on the amount of a good that can be imported), and embargoes (a government order not to trade with a particular country).

Vocabulary

quarantine: a period when people or goods are held in isolation to prevent the spread of disease or pests

Australia has one of the most free markets in the world. Under terms of its various free trade agreements, the country is not an active user of trade barriers. However, Australia does sometimes act in other ways that can slow down trade. For example, exports of food, livestock, mining and construction equipment, and some packaged goods may be quarantined to prevent contamination of the agricultural industry or of the environment.
Exchanging Currencies

International trade would be very difficult, if not impossible, if countries insisted on always using
their own currencies. They need a way to exchange currencies. In other words, they need a reliable system
to calculate what one nation's currency is currently
worth in terms of another nation's currency. This is
called the exchange rate. If an Australian mine wants
to sell copper to a Japanese manufacturer, it wants to
be paid in Australian dollars, not Japanese yen. The
exchange rate is not the same from week to week or
month to month. It varies constantly!

Answer the questions.

1. A country's parliament votes to limit the monthly volume of wheat imports allowed from another country.
   This is an example of...
   a) a tariff.      b) a quota.      c) an embargo.      d) a quarantine.

2. What is the purpose of a tariff such as a protective tariff?
   a) to increase prices of imported goods and protect a country's own industries from foreign competition
   b) to decrease prices of imported goods so a country's people can buy what they need for the lowest cost
   c) to increase prices of exported goods so a country's own businesses are less likely to send their
      products to other nations
   d) to decrease prices of exported goods so people in other countries will buy the foreign nation's
      product instead of their own

3. You work for an American company that wants to sell a coal mine to an Australian mining company.
   Your company asks for 1 million U.S. dollars. About how many Australian dollars will the buyer have
to exchange?
   a) 500,000      b) 757,000      c) 1,125,000

Write T for True and F for False. Correct any false statements to make them true.

   1. All countries have the same type of money.
   T

   2. Australia's money is called an Aussie.
   F

   3. The exchange rate measure how much one currency is worth compared to another currency.
   T

   4. It is impossible for one country to trade with another country if they have different currencies.
   T

   5. Australian dollars can be used at any store in Japan.
   F
CHAPTER 38
THE JOURNEY OF THE ABORIGINES

Early Relations with the British

Great Britain explored, then began colonizing, Australia in the 1770s and 1780s. Many settlers were unprepared for surviving in the harsh outback. After some early conflicts, the settlers started to see the wisdom of befriending the Aborigines and learning from their ways of dealing with the environment.

Then relations got less friendly. New conflicts flared up as the British settlers got used to living in Australia and began expanding. Many of them decided to force Aborigines off their lands. The Aborigines tried to fight back, but their spears were no match for European guns. During the 1880s, the Australian government made it legal for settlers to use force against the Aborigines when necessary. Brutality against the Aborigines increased.

As was the case with the American Indians, disease proved even more dangerous to the Aborigines than guns. The British brought over many diseases—such as smallpox, influenza, and tuberculosis—that were new to the Aborigines. The diseases spread rapidly and eventually killed nearly half the native population.

The Aborigines had a tough choice. They could try to assimilate into the newcomers' culture, but they were often mistreated by colonists. Many could only find low-paying jobs as stock hands or laborers. Poverty rates were high among the Aborigines.

Writing Prompt
The language, culture, and religion of Australia can all be traced to British colonization. Describe what Australia's language, culture, and religion would most likely be if the Aborigines had not been forced to move to the Outback during British colonization. Support your writing with the text and at least one additional resource.
Serious Problems for Modern Aborigines

Today, Aborigines represent only about 2.5 percent of Australia's population. Many generations of discrimination and mistreatment have left them with poor health and low levels of education and employment compared with other Australians. Almost 30 Aboriginal languages were nearly wiped out by centuries of Australian colonialism.

Over time, many Australians began to recognize how harshly the Aborigines had been mistreated. In 1967, the Australian Constitution was amended so that Aborigines were counted with the rest of the country's population. That meant special laws could be passed to help the Aborigines. Those changes were a start, but there was not much follow-through by the government.

In 2008, the Australian prime minister officially apologized to the Aborigines on behalf of all Australians. Australian officials have talked about holding a referendum to amend the national Constitution and specifically mention the Aborigines as the first people of Australia. Also, the Constitution would specifically forbid racial discrimination. But those discussions have not yet turned into real action.

---

**Chronological Order**

Number the events below in the order in which they occurred.

1. Aborigines die of European diseases
2. Aborigines and British are friendly
3. British arrive in Australia
4. British are allowed to use force against Aborigines
5. Official apology is given to the Aborigines
6. Australians recognize the mistreatment of Aborigines

---

**Character Counts**

Imagine you are the prime minister of Australia. Think about what you would say in a public apology to the Aborigines for what occurred in the past. Write your apology letter or speech. Be sure to include what you are apologizing for, why Aborigines did not deserve what occurred, how Aborigines are important to Australia despite their small population, and how they should be treated in the future.
The Myth of the Penguin

The flightless life path of a penguin sure sets this bird species apart from its feathered cousins capable of flying. Have you ever wondered why it is that penguins are unable to fly? Well to discover the answer to this age-old question, we must travel back to the time of the ancient Eskimo.

Life during the Ice Age meant 75% of the Earth's surface was covered in snow, and the other 25% was icy ocean water. During this time Eskimos lived inside cozy little igloos, houses built of snow, all around the world. What was life like for humans back then, you ask? A typical Eskimo day included ice fishing, carving snow sculptures, riding reindeer, and finally, training their pet penguins. Just as dogs and cats are our modern-day pets, penguins were the trusted animal companions of man. This explains why to this very day, penguins don't startle away from humans because of the trust built up by the Eskimo.

Penguins were the preferred pets of the Ice Age because they made excellent bodyguards against pesky sea lions who looted Eskimo igloos for food. However, keeping penguins as pets did present another unfortunate problem. In case you weren't aware, penguins and sea lions have a tumultuous relationship similar to the despicable feeling dogs have toward cats. At any sight of an intruding sea lion, penguin pets became enraged with a fit of fury as their blood pressure boiled to unhealthy levels. This extra blood flow surged down to the penguin's feet and caused the phenomenon of happy feet, leading to an uncontrollable urge to chase.

Believe it or not, the "happy feet" curse allowed penguins to build up enough speed to lift off and momentarily fly through the icy sky chasing away any intruding sea lions. Their frantic feet would get so worked up while their wings flapped up and down as they roared threatening squawks to the sea lions. But their birdy belly blubber proved to be a disadvantage because just as soon as the penguin had lifted off, it would come plummeting down to the ground again. The Eskimos could not continue on with the clumsy penguin flyers accidentally smashing their igloos in as they came crashing down.

So, the Eskimos rallied together and built a 50-foot tall totem pole as a tribute to the Elfy Elders who controlled all of Mother Nature back then. The Eskimos plead for a solution to save their igloos from penguin belly-flop-thers. The Elfy Elders wiggled their noses and tapped their feet together three times as they chanted:

Penguin, Penguin! Fly No More!
Diving Undersea is Your New Chore!
Penguin, Penguin! Black and White
Finding Schools of Fish is Now Your Plight!

A great blizzard whisked through the winter wonderland and left every penguin with a new purpose. No longer did they feel the great need to protect their human master. This sense of duty was quickly replaced with a keen beak for fishing. With their newfound built-in stellar fish GPS trackers, penguins kept their human masters well-fed. And penguin and human fished together in this way until the Ice Age melted away!
COMPREHENSION QUESTIONS: THE MYTH OF THE PENGUIN

1. Based on the myth, what were penguins once able to do that they no longer can?
   a. Their blubber allowed them to slide along the snow on their bellies.
   b. Their evolved beaks allowed them to swim underwater for up to one minute.
   c. Their wings allowed them to momentarily fly in the sky.
   d. Their feet allowed them to chase after sea lions at high speeds.

2. What was life like on Earth during the Ice Age?
   a. About 75% of the Earth was covered in water.
   b. About 75% of the Earth was covered in snow.
   c. Only 25% of the Earth was covered in ice.
   d. Only 25% of the Earth was covered in frost.

3. What initially made penguins the preferred pets of the Eskimo?
   a. They protected humans against intruding saber-toothed tigers
   b. They helped humans to hunt for fish
   c. They helped humans to hunt for caribou
   d. They protected humans against intruding sea lions

4. What did the Eskimos offer as a tribute to the Elfy Elders?
   a. They carved a snow sculpture in the shape of an Emperor Penguin
   b. They carved a snow sculpture in the shape of an elf
   c. They built a fifty-foot-tall totem pole
   d. They offered them fifty pounds of fish

5. How did the Elfy Elders help penguins to become even better pets?
   a. They took away their ability to fly; and gave them the ability to dive for fish
   b. They replaced their intense dislike for sea lions with fish
   c. They took away their ability to swim; and gave them the ability to fly
   d. They replaced their yellow feathers with black and white plumage

GET THE GIST! (Write a complete sentence in response to the prompts.)

<table>
<thead>
<tr>
<th>PROMPT</th>
<th>RESPONSE</th>
<th>EVIDENCE (✓)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What makes penguins an unusual bird?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describe a typical Eskimo day.</td>
<td></td>
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<tr>
<td>Why were the sea lions entering the igloos?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How did the penguins protect against the sea lions?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How did the penguins change in the end?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHALLENGE! (Write your own question & answer for this week's text)
Good readers combine the main idea and key details of a larger text into a brief retelling. Putting the retold text into your own words, is important when you summarize. This practice activity will help you build your own summary paragraph from this week’s text. Remember, only include the details that support your main idea. Details that don’t relate, stay left out!

DIRECTIONS: Look over the example summary for paragraphs 1 – 3 of this week’s story. Notice how the main idea is shorter than the key details. Then, use the blank boxes to create a summary for paragraphs 4-6 of The Myth of the Penguin.

EXAMPLE MAIN IDEA (¶1–¶3)
The Ancient Eskimo kept penguins as pets during the Ice Age.

Key Details 1 (¶1)
Today, penguins are known as a bird that cannot fly. According to Eskimo legend, they once flew.

Key Details 2 (¶2)
Back then, penguins were trained by their Eskimo masters which helped them to trust humans.

Key Details 3 (¶3)
Penguins felt the duty to protect their Eskimo’s igloo when sea lions would barge in searching for food.

YOUR MAIN IDEA (¶4–¶6)
THE STORY OF ARACHNE

THE STORY OF A TALENTED GREEK WEAVER NAMED ARACHNE (UH-RAK-NEE)

There once was a talented weaver named Arachne. Her skill in the arts of weaving and embroidery was so great that the nymphs would leave their groves and fountains to watch her. She wove tapestries and cloths that were beautiful beyond belief, and the graceful way she carded and spun the rough wool into shimmering strands was thrilling to any onlooker. Those who saw her nimble fingers work the spindle and needle had no doubt that the goddess Minerva, who inverted handicrafts, had taught her.

This speculation was denied fervently by Arachne who insisted her skill was self-taught. Furthermore, Arachne couldn’t bear to be thought of as an apprentice, even of a goddess! She challenged society’s speculation to the ultimate test of immortal comparison: “Let Minerva try her skill against mine! If I lose, I will pay the penalty!”

The goddess Minerva heard this and was displeased. Disguised as an old woman, she visited Arachne to give her some advice: “I have had much experience,” she commented, “and I hope you will let me speak. Challenge any mortal you wish, but do not compete with a goddess.” She even added, “I advise you also to ask Minerva’s forgiveness because she is merciful, and perhaps she will forgive you as long as you offer an honest apology.”

Arachne stopped spinning and replied, “Old woman, save your advice for your daughters! I stand by what I say. I am not afraid of the goddess. Let her try her skill against mine, if she dare!” At this plea for a weaving battle, Minerva instantly dropped her disguise. The nymphs bowed low to the ground in respect of the goddess in their presence. “So let us begin,” challenged Minerva. Arachne blushed, then grew pale, yet her confidence did not waiver. She threaded her loom intent on letting her talents speak for themselves during the competition. The goddess and Arachne worked quickly in the excitement of this contest. Both blended the colors of their threads as delicately as the stripes of a rainbow blend seamlessly from one color to the next.

Minerva’s cloth depicted the gods. In the corners, she wove pictures showing the gods’ displeasure with humans who dared to challenge them. For her cloth, Arachne chose to depict the mistakes and failures of the gods. Her weaving was wonderfully well done. Minerva couldn’t help but admire Arachne’s work, but could not forgive the insult. She tore Arachne’s cloth and then touched the mortal’s forehead, making Arachne feel her own guilt. Also, through her touch, the goddess transformed Arachne into a minuscule creature, still known today for spinning intricate webs – a spider!

Did You Know? Scientists call spiders and their relatives arachnids to honor this talented weaving maiden!
**Comprehension Questions: The Story of Arachne**

1. Based on the myth, in which area was Arachne especially skilled?
   a. drama
   b. weaving
   c. music
   d. sculpting

2. To the public, who did the town believe to have helped mentor Arachne?
   a. the nymph, Echo
   b. the goddess, Athena
   c. the ruler, King Midas
   d. the goddess, Minerva

3. How did Minerva first react to Arachne’s challenge to a one-on-one competition?
   a. Minerva did not care because she felt Arachne was just a simple girl.
   b. She wanted to give Arachne the chance to apologize while she was disguised.
   c. Minerva immediately transformed Arachne into a spider.
   d. She wanted to prove her skills were superior by holding an immediate contest.

4. What caused Minerva to destroy Arachne’s tapestry?
   a. She was jealous of Arachne’s nimble fingers.
   b. Minerva was insulted by Arachne’s lack of respect for her.
   c. She was displeased with the appearance of the weaving.
   d. Minerva was upset by Arachne’s insulting comments during the competition.

5. What species have scientists named in remembrance of Arachne and her skills?
   a. marsupials
   b. reptiles
   c. donkeys
   d. spiders

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**Get the Gist! (Write a complete sentence in response to the prompts.)**

<table>
<thead>
<tr>
<th>PROMPT</th>
<th>RESPONSE</th>
<th>EVIDENCE (T#)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who was Arachne?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explain how Arachne challenged Minerva.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describe Minerva’s tapestry (cloth) design.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What did Arachne feel after being touched?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why have scientists used the name, arachnids?</td>
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<td></td>
</tr>
</tbody>
</table>

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**Challenge! (Write your own question & answer for this week’s text)**
**Reading Skill: Character Traits**

Good readers learn about characters in a story through their thoughts, words, and actions. These pieces of evidence show the reader the behaviors and values each character holds. Words used to describe a character's personality are called **character traits**. Use the definitions of each trait to help you identify if the character trait belongs to Minerva or Arachne.

<table>
<thead>
<tr>
<th><strong>proud</strong></th>
<th><strong>talented</strong></th>
<th><strong>vengeful</strong></th>
<th><strong>confident</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(very happy &amp; pleased because of something you have done)</td>
<td>(having a special ability to do something well)</td>
<td>(feeling or showing a desire to hurt someone who has hurt you)</td>
<td>(having a feeling or belief you can succeed at something)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>irritated</strong></th>
<th><strong>sneaky</strong></th>
<th><strong>forgiving</strong></th>
<th><strong>competitive</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(feeling of being annoyed or impatient about something)</td>
<td>(behaving in a secret or dishonest way)</td>
<td>(able or willing to forgive someone or something)</td>
<td>(having a strong desire to win or be the best at something)</td>
</tr>
</tbody>
</table>

**DIRECTIONS: #1-6** Read the sentences from the passage below to determine which character trait is shown and explain your thinking using the sentence frame provided.

**Sentence from the Passage**

Read the passages for clues to help you identify whose character traits are being described.

1. Her skill in the arts of weaving and embroidery was so great that the nymphs would leave their groves & fountains to watch her.

2. Also, through her touch, the goddess transformed Arachne into a miniscule creature.

3. The goddess, Minerva, heard Arachne's request for a challenge and was displeased.

4. Disguised as an old woman, Minerva visited Arachne to give her some advice.

5. I advise you also to ask Minerva's forgiveness because she is merciful, and perhaps she will forgive you if you offer her an honest apology.

6. Arachne threaded her loom intent on letting her talents speak for themselves during the weaving competition.

**Identified Trait & My Reasoning**

Use the following sentence frame:

_________ (Minerva/Arachne) is showing she is ___________ (character trait) because ___________
MORE THAN JUST COFFEE

Seattle-based coffee company, Starbucks, has expanded far beyond their humble starts as a single location in 1971 to become the world’s largest coffeehouse!

**Seattle, 1971**
The history of Starbucks starts in Seattle in 1971 when three friends, Jerry Baldwin, Zev Siegl, and Gordon Bowker (who shared a similar passion for fresh coffee), opened a small storefront. Tucked inside Seattle’s historic Pike Place Market, Starbucks sold fresh-roasted, gourmet coffee beans and brewing gadgets. The Starbucks mission was and has remained focused on two things: to share great coffee and to help make the world a little better.

**The 1980s and Howard Schultz**
In 1981, a salesman who supplied Starbucks with several plastic drips to improve gourmet coffee brewing discovered this shop had great potential to be an extremely successful company. After convincing the Starbucks owners they could benefit from his marketing skills, Schultz was hired on. Soon after, in 1983, Howard traveled to Italy to research their coffee brewing techniques. While there, he fell in love with the exciting coffee culture of Italy ranging from their delicious caffè lattes to the remarkable atmosphere created within Italian cafes. The locals were chatting and enjoying themselves while sipping their coffees amidst the elegant surroundings. This became Howard’s inspiration for the Starbucks makeover!

Upon his return to the United States, Howard was unable to convince the Starbucks founders to rebrand from coffee bean wholesalers into Italian-inspired cafes. Due to this difference in business vision, Howard left Starbucks for a short time to start his own Italian-style coffeehouses and returned in August 1987 with local investors to buy the company for $3.7 million. This was a smart move because Starbucks’ net worth is now over $30 billion!

**Fast-Forward to a Global Success Story**
From the beginning, Starbucks set out to be a different kind of company. One that not only celebrates coffee and the rich tradition, but that also brings a feeling of connection. The Starbucks mission is, “to inspire and nurture the human spirit – one person, one cup, and one neighborhood at a time.” To reduce plastic waste, Starbucks also plans to stop using plastic straws worldwide by 2020. With over 18,000 stores worldwide in 62 countries, Starbucks has achieved a global presence rivaled only by America’s fast food chains. Today, Starbucks holds strong to its title as the premier roaster and retailer of specialty coffee in the world!

**FUN FACTS:**
- Starbucks offers customers a ten cent discount when you give the barista a reusable cup to fill.
- There are over 87,000 ways to customize a Starbucks drink!
COMPREHENSION QUESTIONS: MORE THAN JUST COFFEE

1. What type of store was the original Starbucks?
   a. a place to discover the history of Seattle and its historic Pike Place Market
   b. a place to find a variety of overpriced coffee-basec drinks and tasty snacks
   c. a place to purchase gourmet whole bean coffee and brewing accessories
   d. a place to enjoy the company of friends and Italian-inspired coffee drinks

2. Who were the owners of the original Starbucks Coffee Company?
   a. Howard, Schultz, and local investors
   b. Baldwin, Siegl and Bowker
   c. Gordon, Jerry, and Howard
   d. Stockholders and the Starbucks family

3. Which country famous for coffee became the inspiration for modern-day Starbucks?
   a. Costa Rica
   b. Colombia
   c. Italy
   d. Ireland

4. Which year marked the turning point in ownership of Starbucks?
   a. 1971
   b. 1981
   c. 1983
   d. 1987

5. Which statement best matches the Starbucks company mission?
   a. to promote the spirit of humanity by reconnecting over coffee
   b. to improve the taste of coffee by changing each cup around the world
   c. to increase the likelihood of people choosing coffee over soda
   d. to recreate Italian coffee while offering the convenience of a drive-thru.

GET THE GIST! (Write a complete sentence in response to the prompts.)

<table>
<thead>
<tr>
<th>PROMPT</th>
<th>RESPONSE</th>
<th>EVIDENCE (1#)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explain how Starbucks coffee shop started.</td>
<td></td>
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</tr>
<tr>
<td>Who is Howard Schultz?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explain what Howard discovered on his trip.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How was Howard able to gain ownership of Starbucks?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How was Starbucks different in 1971?</td>
<td>(HINT: think # of stores!)</td>
<td></td>
</tr>
</tbody>
</table>

CHALLENGE! (Write your own question & answer for this week’s text)
**Reading Skill: Chronology**

Good writers organize the events of their story or essay by putting them in an order that makes sense. **Chronology** refers to events put in their correct order. Often times, we use sequence **signal words** like: *First, Next, Then, After, Later, Meanwhile, Finally, and Last.* Good readers sequence the events of a story correctly to improve retell / comprehension!

I love eating peanut butter and jelly sandwiches. For starters, you’ll need to gather your bread, favorite jelly and delicious peanut butter. After taking out two slices of bread, spread the jelly with a butter knife. Repeat this step with the peanut butter on the other slice. Finally join the slices together and enjoy a scrumptious snack!

To sequence the events I’m going to organize the events into a flow map using these signal words. **First,** take out the sandwich-making materials of bread, jelly, peanut butter, and a butter knife. **Next,** spread the jelly and peanut butter onto a slice of bread. **Then,** join the slices together. **Finally,** enjoy a tasty PB&J sandwich!

**DIRECTIONS:** Practice sequencing main events from, *More Than Just Coffee* below.

First, ________  

Next, ________  

Then, ________  

After, ________  

Later, ________  

Finally, ________
THE CHOCOLATE CITY
(HERSHEY, PENNSYLVANIA)

Hershey, Pennsylvania is unofficially America’s chocolate hometown. Here’s why – the Hershey Chocolate Company is based out of this city and it’s all about chocolates and sweets there! Let your nose and eyes do their duty by taking in the sights and smells at the Hershey factory, and soon enough your taste buds will be craving one of the delectable treats produced under the name of Hershey’s Chocolate. Similar to Disneyland in Anaheim, California who prides themselves as “The Happiest Place on Earth,” Hershey has created quite a family-friendly tourist resort calling itself, “The Sweetest Place on Earth.”

The city was built on chocolate, as were the great majority of its attractions. Hershey’s Chocolate World takes sweet teeth on a virtual tour of the Hershey factory, and Hersheypark allows kids and adults to frolic through a vast land of rollercoasters, waterslides, and walking, life-sized chocolate bars. For its female chocolate fans, Hershey even offers a relaxing getaway at the Chocolate Spa where spa visitors can indulge in signature Hershey chocolate treatments including the Cocoa Facial inspired by founders, Milton S. Hershey and his wife, Catherine.

If your family tends to be more outdoor-lovers, than basking in the beauty of nature is an option within the Hershey Resort. Nature lovers will enjoy Hershey Gardens which opened in 1937 with Milton Hershey’s request to “create a nice garden of roses.” However, through the years, the 3 ½ acre rose garden has blossomed into a 23 acre of botanical wonder – home to rare and exotic flowers, shrubs, and trees. In the summer, visitors will also be able to walk amidst 300 fluttering butterflies in the popular outdoor Butterfly House!

For the adventurers and entertainment enthusiasts, Hersheypark is filled with rollercoaster rides for any level of thrill-seeker from the mild kiddie rides to the adrenaline junkie’s favorite high-speed attractions! If water rides are more up your alley, then Hersheypark provides over sixteen hydro-infused choices. Tidal Force is the name of Hersheypark’s water coaster answer to Disneyland’s famous “Splash Mountain.”

Let’s not forget the reason most tourists flock to Hershey, PA – it’s taking a tour at the decadent chocolate factory! While there, take advantage of the Chocolate Lab experience which allows visitors a 45-minute hands-on class in candy making to try out some of the perfected chocolate techniques of Mr. Milton Hershey himself. Another exciting feature of the Chocolate World factory tour is seeing chocolate bars transform from its raw source, the cacao bean, right before your eyes.

Either way, be sure to plan for a trip filled with limitless and boundless chocolate fun! After all, this is the home to Hershey’s Chocolate bars, Kit-Kat bars, and Reese’s Peanut Butter cups!
COMPREHENSION QUESTIONS: THE CHOCOLATE CITY

1. Which genre best describes the passage, The Chocolate City?
   a. myth
   b. persuasive
   c. traditional literature
   d. folktale

2. Which well-known American theme park is Hersheypark compared to?
   a. SeaWorld
   b. ChocolateWorld
   c. Universal Studios
   d. Disneyland

3. What does hydro mean in the following sentence? If water rides are more up your alley, then Hershey park provides over sixteen hydro-infused choices.
   a. fire
   b. water
   c. chocolate

4. Which slogan has Hershey branded to refer to its attractions and resort?
   a. The Happiest Place on Earth
   b. The Sweatest Place on Earth
   c. The Sweetest Place on Earth

5. Which type of tourist frequently visits the attractions of Hershey, Pennsylvania?
   a. Those who are pinching their pennies
   b. Those who possess a sweet tooth
   c. Those who enjoy to paint the town red
   d. Those who live vicariously through others

GET THE GIST! (Write a complete sentence in response to the prompts.)

<table>
<thead>
<tr>
<th>PROMPT</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who founded Hershey Chocolates?</td>
<td></td>
</tr>
<tr>
<td>What makes Hershey, PA unique?</td>
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</tr>
<tr>
<td>Explain how visitors can relax while in Hershey.</td>
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</tr>
<tr>
<td>Describe what you would do on a visit to Hershey.</td>
<td></td>
</tr>
<tr>
<td>Where would Hershey nature lovers escape to?</td>
<td></td>
</tr>
</tbody>
</table>

CHALLENGE! (Write your own question & answer for this week’s text)
**Reading Skill: Compare & Contrast**

Good readers use the comprehension skill of “compare and contrast” to help them determine similarities and differences about a text. To compare means to find what’s the same: the similarities. Meanwhile, to contrast means to find what’s different: the differences.

**What is Disneyland?**
- Opened July 17, 1955 in Anaheim California.
- Founded by Walt Disney
- Disneyland is home to more than 40 rides & attractions
- Famous for Galaxy’s Edge, Splash Mountain, the Mad Hatter Teacups, the Pirates of the Caribbean and much more!
- Tourists are able to meet Mickey & Minnie Mouse among other life-sized Disney and Star Wars characters!
- Disneyland has well-defined itself as “The Happiest Place on Earth”

Read the fact-box on Disneyland. Then, complete a Venn diagram to compare & contrast the entertainment parks of DISNEYLAND with HERSHEY PARK. Remember, similarities are placed on the inner-most part of the circles. Include at least 10 different similarities & differences below!

**TEACH YOUR CLASSMATES:**
Write another Fascinating Fact about Disneyland
MERRY AVALANCHE!

In the middle of the night, an enormous avalanche covered our house under twenty feet of snow. Talk about an instant igloo! Too afraid to open a door or window, my little brother, Nico and I turned to our iPhones for answers.

While I dialed 9-1-1, Nico started asking Siri for any late breaking developments. “No dial tone, I seriously have the worst luck ever!” I sighed. My seven-year-old brother, on the other hand, seemed to have easily pinpointed the cause to this crazy snowfall.

Three minutes before 7:00 p.m. on Christmas Eve, the Penguins of Madagascar torpedoed their World War II jet into the mountain peak covered in snow. Of course, this mountain is the exact mountain that our house is built on in Lubbock, Texas! Needless to say, the penguins shook all the snow off the peak and showered anything that lived below.

Fortunately, it seemed that Gloria (the Madagascar hippo) was already outside blasting the snow away with her Melt-Snow-Away green laser beam! “According to her live video on Instagram TV,” Nico reported, “she was melting the white blanket surrounding our neighborhood!” “Phew, what a relief!” I responded.

Soon, a smirk grew into a beaming smile on my face. Luckily, I thought, we won’t be trapped inside for days. In fact, we can hold our annual Christmas Day snowball fight at the crack of dawn, without delay. This year, why not target the pesky penguins first? Have a Merry Madagascar Christmas!

NARRATOR
the person who tells what happens in the story
The narrator can be told in:

<table>
<thead>
<tr>
<th>First-person</th>
<th>Second-person</th>
<th>Third-person</th>
</tr>
</thead>
<tbody>
<tr>
<td>(someone who was there firsthand to live the story)</td>
<td>(told in the “your” point of view – Choose Your Own Adventure) Frequent Pronouns: I, me, my, we, us, our</td>
<td>(someone tells the story from an outsider’s view) Frequent Pronouns: it, he, she, they, him, her, their</td>
</tr>
</tbody>
</table>
COMPREHENSION QUESTIONS: MERRY AVALANCHE!

1. Why wasn’t the narrator able to reach a 9-1-1 operator?
   a. Nico solved the problem first.
   b. It was Christmas Eve.
   c. Thoro was no dial tone on the telephone line.
   d. The penguins disabled any cell phone service.

2. According to the text, which detail best supports the idea, “Christmas wasn’t ruined?”
   a. In the middle of the night, an enormous avalanche covered our house under twenty feet of snow.
   b. “No dial tone, I seriously have the worst luck ever!” I sighed.
   c. Fortunately, Gloria was already outside blasting the snow away.

3. How did the penguins cause the conflict (or problem) in the story?
   a. They launched a rocket toward the mountain top.
   b. They crash-landed a World War II jet into the mountain top.
   c. They parachuted down from the sky but forgot to give Gloria a parachute.
   d. They gave Gloria a reason to clean up their mess.

4. Who was the first to determine what happened to the house?
   a. the narrator
   b. The narrator’s little brother, Nico
   c. The penguins

5. Which clues signal that this reading passage is NOT a poem?
   a. The text is written in sentences. These sentences are grouped into paragraphs.
   b. The text is written in lines. These lines are grouped into stanzas.
   c. The text is written as a script with lines of dialogue for each character.
   d. The text is written from a first-person narrator’s point of view.

GET THE GIST! (Write a complete sentence in response to the prompts.)

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<tr>
<th>PROMPT</th>
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</thead>
<tbody>
<tr>
<td>Explain what made the avalanche happen.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describe the setting (where &amp; when) of this story.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why did the narrator have hope to smile?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How did Nico figure out they had help?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why might teamwork be a lesson to learn from this story?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHALLENGE! (Write your own question & answer for this week’s text)
Reading Skill: Point of View

Writers use a unique point of view to tell a story. The narrator (the person or character telling the story) can use a first-person, second-person or third-person point of view. Look back at this week’s reading passage and read the chart on the bottom of the page for a quick overview.

DIRECTIONS: #1-5 Read the sentences below to determine which point of view the story’s narrator chose to use. Then, circle the key words that helped you find your answer.

1. Did you know there was an avalanche in Lubbock, Texas?

2. My parents beat my brother and I during our Christmas Day snowball fight!

3. The Garcia’s family home was buried under snow. It took Gloria until sunrise to melt away the avalanche! They were very thankful.

4. She had really wanted to find the penguins to give them a taste of their own medicine! Sadly, they vanished before Marisela could find them.

5. We were surprised the snow didn’t collapse the roof to our house.

YOUR TURN: Write in Each Point of View

Pick a topic you can describe using each point of view. Then write it below.

1st Person Narration

2nd Person Narration

3rd Person Narration
THE WACKY & WILD WORLD OF FROGS

**Survival of the Froggy-Fittest!**

Did you know that frogs survived the catastrophic extinction of the dinosaurs? But strangely, the world's frogs and toads have suddenly begun to disappear. Some species that were common 25 years ago are now rare or extinct. And individual frogs are showing up with deformities such as too many legs. Scientists are not sure exactly what is going on.

**Double Life Divas**

Frogs are amphibians, which means "double life," they spend half their life in water, and the other half on land. They generally hatch in water as tadpoles and end up living on land as fully formed frogs. A frog's skin must stay moist, so they're usually found in wet places.

**Fancy Frog Calls!**

Frogs bark, croak, cluck, click, grunt, snore, squawk, chirp, whistle, trill, and yap. Some are named for the noise they make. A chorus of barking tree frogs sounds like a pack of hounds on a hunt. The carpenter frog sounds like two carpenters hammering nails, and the pig frog grunts like — you guessed it — Porky's cousin! Red-eyed tree frogs will inflate their throat pouches with air to make their mating calls even louder!

**Frog Facts**

- Frogs are carnivorous — they eat almost anything that moves and can fit into their mouths, including insects, worms, slugs, snails, small mammals, and even other frogs.
- When frogs swallow their food, their eyeballs close and go into their heads. The eyeballs help with digestion by applying pressure and pushing food down the throat.
- The unusual gastric brooding frog of Australia is now probably extinct. But check this out: Mother frogs would swallow their eggs, and the young hatched in their stomachs. About six weeks later — burp! — up and out came fully formed froglets!
- Frogs can be different colors — green, brown, red, yellow, orange, and even blue.

**Frogs vs. Toads**

Toads are actually a subgroup of the frog family. So scientifically speaking, all toads are frogs — but not all frogs are toads. Basically, you'll need to remember their differences in skin texture, movement, and habitats. Toads usually live in damp places and have dry and bumpy skin. Meanwhile, frogs live in or near water, and have smooth moist skin. Toads have short hind legs and move by short hops. Instead, frogs have long, strong hind legs, and travel by long leaps. Ever played the game of LeapFrog? It's carefully named because frogs are the leaping amphibians of legend!
**Comprehension Questions: Wacky & Wild World of Frogs**

1. How is this informational article on frogs organized?
   a. enumeration (a complete list with bullet points)
   b. chronology (a definite order using sequential words like First, Next, and Then)
   c. the text feature of headings (each section is logically grouped)
   d. question and answer (each section begins with a question to be answered soon after)

2. A frog is able to make all of the following sounds except for c:
   a. chirp
   b. whistle
   c. croak
   d. drill

3. According to scientists, how long have frogs existed on Earth?
   a. They predict that they have lived for as long as cockroaches.
   b. They have survived since the time of the dinosaurs.
   c. Scientists predict they have been around for 3,000 years.
   d. Scientists believe they have been around for the past 25 years.

4. After comparing and contrasting frogs and toads, what do they have in common?
   a. They both leap to move around from place to place.
   b. They both belong to the animal group of amphibians.
   c. Both frogs and toads have dry and bumpy skin
   d. Both frogs and toads have smooth and moist skin.

5. What is the correct chronology or sequence of a typical frog’s life cycle?
   a. First a tadpole will hatch from an egg, and then the tadpole will live on land.
   b. First a frog will hatch from an egg, and then the tadpole will live underwater.
   c. First a tadpole will hatch from an egg, and then as a frog, it will live on land.
   d. First a frog will hatch from an egg on land, and then as a tadpole, it lives underwater.

---

**Get the Gist!**  (Write a complete sentence in response to the prompts.)

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>What makes frogs an unusual species?</td>
<td></td>
</tr>
<tr>
<td>Describe how frogs drink and breathe.</td>
<td></td>
</tr>
<tr>
<td>Why are frogs said to live a “double life”?</td>
<td></td>
</tr>
<tr>
<td>Explain how gastric brooding frogs hatched.</td>
<td></td>
</tr>
<tr>
<td>How are toads different than frogs?</td>
<td></td>
</tr>
</tbody>
</table>

**Challenge!**  (Write your own question & answer for this week’s text)
Reading Skill: Drawing Inferences

Because authors do not directly tell the reader everything, it is important for good readers to use clues from the text and what your brain already knows about a subject to draw inferences. Drawing inferences as you read will improve your comprehension tremendously, and this makes reading extremely more enjoyable!

Guess My Identity RIDDLE:
My skin is dry and bumpy.
Many people confuse me as a frog,
but I can’t leap I have short hind legs
so all I do is hop!

What animal species will answer the riddle above correctly?
The clues from the text are “dry and bumpy skin, can be confused for a frog, and it hops” and I know from prior knowledge that the name of the animal similar to a frog is a TOAD.

Directions: Use the clues in the speech bubbles to match each frog to its species name. Fill in the correct letters below.

1. Squirrel
2. Bronze
3. Poison Dart
4. Panamanian Golden
5. Macaya Burrowing
6. Red-Eyed (tree frog)
7. Goliath
8. Tomato

A. Oh no, I’m seeing RED again!
B. When it comes to size, I am a GIANT FROG!
C. Don’t upset me or I might dart my poison your way!
D. Coming in 3rd place still wins a champion’s medal!
E. Always order my pizza with extra tomatoes!
F. “Squirrel!” Did that animal just ribbit? “Squirrel!”
G. In my free time, I love digging tunnels underground.
H. Just like Cleopatra, I adore the look of shimmering gold!
Minerals

S6E5. Obtain, evaluate, and communicate information to show how Earth’s surface is formed. b. Plan and carry out an investigation of the characteristics of minerals and how minerals contribute to rock composition.

Minerals are naturally occurring, inorganic, solid, with a crystalline structure and definite composition.

We use minerals every day

Examples: usage of cars (iron, steel, and aluminum) in our homes by using electricity to power lights, stove, refrigerators, and other electronics like computers, and phones. (Minerals like copper wiring, lead and lithium make all of that possible) We also use minerals for fashion. What are some common minerals we were daily? (Gold, silver, platinum, diamonds, emeralds, etc.)

To be considered a mineral a substance has to meet 5 specific characteristics. (Refer to the definition)

1. Natural
2. Inorganic
3. Crystalline structure
4. Definite chemical composition
5. Solid

Now I Can Define minerals (acronym)

1. Natural – name some things that occur naturally? (water, rocks, trees, plants)
2. Inorganic things – metals, (gold and silver) salt
   (Even though plants are natural they are organic meaning they are alive are was alive at some point)
3. Crystalline - crystalline structure means that atoms are arranged within the mineral in a specific ordered manner. When magma cools fast it makes larger crystals. When it cools slowly it makes smaller crystals
4. Definite chemical composition - every time we see a mineral it has the same chemical composition that can be expressed by a chemical formula. No two minerals are alike.
   Example: Halite (table salt) chemical formula is NaCl (sodium, chlorine)
5. Solid - molecules are tightly packed in a solid. (compared to liquid and gases)

Physical properties of minerals.

We identify minerals by their physical properties.

1. Color- not a reliable way to identify minerals.
2. Streak- the color of the powder left on a porcelain tile when you rub a mineral across it.
3. Mohs hardness scale is a list of minerals used to list the hardness of minerals from soft to hardest. It helps us to categorize or eliminate them when we are trying to identify minerals. (talc ---diamond)
4. Cleavage- is used to help identify minerals that split and have a smooth plane.
5. Fracture- minerals break in irregular patterns and have jagged edges.
6. Luster- how the mineral reflects light. Metallic is shiny and nonmetallic is dull.
7. Special properties- fluorescence (glows under a black light), some minerals have magnetic properties, some have a certain taste and some generate electricity under pressure.
8. Tests- you can test minerals by using the Mohs hardness scale, streak, and acid.
S6E5. Obtain, evaluate, and communicate information to show how Earth’s surface is formed. c. Construct an explanation of how to classify rocks by their formation and how rocks change through geologic processes in the rock cycle

Rocks notes

Studying rocks can give us evidence of changes that have taken place on Earth.

Like an area changing from a desert to swamp to a sea.

Why are we able to understand the past by studying rocks? Different rocks form under only certain conditions.

Rocks can tell us if it was a lake, volcano, are mountain ranges in an area or was it hot or cold when the rock was formed?

Igneous Rock

Forms when magma cools or lava cools

- Cools quickly above ground.
- Cools slowly below the ground.
- Melted rock below the surface is magma, above the ground melted rock is called lava.
- Magma inside the crust. (intrusive cools slowly on the inside with larger crystals or holes)
- Lava on the outside of the crust. (extrusive cools quickly on the outside with smaller crystals or holes)
- Examples: granite, obsidian, pumice

Sedimentary rock

- Forms when sediment (rocks, fossils, or organic material) are pressed (compacted) and stick (cemented) together over millions of years.
- Examples: limestone, shale, coal, and chalk

Metamorphic rock

- Forms deep within the earth by heat and pressure.
- Metamorphic rocks are classified as foliated and nonfoliated
- Foliated rocks- have stripes caused by pressures on rocks.
- Nonfoliated – has no stripes because the rocks were formed in areas where the pressure was equal on all sides.
- Examples: marble, slate, and gneiss
What is a mineral?

A mineral is:

- Naturally formed - it forms in nature on its own (some say without the aid of humans)
- Solid (it cannot be a liquid or a gas)
- With a definite chemical composition (every time we see the same mineral it has the same chemical composition that can be expressed by a chemical formula).
- Has a characteristic crystalline structure (atoms are arranged within the mineral in a specific ordered manner).
- Is inorganic, although a mineral can be formed by an organic process.

A mineraloid is a substance that satisfies some, but not all of the parts of the definition. For example, opal, does not have a characteristic crystalline structure, so it is considered a mineraloid.

(Note: The "minerals" as used in the nutritional sense are not minerals as defined geologically.)

Wait, I'm confused! Look at it this way:

- Glass - can be naturally formed (volcanic glass called obsidian), is a solid, its chemical composition, however, is not always the same, and it does not have a crystalline structure. **Glass is not a mineral.**
- Ice - is naturally formed, is solid, does have a definite chemical composition that can be expressed by the formula H$2$O, and does have a definite crystalline structure when solid. **Ice is a mineral, but liquid water is not (since it is not solid).**
- Halite (salt) - is naturally formed, is solid, does have a definite chemical composition that can be expressed by the formula NaCl, and does have a definite crystalline structure. **Halite is a mineral.**

Properties of Minerals

Physical properties of minerals allow us to distinguish between minerals and thus identify them, as you will learn in lab. Among the common properties used are:

- **Habit** - shape
- **Color**
- **Streak** (color of fine powder of the mineral)
- **Luster** -- metallic, vitreous, pearly, resinous (reflection of light)
- **Cleavage** (planes along which the mineral breaks easily)
- **Density** (mass/volume)
- **Hardness**: based on Moh's hardness scale as follows:

  1. Talc
  2. gypsum (fingernail)
  3. calcite (penny)
  4. fluorite
  5. apatite (knife blade)
  6. Orthoclase (glass)
  7. quartz
  8. topaz
  9. corundum
  10. Diamond

Formation of Minerals

Minerals are formed in nature by a variety of processes such as:

- Crystallization from melt (igneous rocks)
- Precipitation from water (chemical sedimentary rocks, hydrothermal ore deposits)
- Biological activity (biochemical sedimentary rocks)
- Change to more stable state - (the processes of weathering and metamorphism)
- Precipitation from vapor (not common, but sometimes does occur around volcanic vents)
Rock Worksheet

Directions: Read the information below carefully and answer the questions that follow on the back side of this paper. Answer the questions as completely as possible.

Rocks and Minerals
The ground we walk on, build on, and grow gardens on is made of rock. All the rocks in the world are made up of chemicals called minerals. Minerals are solid, inorganic (not living) substances found in and on the earth. Most are chemical compounds, which means that they are made of two or more elements. For example, the mineral sapphire is made up of aluminum and oxygen. A few minerals such as gold, silver, and copper are made up of a single element. Minerals are considered to be the building blocks of rocks. Rocks can be a combination of as many as six types of minerals. Through a microscope, a rock shows that it is made of crystals of different minerals, all growing together like a puzzle.

Three types of rocks make up the Earth’s crust. Rocks are formed in three different ways to produce igneous, metamorphic, and sedimentary rocks. Igneous rocks form when molten magma cools and solidifies. Metamorphic rocks form when a rock is chemically changed by heat or pressure to form a new rock type. Sedimentary rocks form when fragments of rocks and other debris are cemented together.

Igneous Rocks
When a candle burns, a runny wax is formed that trickles down its side and solidifies. Igneous rocks are formed in a similar way. The rocks solidify from a mass of molten rock, such as when a lava flow cools and hardens. Because of the heat needed to form igneous rocks, they are sometimes called “rocks of fire.” There are two main types of igneous rock: extrusive and intrusive. Extrusive types form when molten rock comes to the surface and cools quickly, as with lava. This produces a very fine-grained rock. Intrusive rocks are those that solidified underground, cooling slowly to produce coarse-grained rocks. Examples: Granite, basalt, obsidian.

Sedimentary Rocks
Sedimentary rocks are formed when sediment (bits of rock plus materials such as shells and sand) get packed together. They can take millions of years to form. You never know what you might find in a sedimentary rock since many rocks of this type are made up of lots of other rocks, or even animal remains, all stuck together. Sedimentary rocks are built up of particles laid down as layers or beds of sediment and are later buried, compressed, and cemented into a solid mass. Most rocks that you see on the ground are sedimentary. Examples: Sandstone, shale, limestone.

Metamorphic Rocks
Metamorphic rocks are igneous or sedimentary rocks that have been transformed by heat, pressure, or both. Metamorphic rocks are usually formed deep within the Earth, during a process such as mountain building. When you bake bread, you mix flour, yeast, and water together and bake in a hot oven. In a similar way, heat and pressure from the overlying rocks, may change the nature of the rocks below. This process is called metamorphism, which means “change.” Examples: Schist, slate, marble.

Did You Know?
Most of the ocean floor is made of basalt. This igneous rock continues to flow from the Earth through underwater mountain ranges known as “mid-ocean ridges”?
Questions Please write your answers in complete sentences.

1. What is the difference between rocks and minerals?

2. How many types of rocks make up the Earth's crust?

3. What are the names of the 3 types of rocks?

4. How are igneous rocks formed?

5. What is another name for igneous rocks?

6. What is the difference between two types of igneous rocks?

7. How are sedimentary rocks made?

8. How are metamorphic rocks made?

9. What does the word "metamorphism" mean?

10. Which two layers of the Earth are made of rock?

11. What are the names of the other two layers of the Earth, and what are they made of?

12. Write the following layers of the Earth in order from most dense to least dense: atmosphere, crust, inner core, mantle, outer core, water.
Rock Cycle Diagram

The Rock Cycle diagram below is an easy-to-read model of how rocks can change over time.

Directions: Use the diagram above to answer the questions below.

1. What are the three classes of rocks?

2. Follow the arrow from sedimentary rock to metamorphic rock. What process is necessary to change a sedimentary rock to a metamorphic rock
3. Follow the arrow from sediments to sedimentary rock. How do sediments become sedimentary rock?

4. How is magma formed?

5. How does magma become igneous rock?

6. How does igneous rock become metamorphic rock?

7. How does a metamorphic rock become an igneous rock?

8. How are sediments formed?

9. Which process cannot happen?
   a. Igneous rock → heat and or pressure → metamorphic rock
   b. Igneous rock → weathering and erosion → burial → deposition → cementation → sedimentary rock
   c. Metamorphic rock → melting → solidification → igneous rock
   d. Sedimentary rock → melting → solidification → metamorphic rock

10. Can an igneous rock become another igneous rock? If so, how?

11. A sedimentary rock can become an igneous rock by melting and solidification. According to the diagram, what's one other, more indirect, way a sedimentary rock become an igneous rock?

12. According to the Rock Cycle diagram, how long does it take for an igneous rock to become a metamorphic rock?
Review What are the four main characteristics of a mineral:

(a) 
(b) 
(c) 
(d) 

<table>
<thead>
<tr>
<th>Substance</th>
<th>Mineral</th>
<th>Why or why not?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. water</td>
<td>NO</td>
<td>is not a solid</td>
</tr>
<tr>
<td>2. plastic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. diamond</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. steam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. gold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. sugar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. oxygen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. silver</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. iron</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. wood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. copper</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
IDENTIFYING UNKNOWN MINERALS

Minerals can be identified by carefully observing their physical characteristics. These characteristics include:

Color: this depends on the substance that makes up the crystals and varies greatly.
Hardness: depends on the substance and can be determined using a scratch test.
Luster: this refers to how light reflects off the mineral, how "shiny" it is.

Use the information about color, hardness, and luster given in the three tables below to provide the name of the unknown mineral in the table at the bottom of the page.

<table>
<thead>
<tr>
<th>Hardness</th>
<th>Mineral</th>
<th>Common Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Talc</td>
<td>Fingernail will scratch it.</td>
</tr>
<tr>
<td>2</td>
<td>Gypsum/Kaolinite</td>
<td>A copper penny will scratch it.</td>
</tr>
<tr>
<td>3</td>
<td>Mica/Calcite</td>
<td>Knife blade or window glass will scratch it.</td>
</tr>
<tr>
<td>4</td>
<td>Fluorite</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Apatite/Hornblende</td>
<td>Will scratch a steel knife or window glass.</td>
</tr>
<tr>
<td>6</td>
<td>Feldspar</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Quartz</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Topaz</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Corundum</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Diamond</td>
<td>Will scratch all common materials</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Color</th>
<th>Mineral</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Quartz, Feldspar, Calcite, Kaolinite, Talc</td>
</tr>
<tr>
<td>Yellow</td>
<td>Quartz, Kaolinite</td>
</tr>
<tr>
<td>Black</td>
<td>Hornblende, Mica</td>
</tr>
<tr>
<td>Gray</td>
<td>Feldspar, Gypsum</td>
</tr>
<tr>
<td>Colorless</td>
<td>Quartz, Calcite, Gypsum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Luster</th>
<th>Mineral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glassy</td>
<td>Quartz, Feldspar, Hornblende</td>
</tr>
<tr>
<td>Pearly</td>
<td>Mica, Gypsum, Talc</td>
</tr>
<tr>
<td>Dull</td>
<td>Kaolinite</td>
</tr>
</tbody>
</table>

Unknown minerals' properties
Weathering, erosion, and deposition occur to form every sedimentary rock that exists on Earth. **Weathering** is the creation of sediments, through exposure to wind or water tearing off pieces, or through ice or biological activity (such as tree roots and animal hooves) breaking at rock. **Erosion** is the transportation of these sediments from origin to deposition, through wind, water, or glacial ice. **Deposition** is the process of these sediments being dropped off by their mode of movement, or erosion method (by glacial ice, wind, or water). Each of these terms are discussed and shown in detail below, with questions beyond!

**Weathering** is the breaking down of rock into sediments. Rivers can form canyons by breaking down rock. Pieces of rocks, or sediments, can be created in a wide variety of ways. Water and wind can both create sediments by flowing past rock and break off sediments through friction. Ice and biological action - such as tree roots or animal hooves - can create sediments by physically breaking rocks apart: roots can grow into smaller cracks and then widen, forcing cracks to grow with them! Water, wind, ice, and biologic action are all called physical weathering because they physically break the rock. Hot water can cause weathering as well: it can dissolve minerals in the rock, such as Halite or Calcite, much like your coffee or tea dissolve the sugar you dropped in. This is called chemical weathering. Rocks that have been chemically weathered are often rounded or pitted.

![Chemical weathering of a statue](Image-chemistry.png)
Erosion is the transportation of sediments, and, like weathering, can occur in a variety of ways. Wind can carry sand and dust for hundreds, even thousands, of miles! Sandstorms in the Sahara Desert and those of the American breadbasket in the 1930s are perfect examples. Water can also carry sediments: the bathwater in your shower carries dirt, grime, and soap to the drain much like rivers carry sediments from the mountains to the sea. As water slows down, either at the bottom of mountains or as it enters a lake or ocean, it loses its ability to carry larger and heavier sediments, such as boulders. Smaller sediments, like dust and sand, can be carried for some distance! Erosion of sediments can create deep canyons, such as the Grand Canyon.

Deposition occurs because whatever is carrying sediments cannot continue to hold on to them. Wind and water can slow, then lose the ability to transport larger sediments, which need plenty of energy to be held. When wind and water stop moving completely, they cannot carry any sediments at all, and drop the last of what they are carrying! Water slows down at shallower slopes, such as the bottom of mountains. Wind slow down as it encounters taller objects - mountains or buildings. Glaciers drop sediments as the ice melts. From these sediments, layers of sedimentary rocks will form after being compacted! Locations like beaches exist because sand has been deposited there!

Deposition is the dropping off of sediments in a new place. When sediments are deposited at the end of a river, it can form a delta.
Weathering, Erosion, and Deposition Review

1. Define "weathering".

2. Define "erosion".

3. Define "deposition".

4. What are some ways to cause mechanical weathering?

5. What is some biological activity that can cause weathering?

6. What is the difference between chemical and mechanical weathering?

7. What are some agents of erosion (i.e. what can carry sediments?)?

8. Why do heavier sediments get deposited before smaller sediments?

9. What structure do sediments form at the end of a river?

10. What form of rock - igneous, metamorphic, or sedimentary - forms from sediments?

11. What causes wind or water to deposit all their sediments?

Tell if these following images are chemical weathering, physical weathering, erosion, or deposition:

12.

13.

14.

15.
Vocabulary Matching

1. Chemical
2. Delta
3. Sedimentary
4. Erosion
5. Glacier
6. Mechanical
7. Sandstorm
8. Sediment
9. Deposition
10. Ice
11. River

Weathering, Erosion, and Deposition Word Search

a. Weathering in which rocks and minerals are dissolved
b. Frozen water that makes up glaciers
c. Weathering in which rocks are physically broken into pieces
d. A sediment-laden windstorm that occurs in the desert
e. The process of moving or transporting sediments
f. Flow of water that goes from higher to lower land
g. The process of agents of erosion dropping sediments
h. Rock that forms from sediments
i. Pieces of rocks
j. A shape caused by water slowing and depositing sediments
k. Ice that can carry sediments

CHEMICAL  SANDSTORM
DELTA
SEDIMENTARY
EROSION
GLACIER
MECHANICAL
SEDIMENTS
DEPOSITION
ICE
RIVER
SEA
OCEAN
IGNEOUS
METAMORPHIC
ROCK