Erie Rise Leadership Academy Charter School

Parent Lesson Plan

[PARENT LESSON PLAN]

7th Grade, Week of 4/13

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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

Distribution Sites/Information

Food/Curriculum distribution will take place at:

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

Monday and Wednesday from 9AM until 12PM

Leadership Team

Mr. Terry Lang, CEO: 814 812-0503

Mrs. Veronica Will, Principal: 814 873-5158

Mr. Aubrey Favors, HR: 814 812-3026

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	Connect Ed.	Connect Ed.	Connect Ed.	Connect Ed.	Khan
7 th grade	Skill- Point of	Intro. "The	Skill-	Re-Read 1-	Academy
	View "The	Outsiders"	Synonym	"The	Complete
	Others"	Complete	and	Outsiders"	Key Ideas-
	Complete	activities	Antonym	Complete	Drama and
	activities and	and Access	"The	activities	Questions
	Access 1	1 worksheet	Outsiders"	and Access 1	"Carter's
	worksheet		Complete	worksheet	Find"
			activities		
			and Access 1		
			worksheet		
Math	USA Test	USA Test	USA Test	USA Test	USA Test
	Prep	Prep	Prep	Prep	Prep
				ANNEXES STATES	Secretary and
	Class Dojo	Class Dojo	Class Dojo	Class Dojo	Class Dojo
Science	"Monday	"Tuesday	"Wednesday	"Thursday	"Friday April
	April 13 th "	April 14 th "	April 15 th "	April 16 th "	17 th
	Turn up the	Friction	Edible Soil	Calculating	Scientific
	Heat		Profile	Mean and	Method
70.00				Median	
Social	USA Test	USA Test	USA Test	USA Test	USA Test
Studies	Prep	Prep	Prep	Prep	Prep
	"Monday	"Tuesday	"Wednesday	"Thursday	"Friday April
	April 13 th "	April 14 th "	April 15 th "	April 16 th "	17 th "

ELA PRINT MATERIAL

ELA- Mrs. Norgard

Monday- Read and complete the questions for "Making a Difference" Tuesday- Read and complete the questions for "My Father's Miracle" Wednesday- Read and complete the questions for "My First Baseball Game" Thursday- Read and complete the questions for "My Painting" Friday- Use this day to complete any work that is not done.

MATH PRINT MATERIALS

GRAYSON-WAYNE

3 Printed Workaheets from USATest Prep

Chapter 7 Packets

Coach PSSA Practice Packets Chapter on Angles

***Please complete 1-2 lessons per day day along with USATest Prep assignments.

8148449220 Texts only please

Daily Class Dojo Check Ins

SCIENCE/SOCIAL STUDIES PRINT MATERIAL

Social Studies-Alimahmoodi:

Chapter 32: New Challenges

Day 1 (Monday 4/13)

- 1. Read Chapter 32 Lesson 1
- 2. Answer the review questions at the end of the reading

Day 2 (Tuesday 4/14)

- 1. Chapter 32 Lesson 1 Guided Reading
- 2. Chapter 32 Lesson 1 Study Guide "The Global War on Terror"

Day 3 (Wednesday 4/15)

- 1. Lesson 1 Quiz
 - a. Please use all materials that you have available to you to complete this guiz

Day 4 (Thursday 4/16)

- 1. Read Chapter 32 Lesson 2
- 2. Answer the review questions at the end of the reading
- 3. Chapter 32 Lesson 2 Guided Reading

Day 5 (Friday 4/17)

- 1. Chapter 32 Lesson 2 Study Guide "New Challenges- the Obama Presidency"
- 2. Chapter 32 Lesson 2 Quiz
 - a. Please use all materials that you have available to complete this quiz

- 7th Grade Science Lesson Plan/Worksheet for April ,13-17/20
- Directions-Read and Understand the Lesson and the Vocabulary.
- Finish the homework by answering the questions at the end of the page.
- Use this website: https://www.khanacademy.org/
- Monday Lesson- Phototropism & photoperiodism
- Monday Homework- Phototropism & photoperiodism/Answer the Questions?
- Tuesday-Phototropism involves a mobile signal.
- Wednesday Lesson Phototropism and auxin
- Wednesday Homework Experiment (Plant seeds at home)
- Thursday Lessons/ Long-Day and Short-Day Plants
- Tuesday Homework-What is the Difference between Long-Day and Short-Day Plants.
- Friday- Plans Quiz

Guided Reading

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New Challenges

Lesson 1 The Global War on Terror

ESSENTIAL QUESTION

Why does conflict develop?

The Day That Changed the Nation

Sequencing Put the events listed below in the order in which they occurred. Put the letter of the event that happened first on line 1, the letter of the event that took place next on line 2, and so on.

1.	6	а.	Forces led by the United States invade Iraq.
2.		b.	Terrorists attack the United States on September 11, 2001.
3.		c.	The Taliban government of Afghanistan collapses.
4.		d.	U.S. forces invade Afghanistan.
5.			Fighting and violence in Iraq increase along ethnic and religious lines.
6.		f.	President George W. Bush asks the Taliban to turn ove Osama bin Laden.
7 .		g.	Saddam Hussein's government falls.

NAME	DATE	CLASS

Guided Reading Cont.

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New Challenges

A Second Bush Term

Finding the Main Idea For each group of sentences, underline the sentence that expresses the main idea of the paragraph.

- 1. The 2004 presidential race was tight. President Bush won a narrow victory in the popular vote. Bush was elected to a second term.
- 2. The war on terror resulted in changes in American civil liberties. The Bush administration jailed suspected terrorists at the military base in Cuba. They were never charged with a crime.
- **3.** The levees in New Orleans could not hold back all the water from Hurricane Katrina. When the levees broke during the storm, the city was flooded. The hurricane left thousands of people homeless. As many as 1,800 people died.

Print

The September 11 terrorist attacks represented a new type of warfare that challenged old ideas about how to defend the nation.

The Day That Changed the Nation

What events occurred on September 11, 2001?

Terrorism (TEHR • uhr • ih • zuhm) is the use of violence against civilians to reach a political goal, such as changing governments or their policies. Terrorists can be individuals or groups. They may act alone or with the support of a government.

On September 11, 2001, the United States suffered a devastating terrorist attack. Early that morning, terrorists hijacked four U.S. passenger planes. They then crashed two planes into New York City's World Trade Center. A third plane slammed into the Pentagon, the headquarters of the Department of Defense, near Washington, D.C. The fourth plane was likely headed to another Washington, D.C., target. Instead, heroic passengers attacked the hijackers, and the plane crashed in the Pennsylvania countryside.

When the attacks were over, some 3,000 people were dead. The U.S. government quickly identified who was responsible for the deadly attacks: a Saudi Arabian named Osama bin Laden and his terrorist organization, called al-Qaeda (al-KY • duh). Congress approved the use of force to fight the terrorists, and President Bush announced a war on terrorism.

Terrorism Increases

Most of the world's 1 billion Muslims—followers of Islam—reject terrorism. However, some fundamentalists, such as bin Laden, do not. Muslim fundamentalists call for a return to traditional ways. Those who favor bin Laden's methods believe the need to create a pure Muslim society calls for drastic acts. Some Muslims feel that Western (U.S. and European) culture weakens traditional Muslim values. United States' support for Israel is another factor behind strong anti-American feelings.

The War on Terrorism

Osama bin Laden had fought in Afghanistan in the 1980s against the Soviet invasion of that Muslim country. Using family wealth, he formed al-Qaeda, which became a terrorist group dedicated to the spread of fundamental Islam.

Bin Laden was supported by the Taliban, a Muslim fundamentalist group that had gained control of Afghanistan's government in the 1990s. Bin Laden used Afghanistan as his base for planning the September 11 attacks.

After September 11, President Bush demanded the Taliban turn over bin Laden and his followers and shut down all terrorist camps. When Taliban leaders refused, the U.S. military, aided by forces from several other countries, attacked Afghanistan, By December, the Taliban government had collapsed. The surviving Taliban fled into Afghanistan's mountains. Fighting with Taliban forces continued. Meanwhile, bin Laden escaped.

To protect the United States against further terrorist attacks, President Bush created a new federal agency—the Office of Homeland Security. In late October, Congress passed and the president signed into law the Patriot Act to combat terrorism. The law expanded the power of federal agents to tap telephones and track Internet usage in the hunt for terrorists. It also permitted agents to conduct secret searches of a suspect's home or office, without giving prior, or earlier, notice to the owner of the property.

War in Iraq

The September 11 attacks raised fears that terrorists might acquire nuclear, chemical, or biological weapons and use them against Americans. President Bush claimed that Iraq's leader, Saddam Hussein, had such weapons of mass destruction and could supply them to terrorists.

In 2003 a group of countries, led by the United States, invaded Iraq. Their forces quickly defeated the Iraqi army and drove Hussein from power. Hussein was later captured. The fighting did not end, however. Insurgents (ihn • SUHR • juhnts), or rebel groups, attacked the U.S.-led troops. The insurgents tried to defeat U.S. efforts to establish a democratic government, Some insurgents had ties to Saddam Hussein, al-Qaeda, or other extremist groups.

Irag, also, was torn by religious and ethnic divisions. Its Shia Muslims belong to one of the two main branches of Islam. Its Sunni Muslims belong to the second branch. Kurds are an ethnic minority who live mostly in northern Iraq. Hussein's fall sparked fighting among these groups.

As the conflict dragged on and more lives were lost, Americans' support for the war declined. Failure to find weapons of mass destruction led many to conclude the war was a mistake. Yet President Bush was determined to stay in Iraq to try to build a democracy. Elections were held in Iraq, and a democratic government was established. The new government, however, faced many challenges.

Describing Why did the United States invade Iraq?

A Second Bush Term

Why did President Bush lose support during his second term?

President Bush sought reelection in 2004. However, the ongoing Iraq war began to erode his support. A growing national debt, fueled by the war, drained the country's economic strength.

Election of 2004

The Democrats chose Senator John Kerry of Massachusetts to run for president. North Carolina Senator John Edwards was the party's choice for vice president.

President Bush claimed Kerry lacked the ability to carry on the war against terrorism. Kerry blamed Bush for the lack of success in Iraq and the weak economy. Election Day saw the highest voter turnout since 1968—nearly 61 percent of eligible voters went to the polls. Nationwide, President Bush won a majority of the popular vote. His victory helped increase the Republican influence in Congress.

Civil Liberties Issues

The war on terrorism raised questions about civil liberties. Concerned citizens and some members of Congress believed the Patriot Act violated the Fourth Amendment's protections against unreasonable searches and seizures. Supporters of the Patriot Act argued that restricting the act would result in protecting terrorists while endangering the lives of innocent Americans.

Another issue was what to do with suspected terrorists captured in battle. The United States held many of these suspects at the American military base at Guantanamo Bay, Cuba. Bush officials claimed the prisoners were illegal enemy fighters who had very few rights.

The Supreme Court disagreed. In 2004 it ruled in Rasul v. Bush that these prisoners had some legal rights. Those rights included the right to appeal to a court. Bush then set up special military courts to hear each case, In 2006, however, in Hamdan v. Rumsfeld, the Court struck down this plan. It ruled that Bush's military courts violated U.S. military and international laws. Bush agreed to protect certain prisoner rights.

Other Issues at Home

Early in President Bush's second term, he had to fill two vacancies on the U.S. Supreme Court. As a result, the president was able to move the Court in a more conservative direction. First, Bush named federal judge John G. Roberts, Jr., to replace retiring justice Sandra Day O'Connor. Before the Senate could act, however, Chief Justice William Rehnquist died, and the president named Roberts to replace him. Roberts easily won Senate confirmation as chief justice.

Next, Bush tried to fill the O'Connor vacancy. After Senate opposition to Bush's first nominee, the president named federal judge Samuel Alito, Jr. Although some Democrats expressed concern about Alito's conservative views, the Senate voted 58-42 to confirm him.

Disaster struck in August 2005. Hurricane Katrina slammed into the coast along the Gulf of Mexico. The storm left thousands homeless and at least 1,800 people dead. The city of New Orleans suffered great damage. Rising waters broke through levees (LEH • veez), or high walls along waterways, and flooded the city.

Many Americans wondered why national, state, and local governments failed to respond more quickly. As criticism mounted, President Bush promised federal funds to rebuild New Orleans.

In 2006 President Bush called for immigration reform, but the two houses of Congress disagreed over how to go about it. The Senate bill allowed undocumented aliens who grew up in the United States and graduated from high school to apply for citizenship. The House did not support any agreement that allowed unauthorized aliens to live and work in the country. House members called for the United States to build a wall along its Mexican border. By this time, the United States had already tripled the size of its border patrol without reducing illegal immigration.

The Elections of 2006

In 2006 voters made clear their unhappiness with President Bush's policies. The Democrats won control of both houses of Congress for the first time since 1992. House Democrats elected Nancy Pelosi to be the first female Speaker of the House of Representatives.

Troop Surge in Iraq

The day after the election, Secretary of Defense Donald Rumsfeld—a chief planner of the Iraq war—resigned. Bush chose Robert Gates to replace Rumsfeld and put a new commander—General David Petraeus—in charge of the forces in Irag. The president then announced a "surge," or rapid increase, of some 30,000 more troops in Iraq. As a result of growing violence between different groups in Iraq, Bush and top military leaders believed they needed to increase the number of American troops in Iraq. They believed that a surge of troops would reduce the violence and provide better security for Iraq's government and population. House Democrats criticized his new strategy. They called for him to set a definite, or specific, timetable for pulling U.S. troops out of Iraq.

By the fall of 2008, violence in Iraq had been sharply reduced. That same year, the president signed the time line for total U.S. withdrawal from Iraq. By August 2010, the number of U.S. troops was reduced to about 50,000. Their job was primarily to train Iraqi troops.

Economic Recession

In 2007 a major financial crisis developed. Millions of Americans lost their homes and jobs. Financial institutions failed. Many large companies reported record losses. After years of running a cash surplus, Social Security, which depends on the contributions of workers, began running a deficit. In 2008 the economy became the most important issue for voters.

Summarizing What did the Supreme Court rule in Hamdan v. Rumsfeld?

LESSON 1 REVIEW

Review Vocabulary

- 1. Use the following terms to write a short paragraph about the war on terror:
- a. terrorism b. insurgent
- 2. Identify the significance of these words:
- a. levee b. prior notice

Answer the Guiding Questions

- 3. Describing How did the September 11 attacks affect President Bush's policies?
- 4. Determining Cause and Effect Why did the economy weaken during Bush's second term?
- 5. Identifying What fundamentalist group controlled Afghanistan's government in the 1990s and supported the vision of Osama bin Laden?
- 6. INFORMATIVE/EXPLANATORY What issues did President Bush face during his second term in office? What happened as a result of his response to these issues? Write a short essay that answers these questions.

NAME DATE CLASS	NAME		CLASS
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Guided Reading

networks

New Challenges

Lesson 2 The Obama Presidency

ESSENTIAL QUESTION

How do governments change?

A Historic Change

Specifying Answer the following questions in 1 or 2 sentences.

1,	What two things made the 2008 election historic?
	a
	b
2.	What were the key issues surrounding the 2008 presidential election
	a
	b
3.	Why do you think the election brought such a high voter turnout?

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Guided Reading Cont.

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New Challenges

Domestic Issues

Identifying Choose the entry from Column B that best matches the description in Column A. Place the letter in the space provided.

Column A		Column B
1	Health care reform	a. Mitt Romney
2	. Supreme Court Justice	b. Tea Party
3	. Obama's challenger in 2012	c. Budget Control Act
4	. Intended to stimulate the economy	d. Affordable Care Act
5	. Critical of President Obama's reforms	e. Sonia Sotomayor
6	. Part of the deficit reduction plan	f. American Recovery and Reinvestment Act

NAME	DATE	CLASS

Guided Reading Cont.

networks

New Challenges

Foreign Policy

Making Connections In the spaces provided, answer the following questions in one or two sentences.

Ι.	What did President Obama's appointment of Hillary Rodham Clinton as Secretary of State say about his character and his willingness to improve relations with other nations?
2.	How did President Obama continue President Bush's war on terror?
3.	What do you think motivated President Obama to provide support for rebels in Libya and for armies fighting ISIS?

Print

In 2008 Barack Obama became the first African American elected president of the United States. He was reelected president in 2012.

A Historic Change

Why did Americans choose Barack Obama as president in 2008?

As the presidential election of 2008 approached, candidates in both major parties competed to become the presidential nominees. The Iraq war and a weak economy were key issues.

Senator John McCain of Arizona won the Republican nomination. McCain was a Vietnam War hero and a reformer known for working with both parties. He named Alaska Governor Sarah Palin as his running mate. She became the first woman ever to run on a national Republican ticket.

Democrats seeking nomination included Senator Barack Obama of Illinois and former First Lady and New York Senator Hillary Rodham Clinton. Senator Obama won the nomination. He was the first African American ever nominated to run for president by a major party. He chose as his running mate Senator Joseph Biden of Delaware.

For a while, it appeared as if the election would be close. The severe financial crisis that began in 2007, however, continued. Voters seemed to blame Republican policies—and decided it was time for a change in leadership.

Obama got 53 percent of the popular vote and 365 electoral votes to McCain's 173. In addition to the presidency, Democrats increased their majority in both the Senate and the House of Representatives.

The New President

Barack Obama was born in 1961 in Hawaii. Before his run for president, Obama served as a state senator in Illinois and then as a U.S. senator. In his Inaugural Address, he reminded Americans of what his election meant to the nation's ideals:

"This is the meaning of our liberty and our creed—why men and women and children of every race and every faith can join in celebration across this magnificent mall, and why a man whose father less than sixty years ago might not have been served at a local restaurant can now stand before you to take a most sacred oath."

Identifying What was the most important issue that influenced the 2008 presidential election?

Domestic Issues

What challenges did Barack Obama face once he became president?

President Obama took office during the worst economic crisis since the Great Depression. In October 2008, President Bush and Congress approved a bill to supply \$700 billion for the country's financial institutions and strengthen the economy. Despite this, home losses and bank closures continued.

After Obama took office, he got Congress to pass the American Recovery and Reinvestment Act of 2009 to stimulate the economy. The \$787 billion spending bill included jobless benefits, tax cuts for workers, and funding to create jobs. Obama also approved money for a bailout—a financial rescue of some companies.

Health Care

One of the president's key goals was reforming the nation's health care system. Many Americans did not have health insurance. Why? First, it can be very expensive. Second, insurance companies were allowed to deny coverage to people who had certain illnesses or conditions.

The Affordable Care Act, often called Obamacare, which passed in 2010, had two major goals: making it easier for the millions of people without health insurance to get it and making health insurance better for those who already did have it.

The president believed this reform would rein in health care costs and protect consumers from unfair insurance programs. Since 2010, Republicans in the House of Representatives voted more than 60 times to repeal, or overturn, the Affordable Care Act. They argued that it would increase the nation's deficit and decrease health care quality.

Justices on the Supreme Court

In the first years of Obama's presidency, Supreme Court Justices David Souter and John Paul Stevens retired. Obama replaced these justices with Sonia Sotomayor and Elena Kagan. These women are now the third and fourth female justices in the nation's history, Born to and raised in a Puerto Rican family in the Bronx, New York, Sotomayor is the nation's first justice of Latin American descent.

Later, in the last year of Obama's second term, Justice Antonin Scalia died unexpectedly. His death led to controversy, as Republican leaders in the Senate refused to hold confirmation hearings for a new justice. They argued the choice should be left to the next president.

The Tea Party Impacts Congress

Fears that Obama's economic reforms would increase the national debt caused "Tea Party" protests. The name referred to the American colonists who staged the Boston Tea Party in 1773. Most Tea Party protesters opposed both Bush's and Obama's economic stimulus plans, high taxes, and "big government" programs such as the Affordable Care Act. They disagreed on many other issues.

In 2010, Republicans--with Tea Party support--won control of the House of Representatives and captured more Senate seats. In 2011 Congress failed to reduce the deficit as promised and some automatic spending cuts went into effect. The government temporarily shut down and some programs such as NASA, Head Start, and Meals on Wheels were downsized. The federal deficit was, however, reduced.

Describing What were the arguments for and against the Affordable Care Act?

Foreign Policy

How did the continuing threat of terrorism challenge the Obama presidency?

During his terms in office, President Obama faced a number of issues and crises around the world. While parts of the Middle East remained in turmoil, other parts of the world, such as Europe, also experienced problems.

Continuing Issues in the Middle East

Obama's greatest foreign policy challenge was the unpopular wars in Iraq and Afghanistan. Obama ended the U.S. military role in Iraq but kept troops longer in Afghanistan, where militants remained a threat. In 2011 U.S. forces located and killed Osama bin Laden in neighboring Pakistan. Obama originally planned to remove U.S. troops from Afghanistan by late 2014. However, as the Taliban made new territorial gains against a still-strengthening Afghan army, the president revised his plan. It called for some 5,000 U.S. troops to remain in Afghanistan into 2017.

Meanwhile, uprisings toppled dictators in other Middle Eastern countries, such as Tunisia, Libya and Egypt. In Syria, Bashar al-Assad's harsh rule led to a brutal civil war. World leaders pressured al-Assad to step down, but he refused.

In 2014 a new threat emerged. A group that had split off from al-Qaeda known as the Islamic State of Iraq and Syria (ISIS) killed thousands and seized control of several major Iraqi cities, towns and oil fields. ISIS, known for its very strict view of Islam, declared that it wanted to create an Islamic state ruled by Sunni Muslims. ISIS targets Christians, non-Sunni Muslims, and religious minorities.

In the summer of 2014, President Obama authorized airstrikes against ISIS forces in Iraq and Syria. The United States and partner nations also increased support for the Iraqi army and other fighters against ISIS and provided humanitarian assistance to civilians.

People living in areas of Syria, Iraq, and other nations were driven out of their homes by ISIS. Hundreds of thousands of these displaced people headed to European nations to escape the violence in their homelands. By the end of 2015, officials estimated that 750,000 people had been displaced. Many European nations faced economic, political, and social challenges as the refugees arrived. Controversy arose in those countries over how many refugees to accept. The United States faced similar controversy over the acceptance of refugees fleeing ISIS. Some Americans feared that terrorists could enter the country among the refugees.

ISIS took credit for several terrorist attacks in Europe that shocked Americans and the world. In November 2015 in Paris, individuals linked to ISIS carried out a number of coordinated attacks that killed over 120 people and injured many more. In March 2016, similar attacks took place in Brussels, Belgium, killing some 35 people. Following the attacks, President Obama pledged continued U.S. support for the international efforts to defeat ISIS and terrorism.

Troubles in Europe

As the U.S. economy improved during the early 2010s, the economy in other parts of the world still faced challenges. A number of European nations that belonged to the economic group known as the European Union (EU) struggled with high debts and unemployment. Because the countries in the EU share a currency, known as the euro, the struggling nations affected the whole region's economy. The U.S. economy is closely connected to Europe's through trade and investments. Uncertainties over Europe's economic future worried American investors. American officials encouraged European leaders to stabilize their economies.

In Eastern Europe, actions taken by the country of Russia concerned U.S. leaders. Citizens in the country of Ukraine, which borders Russia, disagreed about their country's ties with their neighbor. When residents of Crimea, a region of eastern Ukraine, protested for closer ties with Russia in early 2014, Russia sent military forces to annex the area. European and U.S. leaders strongly protested the Russian action and imposed economic sanctions on Russia. Still, violence between pro- and anti-Russian forces in Ukraine continued despite a cease-fire agreement. Tensions between the United States and Russia remained high.

Asia Trade

In November 2014, Obama traveled to Asia. He met with Chinese leaders to discuss U.S.-Chinese political and economic relationships. Obama then met with other Pacific Rim leaders to discuss the Trans-Pacific Partnership Free Trade Agreement. Obama's goal was that, when approved, this trade agreement would boost U.S. exports and lower tariffs for American goods in the Pacific Asia region.

Describing What were the major foreign policy issues the Obama administration faced?

Obama's Second Term

What disagreements and achievements represent Barack Obama's second term in the White House?

The 2012 election saw voters deeply divided. President Obama ran for a second term, with Joseph Biden again as his running mate. Their Republican challengers were former Massachusetts Governor Mitt Romney and his running mate, Wisconsin Congressman Paul Ryan. President Obama won reelection to a second term, winning the popular vote 51.1 percent to 47.2 percent and the electoral vote 332 to 206.

Republicans kept control of the House, and Democrats, the Senate. The president and congressional Republicans were often at odds on how to resolve the debt and other national problems. Citizens challenged both political parties to work together to find solutions to the nation's problems.

Economic Signals

In the fall of 2014, the unemployment rate, which had been steadily dropping for several months, fell below 6 percent for the first time in more than six years. Some critics were wary of the numbers, however. They pointed out that the number of people who had stopped looking for work was growing. People who no longer search for work are not included in compiling the unemployment rate. In the midterm elections of 2014, the Republicans increased their lead in the House of Representatives and took control of the Senate for the first time since 2006.

The 2016 Election

The 2016 presidential election campaign revealed a deep national divide over political, economic, and social issues. A large number of Republicans entered the race and many of them were elected officials, governors, or senators. But in a surprise, it was billionaire businessman and media star Donald Trump who won his political party's nomination. He competed against former first lady, New York senator, and Obama's secretary of state Hillary Clinton. Even though Trump said things about minorities and women that angered many people, a growing number of Americans agreed with Trump's goal to "Make America Great Again" by emphasizing America's global independence, improving the slow economy, creating better jobs, and protecting the nation from foreign threats.

The differences between Clinton and Trump were very clear. Clinton was the first female presidential nominee by either the Democratic or Republican parties. She had decades of experience in government. Trump had no government or military experience. Yet, the battle between the two candidates became a contest of personalities and was less focused on traditional political issues. Trump kept his supporters angry over several events in Clinton's past government service especially improper use of State Department emails. Before the election, the FBI investigated and cleared Clinton of any criminal wrongdoing. The Clinton campaign described Trump as an angry, abusive man who was unpredictable and unsuitable to represent the United States.

The results on Election Night shocked many—from politicians to pollsters. Trump's message appealed to frustrated Americans who could not get good jobs and felt ignored by Washington D.C. Clinton appealed to women, minorities, and more educated voters—but not to the same levels of enthusiasm that had elected Barack Obama to the White House. Although Clinton won the popular vote, the Electoral College total swung on close vote counts in Wisconsin, Michigan, and Pennsylvania—driven by voters that had suffered from years of industrial economic decline before and during the recession and who yearned for change.

Describing What were two significant facts about the 2016 presidential election?

LESSON 2 REVIEW

Review Vocabulary

- 1. What is the definition of bailout?
- 2. Use the term bailout in a short paragraph describing President Obama's efforts to boost a failing economy.

Answer the Guiding Questions

- 3. Identifying What event helped push Barack Obama to victory in the 2008 election?
- 4. Explaining Why were some Americans critical of President Obama's approach to domestic issues?

- 5. Speculating Why do you think ISIS wanted to create an Islamic state?
- 6. INFORMATIVE/EXPLANATORY What challenges did Barack Obama face as president? What did he do to try to resolve those challenges? Write a short essay that answers these questions.

Lesson Quiz 32-2

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New Challenges

DIRECTIONS: Matching Match each item wi	th the correct statement below.
1. Running mate of Barack Obama	A. ISIS
2. economic group with a shared of	currency B. Budget Control Act
3. Commonly referred to as Obam	acare C. Joseph Biden
4. Enacted to reduce the deficit	D. European Union
5. Islamic militants	E. The Affordable Care Act
DIRECTIONS: Multiple Choice Indicate the a	answer choice that best answers the question.
 6. In addition to the war in Iraq, whethe presidential election of 200. A. the war on drugs B. the economy C. vacancies on the Supreme Computer of the Supreme Com	
 7. What problem did the Affordable A. healthcare reform B. a reduction in the deficit C. humanitarian assistance to volume D. assistance to homeowners under the contract of the	ictims of ISIS
 8. Who was President Obama's op A. Sarah Palin B. John McCain 9. What action did President Oban A. jobless benefits B. a bailout 	D. Hillary Clinton a take to rescue companies in financial crisis? C. tax cuts for workers D. cuts in defense spending
 10. Which of these actions was inte A. passage of Obamacare B. withdrawal of troops from Ira C. passage of the American Re D. downsizing of government a 	nded to stimulate the economy? aq covery and Reinvestment Act

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New Challenges

Lesson 2 The Obama Presidency

ESSENTIAL QUESTION

How do governments change?

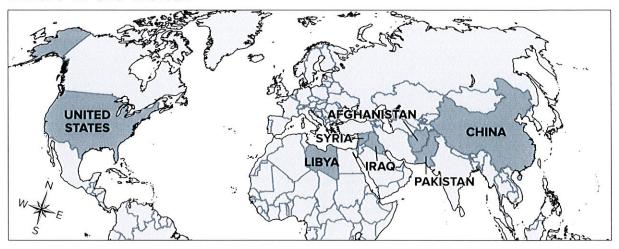
GUIDING QUESTIONS

- Why did Americans choose Barack Obama as president in 2008?
- What challenges did Barack Obama face once he became president?
- 3. How did the continuing threat of terrorism challenge the Obama presidency?

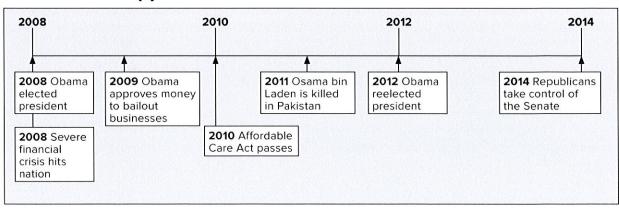
Terms to Know

bailout a rescue, such as from financial ruin

Where in the world?



When did it happen?



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New Challenges

Lesson 2 The Obama Presidency, Continued

A Historic Change

The 2008 presidential election made history. Barack Obama, a senator from Illinois, was the Democratic candidate. He was the first African American presidential candidate of a major party. He ran against Senator John McCain of Arizona. McCain named Sarah Palin, the governor of Alaska, as his candidate for vice president. She was the first Republican woman to run on a presidential ticket.

The Iraq war and a weak economy concerned many voters in the 2008 election. When a severe financial crisis hit the nation in the fall of 2008, many voters blamed the Republicans for the crisis. Obama won the election easily, and the Democrats won majorities in both the House and the Senate.

Domestic Issues

During his early years as president, Obama replaced two retiring Supreme Court justices. He chose Sonia Sotomayor and Elena Kagan as the third and fourth female justices in the nation's history. Sotomayor was the nation's first Latin American justice.

President Obama took office during the worst economic crisis since the Great Depression. Former President Bush and Congress had passed a bill that gave \$700 billion to the country's financial institutions to strengthen the economy. However, people were still losing their homes, and more banks were closing.

To boost the economy, President Obama worked with Congress to pass the American Recovery and Reinvestment Act of 2009. The bill set aside about \$8 billion to pay for jobless benefits, tax cuts for workers, and funds to create jobs. Obama also approved money for a **bailout**. A bailout is a way to rescue businesses from financial failure.

During his campaign, Obama had also promised to make changes to the health care system. Many Americans did not have health insurance. It was too expensive, and insurance companies could deny coverage to people with certain illnesses or conditions.

The Affordable Care Act was passed in 2010. It made health insurance affordable to millions of people who were uninsured. It also improved health insurance for those who already were insured. The new law was often called Obamacare. Critics of Obamacare said that it cost the government too much money. They claimed that it would hurt the overall quality of health care.

3

Identifying

1. What make the election of 2008 historic?



Summarizing

2. What two major issues concerned voters in the 2008 election?

ı.	200	

Marking the Text

3. Underline two actions that President Obama took to boost the American economy.

? Ex

Explaining

4. What were two advantages of the Affordable Heath Care Act?

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New Challenges

Lesson 2 The Obama Presidency, Continued

5.	Which two justices did President Obama appoint to the Supreme Court?
	Describing
6.	What is the Tea Party and what were its goals in the 2010 election?
2	Analyzing
7.	How did the Budget Control Act reduce the national debt?
<u>(</u>	Identifying
8.	What happened in

2014 that showed the

economy was

improving?

Obama had critics who argued that his actions were adding to a large national debt. Some protested at "tea parties." These were named after the American colonists who protested against the British by throwing tea into Boston Harbor in 1773.

In 2010, with support from the Tea Party, Republicans gained control of the House and won more seats in the Senate. They promised to make deep cuts in spending and overturn the health care law. However, the law was upheld by the U.S. Supreme Court in 2012.

In 2011, the Budget Control Act was passed to reduce the national debt. It set up a committee of six Democrats and six Republicans to create laws that would cut spending. The act stated that if the cuts were not made, there would be automatic spending cuts to many different programs. The committee did not achieve its goals. As a result many workers in government agencies lost their jobs. Also, many programs were reduced in size such as NASA, Head Start, the National Science Foundation, and Meals on Wheels. These cuts helped to reduce the national debt.

In 2012, President Obama ran for a second term against former Massachusetts Governor Mitt Romney. He won the popular vote by 51.1 percent to 47.2 percent and the electoral vote 332 to 206. Republicans kept control of the House, and Democrats kept control of the Senate. Two years later, in the 2014 elections, Republicans increased their number of seats in the House of Representatives. They also took control of the Senate for the first time since 2006.

In the fall of 2014, the economy began to show signs of improvement. The unemployment rate dropped below 6 percent for the first time in more than six years.

Late in President Obama's second term, Justice Antonin Scalia died. Republicans in the Senate resisted when the president tried to appoint a new justice.

As President Obama approached the end of his second term as president, the 2016 presidential election campaign began. It included many controversial candidates, including Republican billionaire Donald Trump and an extremely liberal Democrat, Vermont Senator Bernie Sanders. The campaign had debates across the country. The candidates created a lively debate about the future of the country.

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New Challenges

Lesson 2 The Obama Presidency, Continued

Foreign Policy

Obama's greatest challenge in foreign policy was the wars in Iraq and Afghanistan. Many Americans were tired of war and wanted the United States to pull out. Obama ended the military role in Iraq. However, he kept troops in Afghanistan. In 2011, U.S. forces found and killed Osama bin Laden in neighboring Pakistan. Obama planned to remove all troops from Afghanistan by 2014. He changed his plan as the Afghan army grew stronger. His new plan kept 5,000 U.S. troops in Afghanistan into 2017.

Southwest Asia was also a hotspot during this time. There were many uprisings and many dictators were overthrown. In Libya, dictator Muammar al-Qaddafi used force against his own people. Rebels overthrew him with U.S. help. In Syria, Bashir Hassad's harsh rule led to a brutal civil war. World leaders asked him to step down, but he refused.

In 2014, members of a group called the Islamic State of Iraq and Syria (ISIS) killed thousands of people. They took control of several Iraqi cities and oil fields. ISIS is known for its violence and strict view of Islam. It stated that it wanted its own Islamic state across the region that includes Syria, Iraq, Jordan, Israel, and other parts of Asia.

President Obama ordered airstrikes against ISIS in Iraq and Syria in 2014. The United States and other nations vowed to work together to fight ISIS.

ISIS was a threat to people living in the region. By the end of 2015, almost 750,000 refugees had left their homes. They looked for a safe place to start over in Europe and in the United States. Europe was worried because of the large number of refugees that were coming. Americans feared that terrorists may hide among the refugees and then sneak into the United States.

Then, in late 2015 and early 2016, ISIS took credit for terrorist attacks in the European cities of Paris and Brussels. President Obama continued to support international efforts to defeat ISIS and terrorism.

The U.S. economy was getting better in the 2010s, but the economy of the European Union was not as good. This worried some Americans because our economies are so closely linked through trade and investments.

Locating

9. Where was Osama bin Laden when he was killed?

? Determining Cause and Effect

10. Why did President Obama change his plan and keep troops in Afghanistan?

L

Listing

11. What two wars were Americans involved in during Obama's presidency?

Identifying

12. What group was responsible for the terrorist attacks in Paris and Brussels?

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New Challenges

Lesson 2 The Obama Presidency, Continued

? Drawing Conclusions

13. Why did the United States punish Russia?

Reading Check

14. How would the
Trans-Pacific
Partnership Free Trade
Agreement benefit
America?

FOLDABLES

15. Place a two-tab Foldable along the dotted line to cover Check for Understanding, Write Actions of the Obama Presidency on the anchor tab. Label the top tab *In the United* States and the bottom tab In Other Countries. List the facts that you remember about the actions that Obama took at home and abroad during his two terms as president. Use your Foldable to help answer Check for Understanding.

American leaders also worried about Russia's unfriendly actions in Ukraine and punished them with economic penalties. Tensions between the U.S. and Russia were high.

In 2014, Obama traveled to Asia. He met with Chinese leaders to discuss the relationship of the two countries. Obama them met with other countries in the area to discuss the Trans-Pacific Partnership Free Trade Agreement. If this trade agreement is approved, it will boost U.S. exports and lower tariffs for American goods in the Pacific Asia region.

				system?
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List two aced chal	-	ntries in wh	ich President Ob	ama

Making a Difference

Center for Urban Education © 2009

When I was in 7th grade last year, we had a special project. We were getting people to register to vote. I learned that it was so easy to register. I did not understand why more people did not register. It is a very important part of being an American. We learned in social studies that some countries do not allow people to vote. We learned that in US history at some times people have not been allowed to vote. Now everyone who is 18 can vote.

Our class decided to make a change in our community. So we made a plan to get people registered. We started with our own families. The school set up a voter registration day. It was part of the school's open house. So many people would be there. We made sure our parents were there and registered. We asked people why they had not registered before. Most people said they did not care much about it.

My brother was 18. He was going to high school. I asked him if he was registered. The answer was no. I told him how important it was and that he could come to the Open House. He said he would do better than that. I did not know what he meant.

My brother surprised me. He called the registrar's office. He was calling to find out where he could register. But he learned more. He found out he could be a volunteer registrar. He would have to go to a training session. Then he would be able to help others get registered. So he went downtown. He registered as a voter. Then he took the training.

My brother talked with his high school social studies teacher. He said he wanted to help other students get registered. If you are 18, you can register to vote, but many 18-year-olds don't register. It could be that they don't know they can register.

The teacher set up a voter registration table in the lunchroom. My brother sat there every day for a week. When students came in, if they were 18 they could go to register at his table. At the end of the week, 108 students had registered. My brother had done all that himself.

These are questions you can ask and answer about any story. Write your answers on another page. CCSSR.2. Figure out ideas when you read.

- 1. Sequence: Which event happened first? Which happened last?
- 2. Character Traits: Name one character. What is one trait you infer that character has? Explain why you think that.
- 3. Motive: What is something that person does? Why do you think that person does that?
- 4. Summarize: Summarize the story in four sentences. Tell about the characters and what they do.
- 5. Main Idea: What do you think is the main idea of the story?

My Painting

I wanted to show people how I felt about my new country. My family had moved here 5 years ago when I was just 7 years old. When we came I did not know any English. Everything was new and I was surprised every day. I had lived in a remote village far from the city. Now I was living in a city where there were so many people.

We would take the elevated train downtown. There we saw buildings that noted architects had designed. These architects were so famous that people all over the world knew their names. But I had never heard of them before. I looked up and was astonished at how high the buildings were.

I went to a school that was bigger than my whole village. More than 1,000 students go to the school. I remember my first day. The principal was friendly. So was the teacher. But I was mystified. I could not understand what the teacher and students were saying. Then another student came up to me during lunch. She said hello in Russian. I was so glad.

The teacher asked her to sit next to me for the rest of the school year and help me understand what they were saying. She was my official translator. But I wanted to learn English. So every day after school we would go to my home. She would help me learn English. To reciprocate, my mother would cook her family dinner. Once a week they would come to dinner. We would try hard to learn English, so instead of Russian everyone would talk in English.

Now I have learned English, and I have learned a lot about the United States. I will put some symbols in my painting that show how I feel about this land. It is a land of helpful people. It is a land of many heritages. It is a land of collaboration. People here work together to help each other make progress. I'm thinking of putting a flag on the background and then putting people holding hands in the foreground. I'll make a sketch first and then will paint it.

Making a painting is a lot like writing an essay. First you think of the idea you want to express. Then you think of ways to communicate that idea. I think my painting will be a great way to tell people how I feel about my new homeland.

CCSSR1: Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

These are questions you can ask and answer about any story. Write your answers on another page.

- 1. Sequence: Which event happened first? Which happened last?
- 2. Character Traits: Name one character. What is one trait you infer that character has? Explain why you think that.
- 3. Motive: What is something that person does? Why do you think that person does that?
- 4. Summarize: Summarize the story in four sentences. Tell about the characters and what they do.
- 5. Main Idea: What do you think is the main idea of the story? Why?

Read Skillfully

My Father's Miracle

CCSSR2—infer a lesson from a story.

In school we learned about the earth. We learned that rivers flow from higher ground to lower ground. They usually end at a bigger river or go into a lake or ocean. I can see that every day in Chicago. Our river goes into the lake. It's a giant lake.

We used to go fishing on the river every summer. Most days you would find me and my grandfather there, fishing. My father was busy working for the city. I did not know what his job was. He said it was in the Sanitary and Ship Canal. He left early each morning and came home at night, always very dirty.

My grandfather would take me to the river. We'd sit all day and catch fish. I would listen to my grandfather tell about the times he had when he first came to Chicago. He had built our home by himself. "In the old days," he said, "This was a clean stream. "Now look at it. It is filthy."

That day was the end of our fun. We would see boxes floating by. Sometimes we even saw dead fish floating on it. When we brought the fish home, my mother would throw them out. "We can't eat this. This is dirty, bad fish." She sounded angry. But I thought she really liked my grandfather.

So my grandfather and I stopped bringing the fish home. Sometimes we would go to fish and throw them back. But mostly we just stayed at home. We were sad about it.

Then one Christmas my father was so busy he was not home. He even went to work on Christmas day. That New Year's day he worked, too. My mother was worried. "It is too cold." But he went anyway.

Then two days later the newspaper said, "It is a miracle!" That was the headline. I read the article. It told how the workers on the Sanitary and Ship Canal had done something impossible. They had reversed the Chicago River. They dug such a great hole that the river rushed away from the lake. It now went to the west. Now you could go on the river and canal all the way to the Mississippi River.

I was excited. So was my grandfather. He said, "Now we can go fishing this summer." We both laughed. So did my mother. My father smiled a lot, all day long.

What is a lesson people can learn from this story?

Underline the parts of the story that show that is the lesson you can learn.

My First Baseball Game

I remember everything about my first Cubs game, although it was a few years ago. My uncle came to take me to it on a Saturday in spring, a bright sunny day. He drove all the way from Indiana to Chicago to pick up me and my brother. We didn't take his car to the game. We traveled by train to the ballpark because he said traffic would be impossible.

He was right about how crowded it would be. When we got there it was so crowded people were walking in the street, and the cars were moving so slowly. I was only 10, not very tall at all, so it was hard to see over all the people who crowded the street. Finally, we got to the entrance, and then we went to our seats after we handed in our tickets.

We had tickets that were for seats far back, and it seemed like I climbed forever to get to them. When we got there I realized that even though we were at the upper level, I could see everything clearly, the entire field. It was great—seeing it this way was much better than watching it on TV.

Then the game started, and everyone cheered when the Cubs came out on the field. People around us were clapping and shouting. The man next to me said, "This is going to be the year. This year they're going all the way."

My uncle said to him, "Let's hope this is the one." But then he whispered to me, "I think he is too hopeful. We'll have to wait and see. I always start the year thinking they'll win the World Series, but then I remember the last year. They started the season winning and then they had a long losing streak."

"Hey, Hey, Hey!" The Cub batter hit a ball that soared out of the ball park.

Just then I heard "Hot dogs!" "Peanuts!" I looked and saw a vendor with a big tray hanging from his shoulders full of hot dogs in plastic wrap and bags of peanuts.

"Two hot dogs," my uncle shouted, and he gave the man next to us \$4 to pass along down to the man with the hot dogs. He sent back two steaming hot dogs.

"This is great," I said to my uncle as I started to eat my hot dog.

"Not so great," he said. "We just struck out. This inning is not a winning one. Baseball is a game of predicting. The batter has to predict what the angle of the ball will be and determine if it will be a good one to swing at or if he should just let it go past because it's not a good one to hit. The batter has seconds to make that decision. The batter has to keep his eye on the ball and guess. So baseball is a game of skills and choices"

It continued that way for the rest of the game, with us enjoying the food, and my uncle saying "maybe next time" each time a player swung at a bad pitch. We bought peanuts, we even got another hot dog. I had never eaten such delicious hot dogs. We'd hope every time a batter started out, and then were disappointed as one by one they

struck out and retired back to the bench. Still, it was a really pleasant day with great food, fine weather, and special time with my uncle. The final score was 7 to 0, so it was nine innings of hoping and then losing. We were disappointed about that score, but otherwise it was a perfect day.

"Tomorrow, they'll win, I'm certain!" I heard one person say as we left to go home. "Definitely," another replied. "The pitcher tomorrow is terrific, they'll get it done tomorrow."

When we were returning, I asked my uncle, "Why were they so optimistic when the score was 0 today—how can they be sure that tomorrow the team will win?

"That's what it means to be a Cubs fan: we believe in tomorrow. When they win, it's the best. If they lose we expect it will get better, even though experience may tell us it won't. Every year, we hope; every game we hope, and we don't abandon hope, that's loyalty. It's about supporting your team no matter what. Cubs fans are loyal. I've been coming to the Cubs games for 25 years, and I keep coming, win or lose. It's about believing in the team, about being loyal to your team."

"I see what you mean. Thanks for taking us, and thanks for being loyal to us."

Guess what happened the next year. The Cubs won more games, including a game my uncle took us to. They were getting better at making those choices. We went to a few games that year. And the next year we were there, too, cheering, even if they lost.

Then, it was amazing what happened this year. The Cubs won the whole thing—they won the World Series. Their fans were so excited—I've never seen adults scream and jump up that way. I called my uncle the next day. His voice was like a whisper, and I could hardly hear what he said.

"Are you sick?" I asked.

"No way," he answered. I was shouting so much last night I lost my voice. Win or lose, I always support that team, but it feels so good when they win. They may never win another World Series, but I'll always remember this year. And I'll always be loyal—they're my team, win or lose."

This story is an example of realistic fiction. Realistic fiction tells a story that could have happened. Some authors include facts about events that really happened in the story. This story does include an actual event. The Cubs did win the World Series in 2016. Their fans had been hoping for a very long time for that win. But that is an event, it is not the theme of the story.

Think More (Analyze a story to identify the theme—CCSSR2)

Which of these is the theme of the story?

__never give up __be loyal no matter what happens __baseball is a game of skills and choices

Explain why you think that is the theme.

Commutative, Associative, Inverse Properties

Name: Class: Date:

Directions: Complete the guided notes on the Commutative and Associative properties.

Commutative Property: _____



Note: Commutative sounds like _____! When someone commutes to work they drive or move from one place to another – from home to work!

_____ and _____ are commutative operations!

Remember: Subtraction & Division are not commutative operations!

Examples:

1. Addition

a)
$$3 + 4 = 7$$
 AND $4 + 3 = 7$

2. Multiplication

a)
$$2 \times 6 = 12$$
 AND $6 \times 2 = 12$

b)
$$3 \times 12 =$$
 ___ AND $12 \times 3 =$

c)
$$7 \times (-8) =$$
 AND $(-8) \times 7 =$ ____

d)
$$3 \times 4 \times 5 =$$
 __ AND $3 \times 5 \times 4 =$ __ AND $5 \times 3 \times 4 =$ ___



Associative Property:

-	-		
40	2	7]	
//	1	/	
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13		F	

Note: Associative sounds like ______. To associate means to keep company with - like if you associate with someone you are spending time in a group with them!

and _____ are associative operations!

Remember: Subtraction & Division are not associative operations!

&

Examples:

1. Addition

a)
$$(2+6)+8=16$$
 AND $2+(6+8)=16$

$$2 + (6 + 8) = 16$$

b)
$$(5+7)+10 =$$
 ____ AND $5+(7+10) =$ ____

2. Multiplication

a)
$$(2 \times 4) \times 7 = 56$$
 AND $2 \times (4 \times 7) = 56$

$$2 \times (4 \times 7) = 56$$

b)
$$(5 \times 2) \times 3 =$$
 ____ **AND** $5 \times (2 \times 3) =$

Practice:

Directions: Identify the property that makes the following mathematical statements true.

Statement

Property:

1.
$$78 + z = z + 78$$

2.
$$(Qr)s = Q(rs)$$

4.
$$9 + (8 + E) = (9 + 8) + E$$

6.
$$9 + k = k + 9$$



Name _____ Date ____

Commutative Property of Multiplication





Numbers can be multiplied in any order!

X

Use the Commutative Property of Multiplication to fill in the boxes!

1.

X

2.

3.

$$\rceil$$
 ,

Fill in the blanks!

5.
$$3 \times 5 \times 2 =$$

$$2 \times 3 \times 5 =$$

$$2 \times 3 \times 5 =$$
 OR $5 \times 3 \times 2 =$ _____

$$4 \times 5 \times 2 =$$

$$5 \times 2 \times 4 =$$



7th Grade Science Lesson Plan/Worksheet for April ,13-17/20

Directions-Read and Understand the Lesson and the Vocabulary.

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

Use this website: https://www.khanacademy.org/

Monday- Phototropism & photoperiodism

Key points

Plants have a variety of developmental, physiological, and growth responses to

light—sometimes only to particular wavelengths of light.

In phototropism a plant bends or grows directionally in response to light. Shoots

usually move towards the light; roots usually move away from it.

In photoperiodism flowering and other developmental processes are regulated

in response to the **photoperiod**, or day length.

Short-day plants flower when day length is *below* a certain threshold,

while **long-day plants** flower when day length is *above* a certain threshold.

In many plants, photoperiodism is controlled by the overlap between the day

length cue and the plant's internal circadian rhythms.

Introduction

Almost all plants can photosynthesize, and photosynthesis is key to these plants'

survival: it lets them make sugar molecules that serve as fuel and building materials.

But plants respond to light—sometimes, to specific wavelengths of light—in other ways

as well. These non-photosynthesis-related responses allow plants to adjust to their

environment and optimize growth.

For instance, some types of seeds will germinate only when they receive a sufficient amount of light—along with other cues. Other plants have ways to detect if they are in the shade of neighboring plants based on the quality of light they receive. They can increase their upward growth to outcompete their neighbors and get a bigger share of sunshine.

Plant responses to light depend, logically enough, on the plant's ability to *sense* light. Light sensing in plants involves special molecules called **photoreceptors**, which are made up of a protein linked to a light-absorbing pigment called a **chromophore**. When the chromophore absorbs light, it causes a change in the shape of the protein, altering its activity and starting a signaling pathway. The signaling pathway results in a response to the light cue, such as a change in gene expression, growth, or hormone production.

In this article, we will focus on two examples of plant responses to light and explore how these responses allow plants to match their growth to their environments:

- Phototropism is a directional response that allows plants to grow towards, or in some cases away from, a source of light.
- Photoperiodism is the regulation of physiology or development in response to day length. Photoperiodism allows some plant species to flower—switch to reproductive mode—only at certain times of the year.

Let's take a look at how these light responses work!

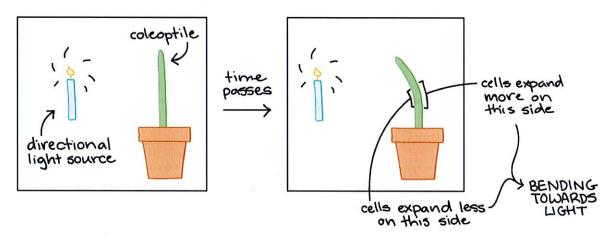
One important light response in plants is **phototropism**, which involves growth toward—or away from—a light source. **Positive phototropism** is growth towards a light source; **negative phototropism** is growth away from light.

Monday Homework- Phototropism & photoperiodism/Answer the Questions?
1.What happened during phototropism?
2. What are photoreceptors made of?
3. What happens during the process of photoperiodism?
6. What are photoreceptors made of?
7. What is a chromophore?
8.What is a phototropism?
9.What is Positive phototropism?
10. What is a negative phototropism?

Tuesday-Phototropism involves a mobile signal.

Read and understand the lesson. Watch the video https://youtu.be/2A_LKrLlhxE

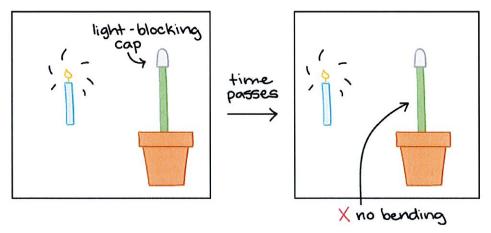
In 1880, Charles Darwin and his son Francis published a paper in which they described the bending of grass seedlings towards light. Specifically, they examined this response in very young plants that had just sprouted whose leaves and shoots were still covered by a sheath called the **coleoptile**.



light source (drawn as candle) and a coleoptile in a pot. The pictures shows a straight coleoptile becoming bent toward the light as time passes. The bending is caused by cells closer to the light expanding less than the plant cells facing away from the light.

The father-and-son team analyzed the bending response using experiments in which they covered either the tip or the lower part of the coleoptile. 11 start superscript, 1, end superscript Through these experiments, they found that light was perceived at the coleoptile's tip. However, the response—bending, at a cellular level, unequal elongation of cells—took place well below the tip. They concluded that

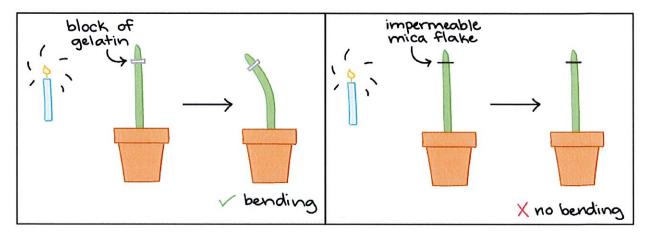
some kind of signal must be sent downwards from the coleoptile's tip towards its base.



light source (drawn as candle) and a coleoptile in a pot with a metal cap covering the very top of the coleoptile. The picture shows a straight coleoptile remaining straight when the metal cap is covering the tip.

In 1913, Danish physiologist Peter Boysen-Jensen followed up on this work by showing that a chemical signal produced at the tip was indeed responsible for the bending response:

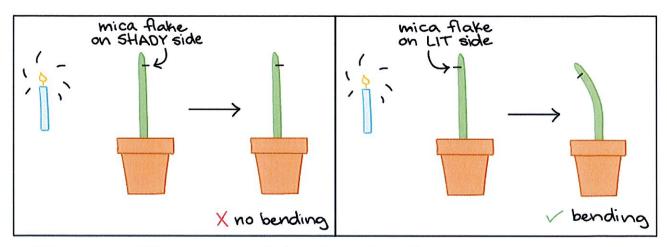
- He first cut off the tip of a coleoptile, covered the cut section with a block of gelatin, and replaced the tip. The coleoptile was able to bend normally when it was exposed to light.
- When he tried the experiment again using an impermeable flake of mica instead of gelatin, the coleoptile lost the ability to bend in response to light.



light source (drawn as candle) and a coleoptile in a pot. The coleoptile on the left has a permeable piece of gelatin separating the tip from the rest of the coleoptile, and it bends toward the light. The coleoptile on the right has a impermeable piece of mica separating the tip from the rest of the coleoptile, and it does not bend toward the light.

Only the gelatin—which allowed a chemical signal to travel through its pores—could allow the necessary communication between tip and base.

Through a variation on this experiment, Boysen-Jensen was also able to show that the mobile signal traveled on the shaded side of the seedling. When the mica plate was stuck in on the illuminated side, the plant could still bend towards the light, but when it was stuck in on the shaded side, the bending response no longer occurred. The results of this experiment also implied that the signal was a growth stimulant rather than a growth repressor since the phototropic response involved faster cell elongation on the shaded side than on the lit side.



light source (drawn as candle) and a coleoptile in a pot. The coleoptile on the left has a piece of mica separating the part of the tip further from the light from the rest of the coleoptile, and it does not bend toward the light. The coleoptile on the right has a impermeable piece of mica separating the part of the tip closer to the light from the rest of the coleoptile, and it bends toward the light.

Tuesday Homework- Understanding and Answer Questions?

1. What is a coleoptile?

- 2. Experiments-Plant seeds at home. Write down step by step and what do you observe daily. Make it a Mother's Day Gift. How to Sow Seeds 10 Easy Steps!
 - **3.** Find some trays or pots.
 - 4. Fill the seed tray with seed compost.
 - **5.** Moisten the surface of the compost.
 - **6.** Sprinkle the **seeds** evenly over the compost.
 - 7. Cover the seed Tray.
 - 8. Place the **seed** tray in a warm place.
 - 9. Uncover the seedlings once they germinate.
 - 10. Transplant the seedlings.

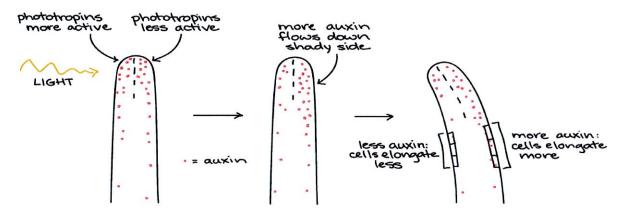
Wednesday- Phototropism and auxin/ Watch the video https://youtu.be/2A_LKrLlhxE

About this unit

Plants may seem less interactive than animals. But they actually have many ways of responding to their environment, changing their growth or physiology to make the best use of available resources. Learn more about plants and their response to environmental cues.

Today, we know that proteins called **phototropism** are the main photoreceptors responsible for light detection during phototropism—the name is a handy reminder of their role! Like other plant photoreceptors, phototropism are made up of a protein bound to a light-absorbing organic molecule, called the chromophore. Phototropism absorb light in the blue range of the spectrum. When they absorb light, they change shape, become active, and can change the activity of other proteins in the cell.

When a coleoptile is exposed to a source of light, phytotropin molecules on the illuminated side absorb lots of light, while molecules on the shady side absorb much less. Through mechanisms that are still not well understood, these different levels of phytotropin activation cause a plant hormone called auxin to be transported unequally down the two sides of the coleoptile.



Close up of tip of coleoptile showing the plant hormone auxin (pictured as red dots) concentrated toward tip. When light hits one side of the coleoptile, the phytotropins are more active on the side with light,

causing the auxin to flow down the shady side. The side of the coleoptile with less auxin has less elongated cells, and the side with more auxin has more elongated cells, causing the tip to bend toward the light.

More auxin is transported down the shady side, and less auxin is transported down the illuminated side. Auxin promotes cell elongation, causing the plant to grow more on the shady side and bend in the direction of the light source.

Thursday Lesson plan/ Long-Day and Short-Day Plants

Every plant for which flower initiation is light-dependent (and not all plants are) has a critical day-length associated with it. The term <u>long-day</u> describes plants that begin forming flower buds when the days are *longer* than their critical day length. The term <u>short-day</u>, on the other hand, describes plants that begin flowering when the days are *shorter* than their critical day length. Day-neutral plants form flowers independent of day length. Generally, long-day plants flower in summer; short-day plants flower in spring or fall.

Here are some examples of light-dependent plants and their approximate critical day lengths. There may, however, be cultivars of these plants which have been bred to have shorter or longer critical day lengths, to meet market demand for flowers at a certain time—or, in the case of spinach, to delay flowering to increase the length of the harvest season. Also, in some cases other environmental factors such as temperature can affect the time of flowering.

Two common **long-day** plants are dill and spinach. Both these plants will initiate flowers when the day lengths are *longer* than their particular critical day length:

Dill critical day length: 11 hrs.

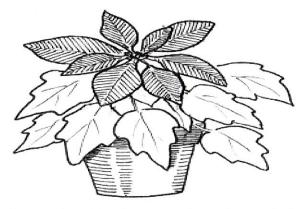
Spinach (some types) critical day length: 13 hrs.

Two familiar **short-day** plants are chrysanthemum and poinsettia. These plants will initiate flowers when the day lengths are *shorter* than their critical day length:

Chrysanthemum (some types) critical day length: 15 hrs.

Poinsettia critical day length: 10 hrs.

Poinsettia



Remember that the terms long-day and short-day don't refer to

the *length* of the critical day. Note that *short*-day chrysanthemums have a critical day length that is *longer* than *long*-day spinach. The key to the concept is that the terms *long-day* and *short-day* refer to whether the plant will begin flowering when the days are *longer* or *shorter* than their individual critical day lengths.

So, when the days (number of hours of daylight, that is) are 14 hours long, both chrysanthemums and spinach will be stimulated to begin flowering. Chrysanthemums will initiate flowers because the day length is shorter than their critical day length of 15 hours; spinach will flower because the day length is longer than its critical day length of 13 hours.

Other common long-day plants include foxglove, lettuce, petunia, sedum, and hibiscus.

Familiar short-day plants include kalanchoe, onion, and viola.

To make things even more interesting, some plants respond to photoperiod when they are young, but at maturity are day-neutral!

Remember that not all plants are photoperiodic (initiate flowers in response to day length). Some plants simply begin flowering once they've reached a certain age. These plants are termed <u>day-neutral</u>. Familiar day-neutral plants include cucumber, tomato, pea, sunflower—and dandelion!

- They flower when the day is short and the night is long.
- They do not flower when the day is long and the night is short.
- They do not flower when the long night is interrupted by a brief period of light.
- They do not flower when the long day is interrupted by a brief period of dark.

Tuesday Homework-Answer the Questions?

1.What are Short-day plants?	
1 What are long-day plants?	
2. What is a day-Natural plant?	

3. What is the difference between Long-day plants and short-day plants?

- 9. True or false? Pitcher plants are carnivorous.
- 10. The Japanese word "sakura" means the blossoming of what kind of tree?

Put the answers in the right place.

True
resin
false
pollination
vine
maize(corn)
photosynthesis
cherry
tree
true

Funny Science Facts

- Rabbits and parrots can see behind themselves without even moving their heads!
- Butterflies taste food by standing on top of it! Their taste receptors are in their feet unlike humans who have most on their tongue.
- Most of the dust in your home is actually dead skin! Yuck!
- Although the Stegosaurus dinosaur was over 9 metres long, its brain was only the size of a walnut.
- Humans get a little taller in space because there is no gravity pulling down on them.
- Because of the unusual shape of their legs, kangaroos and emus struggle to walk backwards.



- A hippopotamus may seem huge but it can still run faster than a man.
- Even if an analog clock is broken, at least it shows the correct time twice a day.
- · Sneezing with your eyes open is impossible.
- The trickiest tongue twister in the English language is apparently "Sixth sick sheik's sixth sheep's sick". Give it a try and see for yourself.

