

2020

Erie Rise Leadership
Academy Charter School

Parent Lesson Plan

[PARENT LESSON PLAN]

8th Grade, Week of 4/20

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INTRODUCTION

Hello Parents!

Included in this packet is a week's worth of printed ELA, Mathematics, and Science/Social Studies work for your students while they are at home. Each day is separated into the 3 content areas for the printed material. If you have access to the digital curriculum, a pacing guide is also provided outlining the digital component assigned for each specific day. If you need technology, please contact the school and we can make it available to you. Also remember, USATestPrep is always an option!

We know some of this material maybe be challenging, but try your best to complete it! Hopefully we will see you back in the classroom soon and will be able to go over all the information.

Printed materials may be turned into to the distribution centers once completed, but it is not a requirement.

Mrs. Will will be available on Youtube Live every day from 10AM-11AM to assist with curriculum questions and/or any resource questions for parents or students.

Stay safe and healthy everyone!

Missing seeing everyone's smiling face! Remember to wash your hands!

Educationally Yours ,
Mrs. Veronica Will

HELPFUL INFORMATION

Distribution Sites/Information

Food/Curriculum distribution will take place at:

Erie Rise Leadership Academy Charter School
1006 West 10th Street
Erie, PA 16502

Tuesday and Friday from 10AM-12PM

Leadership Team

Mr. Aubrey Favors, Interim CEO, HR: 814 812-3026

Mrs. Veronica Will, Principal: 814 873-5158

Mr. Kirk Paskell, Transportation: 814 566-0002

Mr. Homer Smith, PR: 814 392-3413

Mrs. Pearl Jeffries, Social Services: 814 722-5056

DIGITAL LESSON PACING GUIDE

ConnectED Instructions

Please see attached instructions for accessing the digital curriculum.

USATestPrep Instructions

Please see attached instructions for accessing this test-prep site.

If you have access to high speed internet, below are the assignments the teachers have assigned for the various content areas:

Digital Pacing Guide

	Monday	Tuesday	Wednesday	Thursday	Friday
ELA/ Writing 8th grade	Connect Ed. Assignment: Re-Read 1- Tom Sawyer and activities	Connect Ed. Assignment: Re-Read 2- Tom Sawyer and activities	Connect Ed. Assignment: Watch- Tom Sawyer and activities	Connect Ed. Assignment: Skill- Point of View and activities	Connect Ed. Assignment: Skill- Referring Words and activities
Math	USA Test Prep	USA Test Prep	USA Test Prep	USA Test Prep	USA Test Prep
Science	Complete USA Test Experimentation Class Dojo	Complete USA Test Simple Machines Class Dojo	Complete USA Test I HAVE A QUESTION! Class Dojo	Complete USA Test Properties of Minerals and Rocks Class Dojo	Complete USA Test Circuit Diagram Class Dojo
Social Studies	Connect Ed- "Monday April 20 th "	Khan Academy- Ancient Persia	Khan Academy- The Election of 1800	Khan Academy- Jefferson's Presidency and the Turn of the Nineteenth Century	Khan Academy- The Louisiana Purchase and its Exploration

ELA PRINT MATERIAL

ELA- Mrs. Norgard

Monday- Compare and Contrast Different Points of View Pages 19-21

Tuesday- Compare and Contrast Stories Pages 22-25

Wednesday- Explain and Support Inferences Pages 26-27

Thursday- Determine the Theme and Summarize Text Pages 28-30

Friday- Writing Prompt: Use any lined paper you have.

During this time of being away from your peers and teachers, what have you missed the most and why?

MATH PRINT MATERIALS

GRAYSON-WAYNE

Math

3 Printed Material - USATest Prep worksheets

- 3 worksheets
-

Chapter 6 Packets

- 1-2 lessons per day
-

Coach PSSA Packets on Probability and Statistics

- 1-2 lessons per day
-

8148449220 Texts only please

Daily Class Dojo Check-Ins

- please provide contact information if you haven't already.
-

*****Please complete atleast 2 lessons per day and work on USATest Prep daily. Contact me for questions**

SCIENCE/SOCIAL STUDIES PRINT MATERIAL

Social Studies-Alimahmoodi:

Chapter 32: New Challenges

Day 1 (Monday 4/20)

1. Read Chapter 32 Lesson 3
2. Answer the review questions at the end of the lesson

Day 2 (Tuesday 4/21)

1. Chapter 32 Lesson 3 Guided Reading
 - a. Use yesterday's reading to help you answer the questions
2. Chapter 32 Lesson 3: Primary Source Activity "Twenty First Century Challenges *Globalization*"

Day 3 (Wednesday 4/22)

1. Chapter 32 Lesson 3 Study Guide
2. Chapter 32 Lesson 3 Quiz
 - a. Use all previous material from this lesson to help you

Day 4 (Thursday 4/23)

1. Complete Chapter 32 Vocabulary Builder Worksheet

Day 5 (Friday 4/24)

1. Read and highlight the Chapter 32 Summary
-

Directions-Read and Understand the Lesson and the Vocabulary.

Finish the homework by answering the questions at the end of the page.

Use <https://www.khanacademy.org/> for the packets.

5 Printed Worksheets from USATest Prep

Finish the previous work.

Monday-What is a Fair Test?

Tuesday-Solution Design

Wednesday-Inverse Operations

Thursday-Edible Soil Profile

Friday-Fungi Responses

Daily Class Dojo Check Ins

ADDITIONAL RESOURCES (EDUCATIONAL)

Included are a list of hand selected resources for students with internet to use at home.

Lesson Quiz 32-3

New Challenges

DIRECTIONS: Matching Match each item with the correct statement below.

- | | |
|---|------------------------------|
| _____ 1. large ocean waves caused by earthquakes | A. acid rain |
| _____ 2. needed to control illegal immigration | B. border enforcement |
| _____ 3. transfer of work to other countries | C. EPA |
| _____ 4. makes rules about environmental issues | D. outsourcing |
| _____ 5. contains high amounts of chemical pollutants | E. tsunamis |

DIRECTIONS: Multiple Choice Indicate the answer choice that best answers the question.

- _____ 6. What event fueled protests by Black Lives Matter?
- A.** the shooting of Michael Brown in Ferguson, Missouri
 - B.** the Arizona law cracking down on illegal immigration
 - C.** the killing of nine people at a Charleston Bible Study
 - D.** a mass shooting in San Bernardino, California
- _____ 7. What helped the global economy grow in the 2000s?
- A.** a cultural revolution
 - B.** a financial revolution
 - C.** a technology revolution
 - D.** a trade revolution
- _____ 8. A trade deficit occurs when a country does which of the following?
- A.** earns more from exports than imports
 - B.** engages in free trade
 - C.** imports more than it earns from exports
 - D.** engages in globalization
- _____ 9. In 2010 which event had a major impact on fish and wildlife in the Gulf of Mexico?
- A.** earthquake
 - B.** hurricane
 - C.** oil leak
 - D.** tsunami
- _____ 10. Which location was rocked in 2011 by a major earthquake?
- A.** Japan
 - B.** Mexico
 - C.** New Orleans
 - D.** Gulf of Mexico

Primary Source Activity

The logo for 'networks' features the word 'networks' in a bold, lowercase sans-serif font. A stylized graphic of a network or starburst pattern is positioned behind the letter 'o' in 'works'.

New Challenges

Lesson 3 *Twenty-First Century Challenges*

Globalization

Globalization has linked the world in new ways, but it has also brought about economic and cultural shifts. As businesses expand into new markets, they bring with them new products that were not available before. We can see the results of globalization in places that were once isolated and now have cell phone service. In addition, globalization often brings jobs to people in poor countries, helping to raise their standard of living.

On the other hand, our interconnected world means that crisis has a much longer reach. For example, as the American economy slowed in 2008, polls in 15 of 23 countries showed increased concern, compared to polls taken in 2007. In addition, some people object to the transfer of jobs, the use or misuse of natural resources, and even the loss of a country's culture that globalization can bring.

Directions: Read the following opinions about globalization and its effects.

Reading 1 *From an economic report for the Dallas Federal Reserve*

"American consumers will get better goods and services and lower prices. . . .

Trade leads to prosperity. Just look at the past six decades of relatively open trade. Protectionism [a policy focused on protecting a nation's own economic interests] leads to stagnation [lack of progress] and decline. . . .

Despite the World Trade Organization, NAFTA and other advances, trade policy continues to be a contest between free trade advocates and protectionist forces, between consumers' broad interest in abundance and producers' narrow interest in scarcity. The producers will win if Main Street Americans don't comprehend their stake in open trade and aren't vigilant [alert] against protectionist poison."

—W. Michael Cox and Richard Alm,
Federal Reserve Bank of Dallas, Annual Report 2002

Primary Source Activity *Cont.*



New Challenges

Reading 2 From the Millenium Report

"[T]he central challenge we face today is to ensure that globalization becomes a positive force for all the world's people, instead of leaving billions of them behind in squalor [filthy conditions]. Inclusive globalization must be built on the great enabling force of the market, but market forces alone will not achieve it. It requires a broader effort to create a shared future, based upon our common humanity in all its diversity."

—Kofi Annan, UN Secretary General,
"We the Peoples: The Role of the United Nations in the 21st Century," 2000

Directions: Answer the following questions.

Analyzing Primary Sources

1. **Identifying** According to Cox and Alm, what are the advantages of free trade?

2. **Identifying Point of View** What is Kofi Annan's biggest concern about the effects of globalization?

3. **Describing** What do Cox and Alm say that tells you their position on free trade?

Primary Source Activity *Cont.*



New Challenges

4. **Explaining** Why do Cox and Alm think protectionism is poison?

Critical Thinking

5. **Contrasting** Annan and Cox and Alm all think that globalization and free trade have positive benefits. How are their perspectives different?

Guided Reading



New Challenges

Lesson 3 *Twenty-First Century Challenges*

ESSENTIAL QUESTION

What motivates people to act?

The Global Economy

Answering Questions As you read the section, answer the questions below.

1. Which type of technology has contributed most to globalization and to the growth of a global economy?

2. Why do critics object to free trade agreements?

3. What argument supports free trade?

Guided Reading *Cont.*



New Challenges

Defining Define the following terms. Use each in a sentence about the U.S. economy.

1. trade deficit

Definition:

Sentence:

2. outsourcing

Definition:

Sentence:

Guided Reading *Cont.*



New Challenges

Challenges for the Future

Specifying In the left column, list four concerns about the global environment. In the right column, list four government policies for protecting the environment in the United States.

Environmental Issues	Government Policies
1.	5.
2.	6.
3.	7.
4.	8.

Identifying Central Issues Fill in the missing words in the following passage.

The U.S. population is growing and changing. Because of improvements in (1) _____, the number of older Americans has increased. The number of Latinos living here has increased, too; most of these people were born in (2) _____. About 11 million immigrants in the country are (3) _____. They do not have official permission to be in the United States. Some Americans want to prevent future illegal immigration by strengthening (4) _____ and cracking down on (5) _____. Other people believe that these immigrants help the economy. One big question people ask is whether or not these immigrants should be given (6) _____.

Guided Reading *Cont.*



New Challenges

Meeting Challenges

Giving Examples Answer the following questions by providing at least two examples of actions that people have taken to make a difference.

1. How did Malala Yousafzai show her support for a woman's right to education?

2. How did Lilly Ledbetter contribute to the equal pay and civil rights movements?

3. How can we support our veterans and their families?

[Print](#)

Global interdependence offers both opportunities and challenges for the people of the world.

The Global Economy

Why do nations depend upon one another?

Today nations are interdependent (ihn•tuhr•dee•PEHN•duhnt)—that is, one country's economic well-being depends on the well-being of the others. Countries rely on one another for raw materials and for markets in which to sell goods. In other words, the nations of the world take part in a global economy.

Technology Drives Change

Key to the growth of the global economy has been the technology revolution. The invention that has driven this revolution is the computer. In the 1960s, scientists developed the integrated circuit, a small electronic device. A decade later, they came up with even more powerful circuits called microprocessors. These developments made it possible to make small, fast computers that store large amounts of information.

Global Trade

The world's people and nations are closely connected. Technology has led to the rise of globalization (gloh•buh•luh•ZAY•shun), the linking of the world's economies and societies. Because of technology, the physical distance between countries no longer prevents them from interacting with each other.

The use of cell phones, the Internet, and the computer has come together in a way that allows people to connect, interact, research, create, and work from anywhere, at any time.

The United States's huge economy makes it a leader in world trade. The United States exports and imports a large number of goods and services. However, it spends hundreds of billions of dollars more on imports than it earns from exports. The result is a massive trade deficit. A trade deficit occurs when a country spends more on imports than it earns from exports.

The U.S. economy depends on selling American-made products. For this reason, Republican and Democratic presidents since World War II have supported free trade. Free trade means the removal of trade barriers so that goods flow freely among countries. The United States and other nations have been members of the World Trade Organization (WTO). It arranges trade agreements and settles trade disputes among countries.

Some experts believe that trade agreements, such as NAFTA, help spur economic growth. Others complain that they contribute to outsourcing—moving the production of U.S. goods and services to countries such as Mexico. Because workers are paid less in Mexico, the cost of goods may go down. Critics charge that the result is a loss of U.S. jobs. Supporters say that the resulting economic growth can lead to more and better American jobs. They call for investing in education to provide tomorrow's workers with the skills to prosper in the global economy.

Americans have debated trade policies since colonial days. Globalization ensures that this lively debate will continue.

Determining Cause and Effect What causes a trade deficit?

Thinking Like a HISTORIAN

Oil and the Economy

The United States buys many goods and services from other countries. In fact, it imports so many products that for years it has run a trade deficit. A key reason for this deficit is petroleum. The United States uses huge amounts of oil, and it purchases much of this oil from foreign sources. Changes in the price of oil can quickly increase or decrease the trade deficit.

Challenges for the Future

What are the key environmental and social issues facing the U.S.?

The trend toward globalization has made people aware of threats to the environment. Many fear that Earth's resources will soon be unable to support a rapidly rising population. The spread of human settlements into natural areas has already strained water and food resources and damaged wilderness areas.

Polluted Air and Water

Burning fossil fuels, such as oil, coal, and natural gas, pollutes the air. The pollution mixes with the air's water vapor to make acid rain, which is rain containing high amounts of chemical pollution. Acid rain harms trees, rivers, lakes, even the stone used in buildings. The United States has acted to reduce the volume of chemicals released into the air. Still, air and water pollution are serious problems.

Most fossil fuels are made from petroleum, or oil. Petroleum is a natural resource that is limited in supply. People use oil for fuel and for making many other goods. The United States uses large amounts of oil, and it does not have enough to meet its own needs.

Oil is found deep underground, including under the ocean floor. New technology has made it possible to get oil from very deep parts of the ocean. There are risks, however. In 2010 an oil-drilling rig in the Gulf of Mexico blew up, injuring and killing workers.

The blast caused a massive leak of oil into the Gulf of Mexico. Stopping the leak took nearly four months. Meanwhile, fish and wildlife and many natural habitats were choked with oil. The area affected ran along the coast from Louisiana to Florida. The spill was the largest in the history of ocean drilling.

A process known as fracturing, or fracking, can be used to extract gas and oil from shale rock deep underground. Improvements to the process led to its greater use in the early 2000s and to rapid growth in America's gas and oil industry. The technology also helped reduce the United States' dependence on foreign energy. Critics of the process, though, have raised concerns about its environmental impact.

In the United States, some state and local governments have tried to limit air pollution. The federal Environmental Protection Agency (EPA) also can make rules about environmental issues. For example, it can take steps to limit pollutants from cars.

President Obama agreed to have the EPA set limits on chemical pollutants. Obama also asked automakers to improve vehicle fuel efficiency by 2011 and to put a million electric cars on the road by 2015, although this goal was not met. Automakers now offer a "hybrid" gasoline electric car that uses less gasoline.

New Concerns About Nuclear Power

On March 11, 2011, a massive earthquake rocked the nation of Japan. The quake produced a tsunami—a large ocean wave that slammed ashore, causing flooding and property damage.

The disaster left more than 25,000 people dead or missing. It also damaged a nuclear power plant, crippling its system for cooling nuclear material. As a result, the plant released large amounts of radioactive material into the air, some of which reached the United States.

The Japanese nuclear emergency once again raised questions about what role nuclear energy should play in the United States' energy future. How can people balance the need for reliable energy with the dangers that different forms present? What can be done to ensure the safety of the many nuclear plants already in operation around the world? These questions present a challenge as the nation works to find alternative energy sources.

A Changing Society

The U.S. population continues to change. Better health care has helped increase the number of older Americans. The foreign born population is also growing. The number of Latinos—some of whom are immigrants, but most of whom were born in the U.S.—has risen sharply. Between 1980 and 2010, the Latino population soared from under 15 million to about 50 million.

Many immigrants have followed the nation's laws for entry to the United States. Currently, however, there are about 11 million immigrants who are in the United States illegally. Americans disagree about whether or not the U.S. should grant amnesty, or forgiveness, to immigrants already in the country illegally and allow them to become citizens. To prevent future illegal immigration, some Americans call for stronger border enforcement and a crackdown on those who hire illegal immigrants. In 2010 Arizona passed a law expanding police powers for identifying illegal immigrants in the state. The law sparked debate about how far the nation should go in combatting illegal immigration.

Social Unrest and Violence

Besides immigration, other societal issues also present challenges for our country. In the 2010s, a number of shootings, many police related, led to unrest, especially in the African American community. One of the triggering events for the wave of unrest was the shooting of an unarmed African American youth, Trayvon Martin, in Florida in 2012. The shooter, a neighborhood watch participant, claimed self-defense, and was never convicted of any wrongdoing. In 2014, a police officer in Ferguson, Missouri, shot Michael Brown, an unarmed African American teenager. Protests against police violence toward African Americans and against the unfair treatment of African Americans in the justice system quickly broke out in Ferguson. An organization of protestors called #BlackLivesMatter (using the hashtag symbol of a popular social media website) soon helped to organize protests across the country. The public outrage led to the government re-examining police oversight and policies, as well as the treatment of minorities in general.

During the same time period, the United States was shocked by numerous incidents involving gun violence. In December 2012, a 20-year old shooter killed 20 elementary school children and six staff members at the Sandy Hook elementary school in Newtown, Connecticut. Another shocking massacre occurred in June 2015, when a gunman entered a Bible study class in a Charleston, South Carolina, church and opened fire. Nine were killed. In December 2015, another mass shooting happened in San Bernardino, California. A married couple entered the husband's Christmas party and killed 14 coworkers and injured seven others before they were killed by police. The Obama administration asked Congress to pass legislation strengthening gun control. He wanted better background checks on people trying to purchase guns. Such checks would identify people with a criminal record, a history of mental problems, or those with known terrorist ties. Laws strengthening gun control, however, remain a matter of great controversy among Americans.

Summarizing How is the population of the United States changing?

Meeting Challenges

How can the United States successfully face current and future challenges?

As we head further into the twenty-first century, the United States will continue to face challenges, both at home and abroad. Global terrorism remains a concern that tests the nation's diplomatic and military capabilities. Maintaining a strong economy is an ongoing struggle. And keeping the peace and providing equal justice for all Americans will continue to be a focus across the country.

Still, Americans' beliefs in freedom and individual liberty have kept the country strong. Citizens everywhere remain involved in the political process. They protest perceived injustices peacefully, and many get out to vote for their beliefs on Election Day. Also, Americans continue to give back to their country and their communities. Many volunteer in the military to protect our nation. Others volunteer closer to home, caring for those less fortunate or for the environment. The American people's allegiance to our founding principles, and to one another, hold great promise for overcoming any future challenges.

Identifying How do the American people help the country face its challenges?

LESSON 3 REVIEW

Review Vocabulary

1. Write a short paragraph in which you use these vocabulary terms:

- a. interdependent b. globalization
c. free trade d. outsourcing

2. Write two sentences that explain the significance of a trade deficit and acid rain.

Answer the Guiding Questions

3. **Analyzing** How has technology contributed to globalization?

4. **Identifying** What environmental concerns have become more serious issues in recent years?

5. **Identifying Cause and Effect** How did President Obama respond to the incidents of gun violence occurring during his administration?

6. **INFORMATIVE/EXPLANATORY** Write an essay that describes the work of an individual or group whose efforts are addressing a challenge facing our nation or our world.



New Challenges

Lesson 3 Twenty-First Century Challenges

ESSENTIAL QUESTION

How do new ideas change the way people live?

GUIDING QUESTIONS

1. *Why do nations depend upon one another?*
2. *What are the key environmental and social issues facing the U.S.?*
3. *What can individuals and groups do to face the challenges of our world?*

Terms to Know

interdependent relying on each other

globalization the increasing economic interaction between people, companies, and governments of different nations

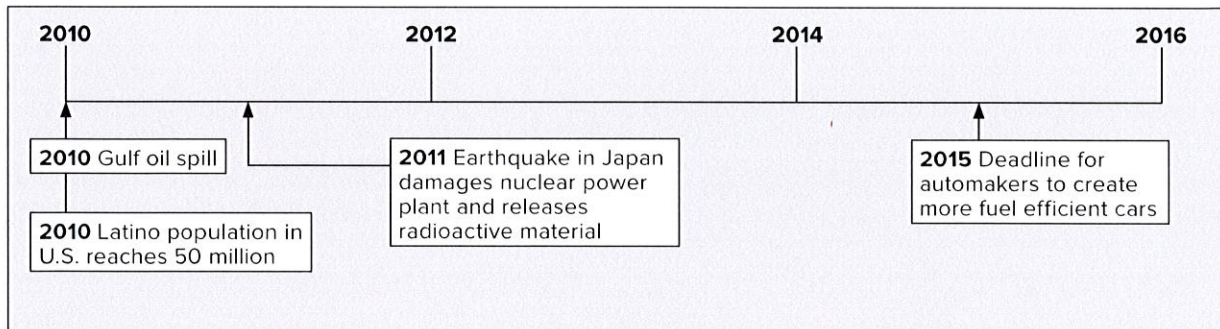
trade deficit what happens when the value of imports is greater than the value of exports

free trade the free flow of goods and services among countries through the removal of tariffs and other trade barriers

outsourcing the practice of moving the production of goods or services to another location where the cost of labor is cheaper

acid rain rain containing high amounts of chemical pollutants from the burning of fossil fuels

When did it happen?



What do you know?

In the first column, answer the questions based on what you know before you study. After this lesson, complete the last column.

Now...		Later...
	What invention triggered the technology revolution?	
	What human actions are affecting the world's environment?	

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New Challenges

Lesson 3 Twenty-First Century Challenges, *Continued*

 **Marking the Text**

- Underline the words in the text that show the meaning of the word *interdependent*.

 **Determining Cause and Effect**

- How did the invention of computers lead to globalization?

 **Explaining**

- Why does the United States have a trade deficit?

 **Analyzing**

- Why might free trade agreements lead to outsourcing?

 **Marking the Text**

- Underline the text that explains the possible effects of outsourcing.

The Global Economy

Today, the countries of the world are **interdependent** (ihn • tuhr • dee • PEHN • duhnt). That means that the health of one country’s economy depends on the health of other countries’ economies. Countries rely on each other for raw materials and markets to sell goods.

The global economy has grown because of the invention of the computer. Scientists developed a small electronic device called an integrated circuit in the 1960s. In the 1970s, they came up with even more powerful circuits called microprocessors. This made it possible to make small, fast computers that store a lot of information.

Technology has led to **globalization** (gloh • buh • luh • ZAY • shun), or the linking of the world’s economies and societies. Businesses and people share information all over the globe.

The United States is a leader in world trade. However, it buys many more goods from other countries than it sells. This causes a **trade deficit**, because the United States spends more on imports than it earns from exports.

To help Americans sell products in other countries, many presidents have supported free trade. **Free trade** means removing barriers to trade, such as tariffs. The United States and other nations are members of the World Trade Organization (WTO). It sets up trade agreements and settles differences among countries.

NAFTA is a free trade agreement. Some experts think it has helped the economy to grow. Others say it leads to **outsourcing**—moving the production of U.S. goods and services to other countries. In many of these countries, workers are paid less. This can lower the price of goods. However, critics say that outsourcing can cause Americans to lose jobs. Free-trade supporters say that the economic growth actually creates more and better American jobs.

Challenges of the Future

Globalization had made people more aware of threats to the environment. Many fear that Earth’s resources will soon be unable to support the large population.

Pollution is another concern. Burning fossil fuels, such as oil, coal, and natural gas, pollutes the air. When the pollution mixes with the air’s water vapor it creates acid rain. **Acid rain** contains large amounts of chemical pollution. It can damage trees, lakes, rivers, and even the stone used in buildings. The United States has acted to reduce the number of chemicals released into the air. However, air and water pollution are still serious problems.

New Challenges

Lesson 3 Twenty-First Century Challenges, *Continued*

Limited resources are also a challenge. Petroleum, or oil, is a natural resource that is nonrenewable. That means that it cannot be replaced. Americans use a large amount of oil for fuel and to make other goods. The United States does not have enough oil to meet its own needs.

Oil is found deep underground. New machines make it possible to get oil from very deep parts of the ocean. There are risks, however. In 2010, an oil-drilling rig in the Gulf of Mexico blew up, injuring and killing workers. Oil poured into the ocean and polluted the waters from Louisiana to Florida. It took four months to stop the leak. The oil killed many animals and damaged natural areas.

A process known as fracturing, or fracking, is used to extract gas and oil from shale rock underground. It has helped the United States to become less dependent on foreign energy, but critics have concerns about its effect on the environment.

Some state and local governments have tried to limit air pollution. The federal Environmental Protection Agency (EPA) can also make rules to control pollution. President Obama had the EPA set limits on chemical pollution. He also asked automakers to make cars that used less gas and to create more electric cars by 2015. Some automakers now offer a “hybrid” car that uses gas and electricity.

Nuclear energy is also a concern. In March 2011, a large earthquake struck Japan. It caused a tsunami—a large ocean wave that flooded and destroyed property in many areas. The disaster left more than 25,000 people dead or missing. It also damaged a nuclear power plant. The plant released large amounts of radioactive material into the air. Some of it reached the United States. These problems started the debate over the safety of nuclear power. Many people wonder if nuclear power is safe enough to use.

Changes in society have also created challenges. Because of better health care, there are now more older people in the United States. The immigrant population is also growing. The Latino population grew from under 15 million in 1980 to about 50 million in 2010. Many followed the nation’s laws to enter the country. However, there are currently about 11 million immigrants who are in the country illegally.

Americans disagree about how illegal immigrants should be treated. Some think they should be allowed to become citizens. Others think the United States should work harder to prevent illegal immigration. In 2010, an Arizona law created conflict by giving the police more powers to identify illegal immigrants.



Describing

- 6. What are some of the effects of acid rain?



Identifying

- 7. What area was affected by the oil spill in the Gulf of Mexico?



Summarizing

- 8. How has the population of the United States changed?

New Challenges

Lesson 3 Twenty-First Century Challenges, *Continued*

 **Reading Check**

9. How do the American people help the country face its challenges?

FOLDABLES®

10. Place a one-tab Foldable along the dotted line to cover Check for Understanding. Write the title *Worldwide Economy* on the anchor tab. Write *Globalization* in the middle and draw five arrows around the title. List five words or phrases that you remember about globalization. Use your memory map to help complete Check for Understanding.

There are also concerns about the treatment of minorities by the justice system. The shooting deaths of several unarmed African Americans fueled protests by members of the African American community, including a group called Black Lives Matter. Equally troubling was a series of mass shootings across the country. Twenty elementary school children and six staff members were killed at Sandy Hook Elementary School in Connecticut. Nine died as a gunman shot Bible Study participants at a church in South Carolina. And a married couple killed 14 and wounded seven others in San Bernardino, California. President Obama pushed for stronger gun control laws, requiring better background checks for those wishing to purchase guns. Americans remain divided over this issue.

Meeting Challenges

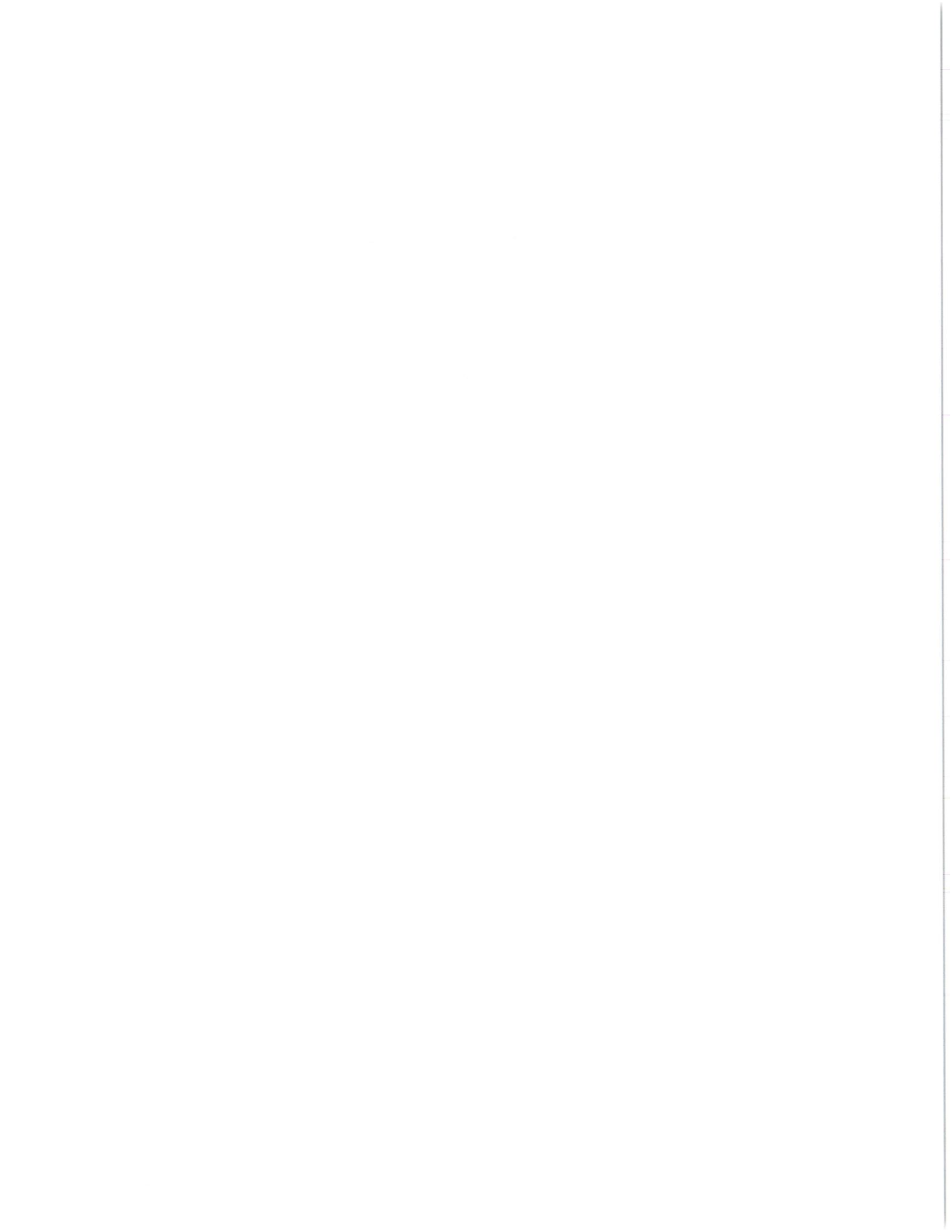
The United States continues to face challenges at home and around the world. Global terrorism tests the country's military strength. Growing the economy remains a struggle. Providing equal justice for all Americans is also an issue.

America's beliefs in freedom and personal rights have kept the country strong. Citizens remain involved in politics. Some protest peacefully against injustices. Many vote in elections. Citizens also give back to their country and their communities. Some protect the country by joining the military. Others volunteer close to home. They may help care for those less fortunate in the community, or help protect the environment. Because the American people remain fully committed to the country's founding principles, future challenges will be met and overcome.

Check for Understanding

List two positive effects of globalization.

How has technology helped the economy grow?



Vocabulary Builder Activity

The logo for 'networks' features the word 'networks' in a bold, sans-serif font. The letter 'o' in 'networks' is replaced by a stylized globe icon with latitude and longitude lines. The logo is positioned in the top right corner of the page.

New Challenges

A. Content Vocabulary

Directions: From the box, select a vocabulary term that best fits each blank in the sentences. Not all words will be used.

bailout
terrorism
insurgent
levee

interdependent
globalization
trade deficit

free trade
outsourcing
acid rain

The September 11, 2001, attacks on the United States were acts of (1) _____, carried out by followers of Osama bin Laden. President Bush reacted by declaring a war on terror, which included an invasion of Iraq to overthrow its leader, Saddam Hussein. Rebel groups, or (2) _____ in Iraq attacked U.S.-led troops, and the war in Iraq dragged on.

Disaster would strike again in August 2005 when Hurricane Katrina hit the Gulf of Mexico coast. As a result of rising waters, (3) _____ failed, and the city of New Orleans suffered great damage. Thousands were left homeless and at least 1800 people died.

By the time President Bush left office, the United States was suffering from a severe economic crisis. The crisis was not limited to just the United States. Countries around the world also suffered, showing that societies and economies of countries around the world are closely linked. This phenomenon, called (4) _____, ignores physical distance and instead proves how (5) _____ the countries of the world really are, relying on each other for their economic well-being.

Vocabulary Builder *Cont.***networks****New Challenges**

Directions Write **T** if the statement is true, or **F** if the statement is false.

- _____ 6. *A trade deficit* results when a country spends more on imports than it earns from exports.
- _____ 7. *Free trade* eliminates the need for trade agreements among countries.
- _____ 8. *A bailout* helps a company in financial trouble stay in business.
- _____ 9. The practice of *outsourcing* jobs to other countries is often criticized for taking jobs from American workers.
- _____ 10. *Acid rain* is a result of global warming.

Vocabulary Builder *Cont.*



New Challenges

B. Academic Vocabulary

Directions: Use each of these words in a sentence to illustrate your understanding of the definition:

1. decade

2. prior

3. aware

1. _____

2. _____

3. _____

Vocabulary Builder *Cont.***networks****New Challenges****C. Combined Vocabulary Reinforcement**

Directions Select academic or content vocabulary words from this chart to complete the following sentences. You may need to change the form of the word to fit the sentence.

bailout

interdependent

free trade

terrorism

decade

outsourcing

insurgent

prior

acid rain

levee

trade deficit

aware

globalization

1. _____ to the technological innovation that allowed _____, most people were probably not _____ how each country's well-being affected the other.
2. The global economy has made countries _____, relying on one another for raw materials and for markets to sell their products.
3. In the _____ preceding the 1970s, scientists developed the integrated circuit and paved the way for the eventual development of the microprocessor.
4. Because the United States spends more money on imports than it earns from exports, the United States is said to have a _____.
5. Critics of _____ argue that the practice takes jobs away from American workers.
6. Before the attacks on the World Trade Center and the Pentagon, most Americans viewed _____ as violence that occurred in other countries.

Vocabulary Builder *Cont.*

networks

New Challenges

7. _____ occurs when chemical pollution from the burning of fossil fuels mixes with water vapor.
8. Economic growth stimulated by _____ is possible because countries have removed the barriers preventing the flow of goods among countries.
9. People who rebel and fight against their government are called _____.
10. Companies facing financial ruin are sometimes rescued by a government _____.
11. A _____ is used to retain, or hold back, a river or waterway and prevent floods.

Chapter Summary

New Challenges

Lesson 1 *The Global War on Terror*

- A small group of al-Qaeda terrorists attacked the United States on September 11, 2001, by flying hijacked planes into the World Trade Center and the Pentagon. This attack began the war on terror. Because al-Qaeda planned the attacks from bases in Afghanistan, the American military attacked al-Qaeda forces in Afghanistan.
- In 2003 President Bush formed a military coalition that invaded Iraq and removed the Iraqi government. Some Iraqis resisted the presence of foreign troops. Over time, continued U.S. involvement increased Americans' opposition to the war.
- In 2005 a strong hurricane hit New Orleans, flooding the city. Criticism of the government's response to the disaster, combined with a declining economy and opposition to the Iraq war, weakened public support for Bush.

Lesson 2 *The Obama Administration*

- In 2009 Democrat Barack Obama became the first African American president of the United States. Facing the worst economic crisis since the Great Depression, he approved huge amounts of money to aid struggling businesses and jobless Americans. After a long fight with Congress, in 2010 President Obama signed a new law that brought major changes to the nation's health care system.
- In 2010 President Obama ended U.S. combat operations in Iraq, concentrating instead on fighting the Taliban and al-Qaeda in Afghanistan. The following year, U.S. troops succeeded in locating and killing the al-Qaeda leader, Osama bin Laden.
- In 2011 people in several Arab countries rose up against oppressive dictatorships. When the Libyan dictator, Muammar al-Qaddafi, mounted counterattacks against his own people, the United States joined an international military effort to stop him.
- In the summer of 2014, President Obama took a stand against a militant group called Islamic State of Iraq and Syria (ISIS) by authorizing airstrikes and offering support to those fighting ISIS. He also provided humanitarian support to civilians affected by the fighting.

Chapter Summary

New Challenges

Lesson 3 *Twenty-first Century Challenges*

- Globalization and laws that removed trade barriers made imported goods cheaper for Americans. However, they also helped create a large trade deficit.
- The U.S. Congress has enacted policies over the years to control or reduce chemicals that cause air and water pollution.
- Two disasters brought up questions about energy. In 2010 an oil rig exploded in the Gulf of Mexico, resulting in a the largest oil leak in the history of ocean drilling. It affected coastal areas from Louisiana to Florida. In 2011 a massive earthquake and tsunami struck Japan, leaving more than 25,000 dead and damaging a nuclear power plant. The damaged plant released large amounts of radioactive material.
- A large number of immigrants live in the United States illegally. Some Americans think that these illegal immigrants should be deported. Other Americans think that they should be given amnesty and be allowed to become legal immigrants.
- In the 2010s, a number of shootings, many police related, led to unrest. Incidents including the shooting of Trayvon Martin in Florida and Michael Brown in Ferguson, Missouri, led to protests against the unjustified use of force by the police and the unfair treatment of African Americans in the justice system.
- The U.S. continues to be plagued by mass shootings. Examples of mass shootings include incidents at Sandy Hook Elementary School in Newton, Connecticut, in 2012, A Bible study class at a Charleston, South Carolina, church in June 2015, and at a county health department event in San Bernardino, California, in December 2015.
- While the United States will continue to face challenges such as global terrorism, keeping the economy strong, and providing equal justice for all, our nation's core beliefs keep the country strong. Americans remain deeply involved in the course of the country and their communities through the political process and volunteerism.

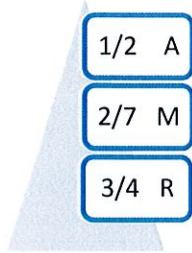
Comparing Fractions

Name:
Teacher:

Class:
Date:

Directions: Circle the word that will be formed when the fractions are written in order from least to greatest, with the greatest fraction written as the base of each triangle.

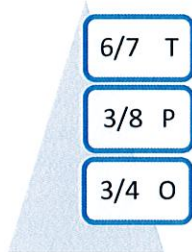
1. RAM ARM MAR



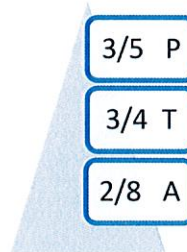
2. TIS SIT ITS



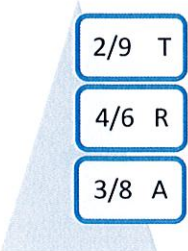
3. TOP POT OPT



4. APT TAP PAT



5. ART RAT TAR



6. CAT TAC ACT



Compare and Contrast Different Points of View

Reading: Literature

DIRECTIONS: Read the stories.

A DAY AT THE BEACH

Today, Sam visited the ocean for the very first time. "You'll love it," his mom told him along the way. He was very excited. What would it be like? Would it smell different from other places? Would it be warmer or colder? Would it be okay to swim in the ocean, or would a shark eat him? These were all questions, and he needed answers.

When they arrived at the ocean, Sam was amazed. It did smell different! Sam's mom told him that was because of all the salt in the water. It was cooler! Sam's mom told him that was because of the breeze coming off the ocean. Most importantly, though, it was okay to swim in the ocean. Even if it was a little chilly. "And no," Sam's mom told him, "a shark will not eat you. They're just as scared of you as you are of them!"

Sam and his mom spent the day walking on the beach and putting their toes in the water. They even swam for a while, and Sam could swear he saw some turtles. They went to a restaurant and ate sea salt fries. Then, they got ice cream and took lots of silly pictures.

Sam decided he liked the beach. Sam's mom told him she knew he would love it. "The beach is my favorite place. But, I guess I will share it with you!" she said while she laughed. He grinned, and they got in the car but not until they shook the sand from their shoes.

I LIKE TO RUN!

My name is Maya, and I like to run. There is no better feeling than the wind on my face and the road beneath my feet. When I run, I feel like I am flying.

Running is important. When I was little, running was always my favorite kind of exercise. I would run in races against boys and beat them. I would run in games, like tag and kickball. I would run in circles in my backyard with my dog. I would find any reason to run. Running made me feel special. Running still makes me feel that way.

As I got older, I started running on sports teams, like soccer and track. Everyone told me I was really good at it. All of their kind words made me want to work harder so I could be even better. I practiced every day. Sometimes, I would run for short distances as fast as I could. Other times, I liked to run for a long time and go nice and slow.

One day, I want to run as fast as Usain Bolt. He is the fastest man alive. He is also my hero. I know if I work hard, I might be able to make it one day. If I keep putting my mind to it, I can do it. I can do anything.

Compare and Contrast Different Points of View

Reading: Literature

DIRECTIONS: Use the stories to answer the questions.

Strategy

While reading, identify who the narrator is in the story to understand the point of view.

Test Tip

A story with first-person point of view has a narrator that is a character in the story. The narrator uses "I" and reveals his or her thoughts. A story with third-person point of view has a narrator that is not part of the story.

1. From whose point of view is each story written?

A Day at the Beach: _____

I Like to Run!: _____

Write how you know.

2. In the story "A Day at the Beach," how does the narrator show how Sam is feeling?

3. In which story does the reader learn from the character exactly how they are feeling?

4. Why is it easier to know exactly how a character feels when the story is told from the character's point of view, rather than when it is told from a narrator's point of view?

- (A) The character tells you exactly what he or she is feeling.
- (B) The narrator describes what the character does.
- (C) The character tells about what he or she does.
- (D) The narrator tells what the character says.

5. How did Sam feel about going to the ocean?

Choose all that apply.

- (A) He was excited.
- (B) He had many questions.
- (C) He didn't want to go.
- (D) He had been there a thousand times.

6. Is there a way to know how the characters in "A Day at the Beach" felt at the end of the story?

Write how you know.

7. What is another way Maya could have said, "run short distances as fast as I can"?

- (A) jog
- (B) rush
- (C) sprint
- (D) stroll

8. What is another way the narrator could have said, "putting their toes in the water"?

- (A) splashing in the water
- (B) jumping in the water
- (C) wading in the water
- (D) dipping their toes in the water

Compare and Contrast Different Points of View

Reading: Literature

Strategy

To figure out the point of view, ask yourself *Who is telling the story? What do they know?*

Test Tip

Stories with third-person point of view have narrators that know what events are happening. They may know what characters are thinking and feeling.

DIRECTIONS: For each sentence, write if the point of view is *first person* or *third person*.

9. I was so excited to see the ocean!

10. "Dad," said Maya, "I'm going out running."

11. Sam couldn't wait to get to the beach.

12. I am going to train for a marathon.

DIRECTIONS: Rewrite each sentence in the opposite point of view. If the sentence is written in third person, rewrite it in first person. If the sentence is written in first person, rewrite it in third person.

13. Today, Sam visited the ocean for the very first time.

14. My name is Maya, and I like to run.

15. Sam and his mom spent the day walking on the beach and putting their toes in the water.

16. One day, I want to run as fast as Usain Bolt.

Compare and Contrast Stories

Reading: Literature

DIRECTIONS: Read the story. Then, answer the questions.

ADAPTED FROM "JASON AND THE GOLDEN FLEECE"

Jason was the son of the king, but his uncle had stolen the throne. His uncle lived in constant fear of losing what he had taken. He kept Jason's father prisoner and would have murdered Jason at birth. But, Jason's mother tricked him by acting as if Jason had died. Meanwhile, the infant was sent to be raised by Chiron the Centaur.

When Jason was old enough, he returned to the kingdom to claim the throne. But, his uncle had no intention of giving it up, especially to a stranger. He invited Jason to a banquet. During the meal, he said to Jason, "You may rule the kingdom if you bring back the Golden Fleece. It's a quest that any hero worth his salt would leap at."

Jason and his crew encountered many dangers on their journey. Each time, a kind stranger came to help the heroes avoid harm.

Once he arrived in the kingdom where the Golden Fleece was kept, Jason had to face a series of challenges from its king. The king considered the Golden Fleece his own. The king's daughter, Medea, reminded him to be kind. Medea quietly offered to help Jason. She helped him accomplish all of his challenges.

However, the king told Medea that he would never give the Fleece to Jason. Medea told this to Jason. She offered to lead him to the temple grove where the Fleece was nailed to a tree and guarded by a dragon. So, at midnight, they crept into the grove. Jason, ever the hothead, whipped out his sword, but Medea wisely held his arm.

Instead, she used a sleeping potion on the monster. Together, they made off with the Fleece and escaped to the ship. Setting sail at once, they escaped. Thus, Jason succeeded in his heroic challenge.

Strategy

Determine a story's theme by identifying the main character, the main character's problem, and how the problem is solved.

Test Tip

A theme is the overall idea or message in the story. A myth is a traditional tale that usually involves supernatural elements. Myths are usually about heroes on quests, which are adventures that require them to accomplish a dangerous task.

1. Who is the hero in this myth?

- (A) the uncle
- (B) Jason
- (C) Medea
- (D) the king

2. Describe the character of Jason. Use details from the story.

Write how you know.

Compare and Contrast Stories

Reading: Literature

DIRECTIONS: Use the story to answer the questions.

Strategy Review the characters in the story and the plot. Use what happens to each character and how they respond to identify the theme of the story.

Test Tip Look for patterns in a story, or details that seem to repeat. If an idea is presented many times, it is related to the story's theme.

3. Describe Jason's uncle. Use details from the story.

Write how you know.

6. Why did Medea help Jason take the Golden Fleece from her father?

4. Why did Jason agree to go on the quest?

7. Do you think Jason would have succeeded on his quest without the help of others? Explain.

Write how you know.

8. Which sentence best describes the theme of the story?

- (A) Strength is better than kindness.
- (B) Challenges are difficult to face.
- (C) Heroes can do everything on their own.
- (D) Everyone needs help at some point.

5. Why does Jason's uncle send him on the quest to get the Golden Fleece?

- (A) He needs the Golden Fleece to keep the throne.
- (B) He knows it is very dangerous and Jason might not succeed.
- (C) He wants Jason to prove he is worthy of the throne.
- (D) He thinks Jason will refuse to go on the quest.

Write how you know.

Compare and Contrast Stories

Reading: Literature

DIRECTIONS: Read the story. Then, answer the questions.

ADAPTED FROM THE STORY OF RAMA AND SITA

A good man, called Rama, was married to a beautiful princess, called Sita. Prince Rama was the son of a great King and was expected to become King himself one day. However, his stepmother wanted her son to become King. She tricked her husband into banishing Rama and his wife Sita to live in the forest with his brother, Lakshman.

But, this was no ordinary forest. This was the forest where demons lived, including Demon King Ravana. Ravana had 20 arms and 10 heads. There were 2 eyes on each head and a row of sharp yellow teeth. When Ravana saw Sita, he wanted her for himself. He decided to kidnap her. When Rama was out of sight, Ravana disguised himself as an old man and tricked Sita. He flew off with Sita in a chariot pulled by flying monsters.

Sita was afraid, but she was also clever. Being a princess, she wore jewelry, and she dropped her jewels, piece by piece, onto the ground to leave a trail for Rama. Rama, realizing he had been tricked, discovered the trail. He also came upon his friend Hanuman, King of the Monkeys. Hanuman promised Rama he and all the monkeys would help Rama find Sita, and they searched the world looking for her. Eventually, a monkey located Sita on a dark, isolated island surrounded by rocks and stormy seas. Hanuman flew to Sita. She gave him her last precious pearl to give to Rama and prove it was really her. She had been found! The monkeys helped Rama for a second time by throwing stones and rocks into the sea until they had built a great bridge to the island.

Hanuman, Rama, and Lakshman prepared for battle. This was one of the greatest battles ever seen. The fighting lasted for 10 days. It looked as though Ravana was going to win, until Rama borrowed a special bow and arrow from the gods. Rama shot Ravana through the heart, and the battle was won. Rama rescued Sita, and they returned home. As it got dark, the people of the kingdom put out little oil lamps in their windows to show the way home. Everyone was happy, and Rama and Sita ruled well.

Strategy Compare the themes in different stories, looking for how they are similar.

1. Why were Rama and Sita banished to the forest?
- (A) Rama gave up his title of prince.
 - (B) Sita was found to be an evil sorceress.
 - (C) Rama's stepmother wanted her son to be king.
 - (D) Rama's father didn't want to give up his kingdom.

Write how you know.

2. Write two details from the story that describe the setting.
- _____
- _____

3. Why did Prince Rama's stepmother choose to banish Rama and Sita to this forest?
- (A) Rama would enjoy living in the forest.
 - (B) Sita was afraid of forest animals.
 - (C) The forest was far away from the castle.
 - (D) Ravana lived there and would harm them.

Compare and Contrast Stories

Reading: Literature

DIRECTIONS: Use the story to answer the questions.

Strategy Compare themes by looking for similarities in characters, events, and ideas.

4. What detail shows that Sita was clever?

5. Who helped Rama fight Ravana? Choose all that apply.

- (A) his stepmother
- (B) the king of the monkeys
- (C) the king of the demons
- (D) his uncle, Lakshman

6. What are two similarities between this myth and the myth of "Jason and the Golden Fleece"?

Write how you know.

7. What are two differences between the myths?

8. Which theme applies to both stories?

- (A) Family is the most important thing in life.
- (B) With help from others, you can overcome challenges.
- (C) People who want power will always win.
- (D) Heroes are easily tricked by magic.

Write how you know.

9. Which patterns are present in both myths? Look for ideas or events that appear in each story.

Explain and Support Inferences

Reading: Informational Text

DIRECTIONS: Read the passage. Then answer the questions.

Have you ever seen someone send a code for SOS? Maybe you've seen an old movie showing a ship about to sink. Perhaps, someone on the ship was tapping wildly on a device. That person was using the telegraph to send for help. Samuel Morse invented the telegraph. He also invented the electronic alphabet called *Morse Code*. The code is a set of dots and dashes that stand for each number and letter of the alphabet.

In 1832, Morse was sailing back to the United States from Europe. During the trip, he came up with the idea of an electronic telegraph. It would help people communicate across great distances. They could be in contact with each other from ship to shore. He was eager to make his invention as quickly as possible.

By 1835, he had made his first telegraph. However, it was only a trial version. In 1844, he built a telegraph line. It went from Baltimore to Washington, D.C. The telegraph line was like a telephone line today. It carried Morse Code messages from one person to another. Morse kept working to make his telegraph better. In 1849, the government gave him a patent. This gave him the right to make his invention. Within a few years, there were 23,000 miles of telegraph wire. People could now communicate across great distances. As a result of his invention, trains ran more safely. Conductors could warn about dangers or problems and ask for help. People in businesses could communicate more easily. This made it easier to sell their goods and services. Morse had changed communication forever.

Strategy Explain the passage and infer by using words and phrases exactly as they appear in the passage.

Test Tip The main idea is what the passage is *mostly* about. Details tell more about the main idea.

1. What is the main idea of this passage?

4. Write three words using the word part *tele-*.

2. What details helped you answer question 1?

5. What is *Morse Code*?

- (A) a set of bumps used to help blind people read
- (B) a set of dots and dashes that stand for letters and numbers
- (C) a secret code used by the FBI
- (D) the password for an e-mail account

3. What word parts make the word *telegraph*?

_____ and _____

Explain and Support Inferences

Reading: Informational Text

DIRECTIONS: Read the passage. Then, answer the questions.

Perhaps you have heard that many types of bats have very small eyes and do not see well. Still, as they swoop through the night, they do not bump into objects and are able to find food, even though they can't see their prey. How is this possible? Echolocation.

You might recognize the beginning of the word *echolocation* as *echo*, and you might recognize the last part of the word as *location*. This gives you clues about how echolocation works. The bat sends out sounds. The sounds bounce off objects and return to the bat. Echolocation not only tells the bat that objects are nearby, but it also tells the bat just how far away the objects are.

Bats are not the only creatures that use echolocation. Porpoises and some types of whales and birds also use it. It is a very effective tool for the animals that use it.

Strategy As you read a passage, make inferences by using what you know from the text and what you know from your own experiences or other stories you have read.

Test Tip An inference must be supported by details in the text.

1. What is the main idea of this passage?

Write how you know.

2. Why are the details about bats having very small eyes and not seeing well important?

- (A) to explain why bats are up at night
- (B) to describe what bats look like
- (C) to show why they use echolocation
- (D) to prove that bats are blind

Write how you know.

3. Why do you think the writer chose to show how *echolocation* can be broken into *echo* and *location*?

4. Why do animals use echolocation? Choose all that apply.

- (A) to keep from bumping into things at night
- (B) to locate prey they can't see
- (C) to tell the distance of an object
- (D) to hear the sound of its own voice

Determine the Theme and Summarize Text

Reading: Informational Text

DIRECTIONS: Read the passage. Then, answer the questions.

Mars is about 225 million kilometers away from Earth. But, in terms of similarities, Mars is the closest planet to Earth.

Mars is named after the Roman god of war. It is the fourth planet from the sun and is the second smallest planet in our solar system, after Mercury. It is often described as the "Red Planet." Mars is called the Red Planet because of large amounts of iron oxide on its surface. Iron oxide is a chemical that gives Mars its red color. Other colors seen on the surface of Mars are gold, brown, tan, and green. Each color is a result of different elements on the surface of Mars.

The United States has attempted 39 missions to Mars. Of these, only 16 have been successful. Five different spacecraft are currently observing Mars. Three of these craft are in orbit around Mars. The other two are on the surface. These spacecraft study the surface of Mars and send back information for scientists to examine. They have found that many of the features of Mars are similar to those of Earth.

Aside from iron oxide, there are many other elements and rocks on Mars, making it a terrestrial planet. A terrestrial planet is one that has a hard surface, like Earth. Mars also has many surface features similar to both Earth and the moon. It has impact craters like the moon and valleys, deserts, and polar ice caps like Earth. The largest mountain in the solar system is found on Mars. Also, Mars has the largest dust storms in the universe.

Mars is approximately half the size of Earth and is less dense. Mars has about 15% of Earth's volume and 11% of its mass. The total surface area of Mars is almost equal to the total area of dry land on Earth. Although Mars is larger and more massive than Mercury, Mercury is denser. For this reason, both planets have a similar gravitational pull at their surface. The gravity on Mars is only about 38% of the gravity on Earth. So, if you weigh 100 pounds on Earth, you would only weigh 38 pounds on the surface of Mars!

Because Mars is the planet most similar to Earth, scientists are searching for signs of life. So far, they have found evidence of water on Mars. This discovery is an important step in learning more about the red planet.

Strategy

Identify a main idea for each paragraph of an informational passage. Then, find details that support the main ideas.

Test Tip

A main idea is not the topic of the passage. It is what the passage is mostly, or mainly, about.

Name _____ Date _____

English Language Arts

Determine the Theme and Summarize Text

Reading: Informational Text

1. What is the main idea of this passage?

- (A) Mars is far away from Earth.
- (B) Mars has the largest mountain in the solar system.
- (C) Mars is the planet most similar to Earth.
- (D) There have only been 16 successful missions to Mars.

2. Write three details that support the main idea.

3. Why do scientists study Mars?

- (A) They are looking for Martians.
- (B) They are searching for signs of life.
- (C) They are hoping to move people there soon.
- (D) They need to find more water for Earth.

4. How is Mars different from Earth?

5. Write three things you learned about Mars from this passage.

6. What would you look for to write a summary of the passage?

Determine the Theme and Summarize Text

Reading: Informational Text

DIRECTIONS: Read the passage. Then, answer the questions.

Go to an aquarium, or even a pet store, and you can see hundreds of beautiful sea creatures. From rainbow-colored fish to coral, these animals are undeniably beautiful. But, there are other creatures in the Earth's seas that most people would not consider beautiful. In fact, they might consider them downright weird.

The blobfish has been voted the world's ugliest creature. A part of the group of fishes called "fatheads," the blobfish is a deep-water fish that lives off the coast of Australia. It has pale, jelly-like flesh with loose skin, beady, staring eyes, and a big nose. The blobfish floats above the floor of the ocean not really spending much energy. While nobody has ever seen a blobfish eat, scientists believe they likely open their mouths and eat whatever happens to float in.

The Dana octopus squid is another weird sea creature. It is one of the largest squid species and can grow up to 7.5 feet long. The Dana octopus squid sends off flashes of bright light from its tentacles as it attacks its prey. Scientists believe the squid uses these bright flashes of light to confuse its prey. The flashes may also be used as a sort of flashlight, lighting up the prey so the squid can capture it. Young Dana octopus squid have also been seen swimming toward predators flashing their lights, perhaps to confuse them and allow other squid to escape.

One last weird sea creature is the viperfish. This fish is most known for its large predatory teeth and hinged lower jaw. The viperfish's fangs would not even fit in their mouth if they didn't curl up toward their eyes. Like the Dana octopus squid, the viperfish lights up. The light helps them catch prey and communicate to other viperfish. Viperfish grow to two feet long and can live up to 40 years!

There are thousands of species that call our oceans home. Many of them are beautiful, and just as many are unusual.

Strategy Summarize a passage in your own words using the main ideas to make sure you understand it.

1. What is the main idea of this passage?

- (A) There are many beautiful fish in the oceans.
- (B) Viperfish have a very weird appearance.
- (C) There are many unusual creatures in the oceans.
- (D) The blobfish was voted the world's ugliest creature.

Write how you know.

2. Three examples of weird sea creatures are featured in this passage. Write three details about each that support the main idea.

Blobfish:

Dana octopus squid:

Viperfish:

Explain Historical, Scientific, and Technical Text

Reading: Informational Text

DIRECTIONS: Read the passage. Then, answer the questions.

In 1908, Jacqueline Cochran was born to a poor family in Florida. Like many girls at the time, she went to work at an early age. When she was just 8 years old, she started work in a cotton mill. As she made cloth, she dreamed about becoming a pilot. She wanted to fly one of the recently invented planes.

Jacqueline got her wish in the 1930s. At this time, only a few daring young men flew these new planes. There were few women pilots. That did not stop Jacqueline. She took flying lessons and became a pilot. She began to enter famous races. In 1938, she won first prize in a contest to fly across the United States.

At the beginning of World War II, Jacqueline trained women in England as pilots. She later returned to the United States and trained American women, too. In 1945, she earned the Distinguished Service Medal. It is one of America's highest honors.

When jet planes were invented, Jacqueline learned to fly them, too. She was the first woman to fly faster than the speed of sound. She also set many other records, including flying higher than anyone had before her.

In many ways, Jacqueline is forgotten today. But, she was a pioneer in a new technology. She helped to make air travel one of our most important means of transportation.

Strategy

Look for details that explain the type of information given in a text—historical, technical, or scientific. Then, use those details to explain the information.

Test Tip

Biographies are historical passages because they tell about the history of someone's life. Look for time words and dates to help you sequence events in a person's life.

1. How was Jacqueline Cochran a pioneer in new technology?

3. Which words and phrases did the author use to order the events in the passage?

2. List five details that show that Jacqueline Cochran was a pioneer and explain the events in the passage.

4. How is this an example of historical text?

Explain Historical, Scientific, and Technical Text

Reading: Informational Text

DIRECTIONS: Read the passage. Then, answer the questions.

THE NORTH STAR

The North Star is one of the most famous stars. Its star name is *Polaris*. It is called the North Star because it shines almost directly over the North Pole. If you are at the North Pole, the North Star is overhead. As you travel farther south, the star seems lower in the sky. Only people in the Northern Hemisphere can see the North Star.

Because the North Star is always in the same spot in the sky, it has served to give direction to people at night for years. Sailors used the North Star to navigate through the oceans.

Polaris, like all stars, is always moving. Thousands of years from now, another star will get to be the North Star. Vega was the North Star thousands of years before it moved out of position and *Polaris* became the North Star.

Strategy

Explain information in a passage by finding details in the passage. Then, be sure to use words and phrases from the passage in the explanation.

Test Tip

Scientific passages usually are written with a cause-effect structure. Look for words that show cause-and-effect relationships.

1. The North Star might be one of the most famous stars because _____.

- (A) it is near the North Pole
- (B) it is always moving
- (C) it is always in the same spot
- (D) it is difficult to find

Write how you know.

4. Why do you think only people in the Northern Hemisphere can see the North Star?

2. Why will another star get to be the North Star someday?

5. Write a sentence from the passage that shows a cause-and-effect structure.

3. The name *Polaris* most likely comes from which name?

- (A) polecat
- (B) polar bear
- (C) Poland
- (D) North Pole

8th Grades

Monday-Overview of metabolism

Introduction

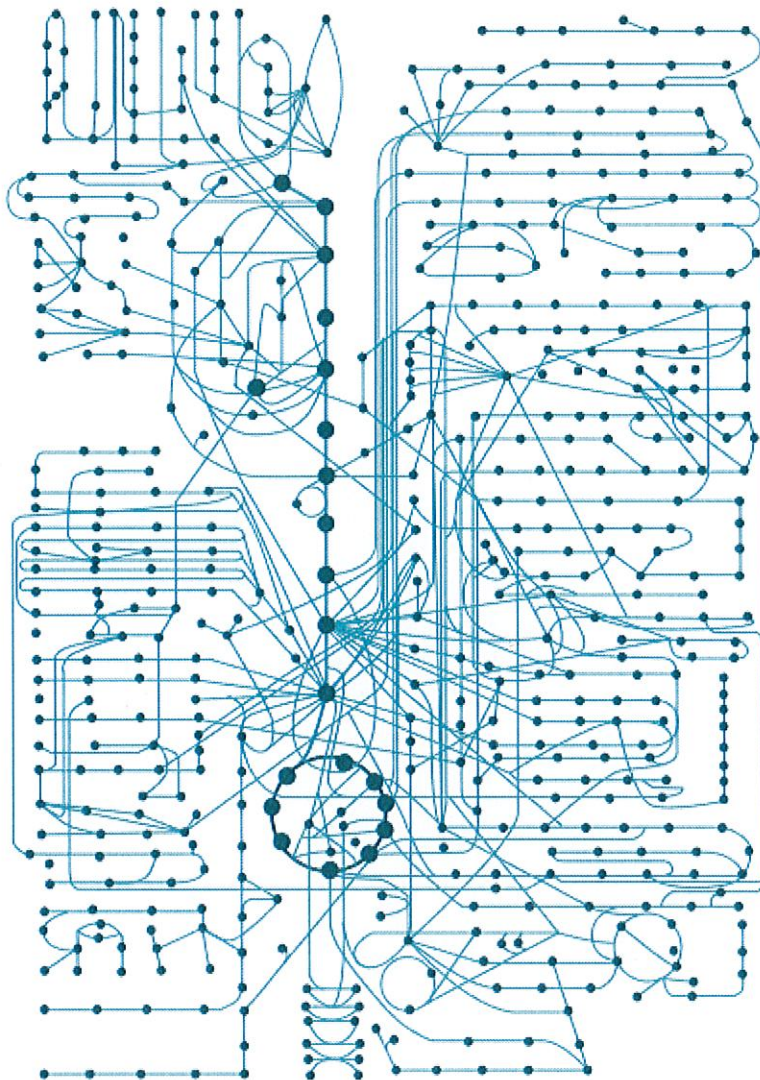
What's going on in your body right now? Your first answer might be that you're hungry, or that your muscles are sore from a run, or that you feel tired. But let's go even deeper, moving past the layer of your consciousness and looking at what's going on in your cells.

If you could peek inside of any cell in your body, you'd find that it was a remarkable hub of activity, more like a busy open-air market than a quiet room. Whether you are awake or sleeping, running or watching TV, energy is being transformed inside your cells, changing forms as molecules undergo the connected chemical reactions that keep you alive and functional.

Overview of metabolism

Cells are constantly carrying out thousands of chemical reactions needed to keep the cell, and your body as a whole, alive and healthy. These chemical reactions are often linked together in chains, or pathways. All of the chemical reactions that take place inside of a cell are collectively called the cell's **metabolism**.

To get a sense of the complexity of metabolism, let's take a look at the metabolic diagram below. To me, this mess of lines looks like a map of a very large subway system, or possibly a fancy circuit board. In fact, it's a diagram of the core metabolic pathways in a eukaryotic cell, such as the cells that make up the human body. Each line is a reaction, and each circle is a reactant or product.



Abstract diagram representing core eukaryotic metabolic networks. The main point of the diagram is to indicate that metabolism is complex and highly interconnected, with many different pathways that feed into one another.

Image credit: "Metabolism diagram," by Zlir'a (public domain).

In the metabolic web of the cell, some of the chemical reactions release energy and can happen spontaneously (without energy input). However, others need added energy in order to take place. Just as you must continually eat food to replace what your body uses, so cells need a

continual inflow of energy to power their energy-requiring chemical reactions. In fact, the food you eat is the source of the energy used by your cells!

To make the idea of metabolism more concrete, let's look at two metabolic processes that are crucial to life on earth: those that build sugars, and those that break them down.

Tuesday-Breaking down glucose: Cellular respiration

As an example of an energy-releasing pathway, let's see how one of your cells might break down a sugar molecule (say, from that candy you had for dessert).

Many cells, including most of the cells in your body, get energy from glucose ($\text{C}_6\text{H}_{12}\text{O}_6$) in a process called [cellular respiration](#). During this process, a glucose molecule is broken down gradually, in many small steps. However, the process has an overall reaction of:

$$\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 \rightarrow 6\text{CO}_2 + 6\text{H}_2\text{O} + \text{energy}$$

Breaking down glucose releases energy, which is captured by the cell in the form of **adenosine triphosphate**, or **ATP**. [ATP](#) is a small molecule that gives cells a convenient way to briefly store energy.

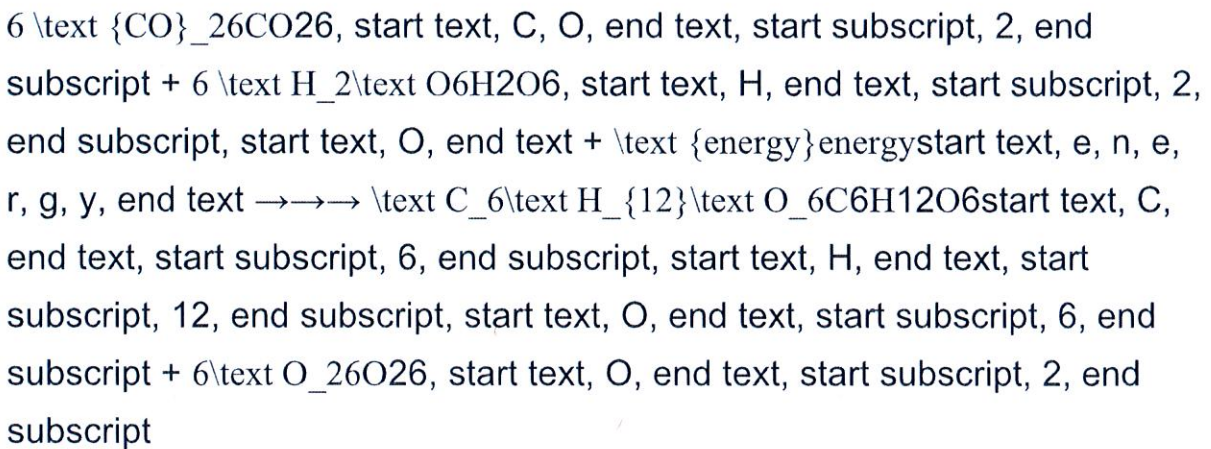
Once it's made, ATP can be used by other reactions in the cell as an energy source. Much as we humans use money because it's easier than

bartering each time we need something, so the cell uses ATP to have a standardized way to transfer energy. Because of this, ATP is sometimes described as the “energy currency” of the cell.

Wednesday-Building up glucose: Photosynthesis

As an example of an energy-requiring metabolic pathway, let's flip that last example around and see how a sugar molecule is built.

Sugars like glucose are made by plants in a process called [photosynthesis](#). In photosynthesis, plants use the energy of sunlight to convert carbon dioxide gas into sugar molecules. Photosynthesis takes place in many small steps, but its overall reaction is just the cellular respiration reaction flipped backwards:



Like us, plants need energy to power their cellular processes, so some of the sugars are used by the plant itself. They can also provide a food source for animals that eat the plant, like the squirrel below. In both cases, the glucose will be broken down through cellular respiration, generating ATP to keep cells running.



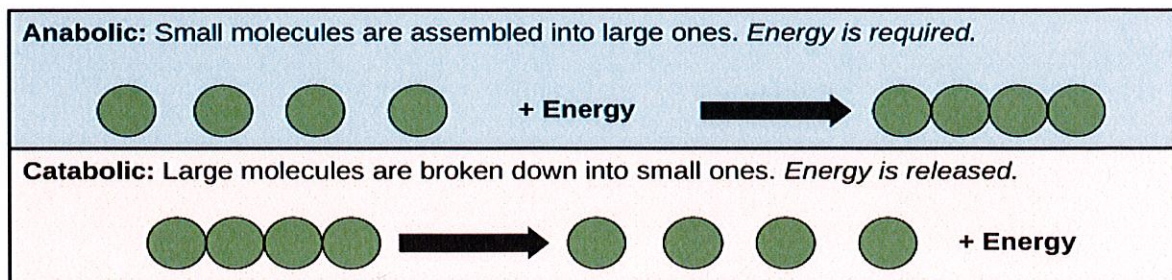
Left: image of a tree with acorns growing on it. Right: image of a squirrel eating an acorn.

Thursday-Anabolic and catabolic pathways

The processes of making and breaking down glucose molecules are both examples of metabolic pathways. A **metabolic pathway** is a series of connected chemical reactions that feed one another. The pathway takes in one or more starting molecules and, through a series of intermediates, converts them into products.

Metabolic pathways can be broadly divided into two categories based on their effects. Photosynthesis, which builds sugars out of smaller molecules, is a "building up," or **anabolic**, pathway. In contrast, cellular respiration breaks sugar down into smaller molecules and is a "breaking down," or **catabolic**, pathway.

Metabolic pathways



Anabolic pathway: small molecules are assembled into larger ones. Energy is typically required.

Catabolic pathway: large molecules are broken down into small ones. Energy is typically released.

Image credit: OpenStax Biology.

Anabolic pathways build complex molecules from simpler ones and typically need an input of energy. Building glucose from carbon dioxide is one example. Other examples include the synthesis of proteins from amino acids, or of DNA strands from nucleic acid building blocks (nucleotides). These biosynthetic processes are critical to the life of the cell, take place constantly, and use energy carried by ATP and other short-term energy storage molecules.

Catabolic pathways involve the breakdown of complex molecules into simpler ones and typically release energy. Energy stored in the bonds of complex molecules, such as glucose and fats, is released in catabolic pathways. It's then harvested in forms that can power the work of the cell (for instance, through the synthesis of ATP).

[\[Need a mnemonic for anabolic and catabolic?\]](#)

One final but important note: the chemical reactions in metabolic pathways don't take place automatically, without guidance. Instead, each reaction step in a pathway is facilitated, or catalyzed, by a protein called an **enzyme**. You can learn more about enzymes and how they control biochemical reactions in the [enzymes](#) topic.

Homework-Word Definition

Metabolism-

Cellular respiration-

ATP-

Photosynthesis-

metabolic pathway-

anabolic-

catabolic-

Anabolic pathways –

Catabolic pathways –

Enzymes-

Quiz-Friday

- 1. In the morning, you:
 - A. Don't eat breakfast.
 - B. Have a light meal like fruit, toast, or cereal.
 - C. Have a very heavy meal like eggs, bacon, ham, and hash browns.

- 2. At lunch, usually your appetite is:
 - A. Not very hungry
 - B. Normal
 - C. Very hungry

- 3. For dinner, you usually want:
 - A. Chicken or fish, rice, salads and vegetables.
 - B. It changes every day.
 - C. Heavy, fatty foods like steak, pasta, and potatoes

- 4. After dinner you:
 - A. Crave or need something sweet.
 - B. I don't really need or crave anything.
 - C. Crave or need something salty, like popcorn.

- 5. The sweets I like are:
 - A. Candies like skittles or hot tamales.
 - B. It doesn't really matter, if it's sweet.
 - C. Ice cream or cake.

- 6. Eating something sweet before bed:

- A. Doesn't interrupt my sleep at all.
 - B. Sometimes makes me restless before I go to sleep.
 - C. Prevents me from sleeping.
- 7. How many times do you eat each day?
 - A. 2-3 meals without any snacks.
 - B. 3 meals with maybe one snack.
 - C. 3 meals and I'm constantly snacking
- 8. After skipping a meal, you feel:
 - A. Fine, normal.
 - B. I don't perform at my best, but it doesn't really bother me.
 - C. Weak, irritable, shaky and tired.
- 9. Fatty foods: how do you feel about them?
 - A. I don't really like them.
 - B. I kind of like them.
 - C. I crave them.
- 10. What foods drain your energy?
 - A. Fatty foods.
 - B. No foods really drain my energy or affect me in this way.
 - C. Sugary foods like candy or confections and fruit give me energy but I then crash.
- 11. What are feelings about potatoes?
 - A. I don't really care for them.
 - B. What about them? Yeah, I eat potatoes, but not a hardcore lover!
 - C. I really love them.
- 12. How do you feel after you eat red meat?
 - A. Tired, lethargic
 - B. Doesn't really affect me.
 - C. Strong
- 13. After eating fatty or heavy foods, you feel:
 - A. Sick or irritable.
 - B. Doesn't really affect me.
 - C. Often makes me feel less angry or irritable.
- 14. When you feel anxious:
 - A. Fruits and vegetables make me feel better.

- B. Pretty much any food makes me feel better.
 - C. Fatty foods make me feel better.
- 15. Your mental and physical performance is better when you eat:
 - A. Light proteins like egg whites, chicken, fruits or fish.
 - B. Any wholesome food.
 - C. Fatty, heavy foods.
- 16. You prefer what kind of climate?
 - A. Warm or hot weather.
 - B. Doesn't really matter to me.
 - C. Cold weather