



Dear 6th – 8th Grade Parents and Guardians:

While your students are home, we ask that you continue to partner with us in ensuring ongoing learning. Below is a list of activities we recommend your students complete on a daily basis.



Reading (20 minutes) - if you have access to online resources, your student can log into [Clever](#) to access district resources such as Pearson Realize, Compass Learning, and [Scholastic](#). Please encourage your student to choose stories or articles to read. If you have reading materials at home, feel free to use those as well. After students are done reading, have your students tell you what their article or story was about. Students may also complete hard copy Reading activities as well. Reading packet options are available [here](#).



Writing (30 minutes)- if you have access to online resources, please visit [Scholastic Story Starters](#) (6th grade only), [Story Jumpers](#), or [Story Board That](#) for fun and creative story starters and writing prompts. Have students use these prompts and tools to create their very own story. Students can also write... a story, their feelings, their thoughts about what they are reading, a letter, an information piece about something on which they are an expert. Writing packet options are available [here](#).



Math (30 minutes) - if you have access to online resources, your student can log into [Clever](#) to access Mathia. A Math [scavenger hunt](#) is provided to encourage your student to find the math that is all around them. Visit [IXL](#), [Khan Academy](#), and [Cool Math](#) for practice and fun Math games. Math packet options are available [here](#).



Social Studies (20 minutes) - if you have online access, your student can log into [Clever](#) to access district resources. You will also find articles in both English and Spanish at [Tweentribune](#). Have students to read and complete the quiz. Also visit [Education.com](#), [Newsela](#), and [IXL](#) for interactive Social Studies activities. Social Studies packet options are available [here](#).



Science (20 minutes) - if you have access to online access, your student can log into [Clever](#) to access district resources. Visit [Energy Kids](#) to learn more about energy as well as games and activities. Visit this [Optics 4 Kids](#) to learn about cool optical illusions and visit [Ask a Biologist](#) for virtual field trips and activities. Visit [YouTube videos](#) and [National Geographic Kids](#) to learn more about science. Science packet options are available [here](#).



Exercise (60 minutes a day) - regular exercise and movement is important to do every day. Movement helps you reduce stress, build strong bones and muscles, and helps you to be ready to learn! Try to get 60 minutes of physical activity every day. Visit [GoNoodle](#) for movement videos.



Estimados padres y tutores de 6º a 8º grado:

Mientras sus estudiantes estén en casa, le pedimos que continúe colaborando con nosotros para garantizar un aprendizaje continuo. A continuación, hay una lista de actividades que recomendamos que sus estudiantes completen diariamente.



Lectura (20 minutos) - Si tiene acceso a recursos en línea, su estudiante puede iniciar sesión en [Clever](#) para acceder a recursos del distrito como Pearson Realize, Compass Learning y [Scholastic](#). Por favor anime a su estudiante a elegir historias o artículos para leer. Si tiene materiales de lectura en casa, siéntase libre de usarlos también. Una vez que los alumnos hayan terminado de leer, pídeles que le cuenten de qué se trata su artículo o historia. Los estudiantes también pueden completar actividades de lectura impresas. Las opciones de paquetes de lectura están disponibles [aquí](#).



Escritura (30 minutos)- Si tiene acceso a recursos en línea, visite [Scholastic Story Starters](#) (solo 6th grado), [Story Jumpers](#), o [Story Board That](#) para iniciadores de historias divertidas y creativas y mensajes de escritura. Haga que los estudiantes usen estas indicaciones y herramientas para crear su propia historia. Los estudiantes también pueden escribir ... una historia, sus sentimientos, sus pensamientos sobre lo que están leyendo, una carta, una información sobre algo en lo que son expertos. Las opciones de paquetes de escritura están disponibles [aquí](#).



Matemáticas (30 minutos) - Si tiene acceso a recursos en línea, su estudiante puede iniciar sesión en [Clever](#) para usar Mathia. Una búsqueda de matemáticas se puede encontrar en [scavenger hunt](#) para animar a su estudiante a encontrar las matemáticas que en todo su alrededor. Visite [IXL](#), [Khan Academy](#), y para practicar y divertir con juegos matemáticos. Las opciones de paquetes matemáticos están disponibles [aquí](#).



Estudios sociales (20 minutos) - Si tienen acceso en línea, su estudiante puede iniciar sesión en [Clever](#) para acceder los recursos. Encontraran articulos en ingles y espanol en [Tweentribune](#). Los estudiantes pueden leer y contestar las preguntas aqui. Tambien visite [Education.com](#), [Newsela](#), y [IXL](#) para actividades interactivas. Las opciones de paquetes de estudios sociales están disponibles [aquí](#).










Ciencias (20 minutos) - Si tiene acceso a recursos en línea, su estudiante puede iniciar sesión en [Clever](#) para acceder los recursos. Visite [Energy Kids](#) para aprender más sobre energía, juegos y actividades. Visite [Optics for Kids](#) para aprender sobre ilusiones ópticas geniales y otras actividades. Visite [Ask a Biologist](#) para excursiones virtuales y actividades. Visite [YouTube videos](#) y [National Geographic Kids](#) para aprender más de ciencias. Las opciones de paquetes de ciencias están disponibles [aquí](#).










Ejercicio (60 minutos diarios) - es importante hacer ejercicio y movimiento regularmente todos los días. ¡El movimiento te ayuda a reducir el estrés, desarrollar huesos y músculos fuertes, y te ayuda a estar listo para aprender! Intente realizar 60 minutos de actividad física todos los días. Visite [GoNoodle](#) para videos de movimiento.









<p>Access these programs from Clever at https://www.clever.com/in/maywood89</p>	
	Lexia Core 5 has literacy activities with tracked progress and customized lessons. K-5; App available
	Raz-Kids has online leveled books from basic to advanced. Students can record themselves and take quizzes. K-5; English and Spanish; App available
	Imagine Español has Spanish literacy activities with tracked progress and customized lessons. K-3; Spanish
	Imagine Math has math activities with tracked progress and customized lessons. K-5
	Wonders/Maravillas includes literature, vocabulary, writing, and grammar activities K-5; English and Spanish; App available (separate sign-in required—email teacher if needed)
	World Book A world of learning at your fingertips. Explore important people, animals, maps, science, and activities. K-8; English and Spanish
	Edgenuity Pathblazer includes Math and Reading activities linked to standards. K-8; Limited School Access


If you need login assistance with login information, contact your teacher through [email](#).






Additional Resource Links






Reading	
	https://classroommagazines.scholastic.com/support/learnathome.html Choose books, videos, and activities by grade levels
	https://www.thespanishexperiment.com/stories Children's stories in Spanish
	https://www.storylineonline.net/ Actors and Actresses read books with illustrations
	https://www.getepic.com/ 1000's of award winning books. English and Spanish Signup required, free 30 days
	https://newsela.com/ English; https://newsela.com/rules/spanish Spanish News articles written for students with quizzes and writing prompts for 3-8; English and Spanish
	https://www.tweentribune.com/ Informational text at different grade levels
	https://stories.audible.com/start-listen Free audiobooks for PreK-High school students



Online Magazines	
	Time for Kids http://www.timeforkids.com
	Scholastic News http://magazines.scholastic.com English https://classroommagazines.scholastic.com/spanish.html Spanish
	Highlights Kids https://www.highlightskids.com/
	Sport Illustrated Kids http://www.sikids.com
	National Geographic Kids http://kids.nationalgeographic.com



Writing	
	http://www.scholastic.com/teachers/story-starters/index.html Story Starter ideas by grade level
	https://www.storyboardthat.com/ Digital story telling with backgrounds, characters, and text


Dual Language	
	https://l2trec.utah.edu/news/utahdliathome/spanish.php Spanish and Dual language activities and resources

Math	
	https://www.coolmath4kids.com/ K-5 Math games, lessons, brainteasers
	https://minds-in-bloom.com/math-scavenger-hun/ K-5 Math scavenger hunt ideas
	https://www.khanacademy.org/math K-8 Practice early math through grade 8
	https://www.ixl.com/ K-8 Practice early math through grade 8
	https://www.mathgames.com/math-games.html K-8 math games by grade and topic

Science and Social Studies	
	BrainPop Jr https://jr.brainpop.com BrainPOP Español https://esp.brainpop.com BrainPop https://www.brainpop.com/ BrainPopELL https://ell.brainpop.com Animated educational videos and activities on many school topics K-8; App available (Username: district89; Password: brainpop2)
	https://www.eia.gov/kids/ Information and games about energy
	https://www.optics4kids.org/illusions Optical illusions
	https://blockly.games/ Programming games for kids
	https://www.education.com/activity/social-studies/ Social Studies activities by grade level

Health	
	https://www.gonoodle.com/ Movement and mindfulness videos
	https://aha-nflplay60.discoveryeducation.com/families Fun activities, videos, and virtual field trips

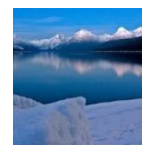
Art/Music	
	http://www.maywoodfinearts.org/?page_id=3043 Take an online class with Maywood Fine Arts
	https://colormandala.com/ Color mandelas online

For Parents	
	http://www.parenttoolkit.com/ English; http://www.parenttoolkit.com/home?lang=es Spanish Age level guides for academic, health, social emotional topics and video parenting guides English and Spanish

Virtual Field Trips/Tours

Use Google Earth to explore our National Parks.

[Badlands National Park](#)
[Death Valley National Park](#)
[Denali National Park](#)
[Everglades National Park](#)
[Glacier National Park](#)
[Grand Canyon National Park](#)
[Great Smoky Mountain National Park](#)
[Redwood National and State Parks](#)
[Rocky Mountain National Park](#)
[Yellowstone National Park](#)



Lesson ideas:

Choose a National Park. Record your observations, then choose to create one of the following:

- Design a travel brochure
- Write a newspaper article to describe the location and encourage travel there
- Create a map that shows the location of the national park

Zoos and Web Cams - Observe various zoo animals through web cams.

[Smithsonian's National Zoo](#)
[San Diego Zoo](#)
[Animal Planet Live](#)
[National Aquarium](#): Black Tip Reef Sharks, Jellies, and Pacific Coral Reef Live
[Seattle Aquarium](#): YouTube virtual field trip and lesson
[Seattle Aquarium Live Cams](#)



Lesson ideas:

Visit and observe an animal of your choice. Complete one of the following:

- Observe the animal for one week. Record these observations and then write a journal about the animal and its habits.
- Create an informative poster about the animal.
- Describe the animal's habitat.

[Planetarium](#) - Explore over 60,000 stars, locate planets, and watch sunrises and solar eclipses. If you enter your location, and you can see all the constellations that are visible in the night sky in your corner of the world.

[NASA Commercial Crew Virtual Tours](#) - YouTube series containing virtual tours of training facilities. Learn how the astronauts train for space travel and life aboard the International Space Station.

[Smithsonian Latino Center](#) - Features live broadcasts of Latina writers and virtual exhibits around latino cultures. Includes a Latino Virtual Museum Bilingual Teacher Training Took Kit that is now available online and via iTunes U.

Tour various locations from around the world.

[The Great Wall of China](#)
[Pompeii](#)
[Ellis Island](#) - this site also includes some additional activities

Lesson ideas:

Write a journal entry from about a journey to this location.
Create a travel brochure.

Take a trip to Walt Disney World and go on a virtual ride of some of Disney's famous attractions.

[Space Mountain](#)
[Splash Mountain](#)
[Test Track](#)
[Expedition Everest](#)
[Rock n Roller Coaster](#)
[Soarin'](#)
[Seven Dwarfs Mine Train](#)
[Rise of the Resistance](#)
[Mickey and Minnie's Runaway Railway](#)
[Slinky Dog Dash](#)
[Millenium Falcon/ Smuggler's Run](#)



8th

Student eLearning Activities Log Week 9 – May 18 – May 21

Student Name _____ Grade _____

Teacher _____

Please write the activities you completed each day.

	Monday	Tuesday	Wednesday	Thursday	Friday
Example:	Mathia Reading packet Math packet PE Science experiment Raz-Kids Compass Learning	Reading packet Math packet Raz-Kids Art Imagine Math	Imagine Math Writing Virtual Tour Read a book Jumped Rope/Burpees	Imagine Math Reading packet Math packet Social Studies Music YouTube exercise video	
Activities/ Assignments					

Parent Signature _____ Date _____

Registro de actividades de aprendizaje electrónico semana 9 del 18 de mayo al 21 de mayo

Nombre _____ Grado _____

Maestro/a _____

Por favor escribe las actividades que completaste cada día.

	lunes	martes	miércoles	jueves	viernes
Ejemplo:	Mathia Paquete de lectura Paquete de matemáticas Educación física Ciencias Raz-Kids Compass Learning	Paquete de lectura Paquete de matemáticas Raz-Kids Arte Imagine Math Lexía	Imagine Math Escritura Paseo Virtual Leer un libro Brincar la cuerda/sentadillas lexía	Imagine Math Paquete de lectura Paquete de matemáticas Estudios Social Video YouTube de ejercicio	
Actividades/ Tareas					

Firma de Padres _____ Fecha _____

With proms canceled, this family held a festive prom for two

By Washington Post, adapted by Newsela staff on 05.01.20

Word Count 755

Level 1030L



Carlee Castillo and her dad Cris pose for photos at a prom they held at home on April 17 after Carlee's high school prom was canceled due to the coronavirus. Photos: Sheila Castillo

High school proms across the country have been canceled because of COVID-19. Alternatives to the annual tradition are cropping up everywhere. People are trying to boost the spirits of countless disappointed teens left staring at unused formal wear hanging in their closets.

The coronavirus, also called COVID-19, is a new, flu-like illness. It emerged in December 2019 and has since been spreading around the world. There is no treatment yet, so health officials have been encouraging social distancing to slow the spread of the virus. Many schools are closed for the remainder of the school year, which has had an impact on school events, like the prom. So, people are getting creative with alternatives.

A Michigan theater is holding a prom on Facebook. A television station in Virginia asked teens to send in photos in their prom attire to put on the air. John Krasinski's hit YouTube show, "Some Good News," hosted a virtual prom, with more than 3 million views so far.

In Castle Rock, Colorado, the parents of one dispirited teen pulled off something none of them would have imagined a few months ago: an elegant prom for two in the dining room.

Months Of Prom Planning Down The Drain

It was months ago in February when Carlee Castillo and her mother picked out Carlee's prom dress. It is a cream-colored gown with gold and white sparkles. Like other high school seniors, 17-year-old Carlee was crushed when she learned in March that Douglas County High School's spring prom on April 17 was canceled. Even her graduation ceremony is on hold.

"I was so disappointed. I'd been planning my outfit and a fun night out with a group of my friends for a long time," she said of her prom. "But now, we'd all be staying home alone."

Then, in mid-April, Carlee's parents, Cris and Sheila Castillo, surprised her with something they had quietly planned for weeks: Since Carlee couldn't attend her senior prom, they decided to bring the dance to her.

"Your dad can be your prom date," Sheila told her daughter the night before the big event, "and I'll serve both of you dinner."

Dinner, Dancing Cheered On By Grandma

Promptly at 7 p.m. on April 17, Carlee descended the stairs in her prom dress and gold high-heeled sandals. Her father presented her with a daisy wrist corsage to match his boutonniere. He then accompanied her to their dining room, which had been decorated with balloons in purple and white. Sheila served takeout from Carlee's favorite Italian restaurant.

After enjoying a salad, spaghetti and meatballs, bruschetta and chocolate cupcakes, Carlee and her dad spent the rest of the night dancing to a playlist he had made. Carlee's 81-year-old grandmother, Ann Castillo, cheered them on.

The playlist included Carlee's favorite Abba songs and hits from Britney Spears, Lorde and Tame Impala, and her dad even included a few hits from his own high school days back in the 1970s.

The night held a sweet sense of déjà vu for Cris, age 60, a corporate lawyer. In 1978, he wore a lime-green tuxedo to his own senior prom. Later in life, he enjoyed daddy-daughter dances with Carlee when she was in the sixth grade.

"I had happy memories - even of the suit," he said, "and I'd always wished that I'd had one more daddy-daughter dance with Carlee. Thanks to Sheila taking charge, we both were able to have that chance."

"We Can Make This Special"

Sheila said there was no way she could recreate the school's plan to have a Roaring 1920s-themed dance at an antique car museum, but she decided to do what she could.

After consulting with Cris, she ordered cupcakes and balloons. Sheila scavenged for some fun props leftover from her last family reunion. She even bought a fringed gold backdrop to serve as a prom-night photo booth.

"I thought, 'We can make this special. Let's do it right,'" said Sheila.

For Carlee, a night dancing with her dad turned out to be the best evening in quarantine yet. When she goes away to college, where she plans to major in journalism, she will keep this memory close, she said.

"It was a lot of fun, and they played all of my song requests," she said.

Carlee said she's grateful her parents went all-out for the evening but admitted she is also thankful for small favors. Specifically, she appreciated that her dad decided to wear a black-and-white suit on home-prom night and leave the lime-green tux behind.

Writing: Choose a problem (and solution) described
[5-6 paragraphs] in the text. Explain what the problem
is and why it matters, using
examples, facts and details from
the text. If possible, describe
any solutions proposed in the text.

Quiz

1 Read the following paragraph from the Introduction [paragraphs 1-4].

A Michigan theater is holding a prom on Facebook. A television station in Virginia asked teens to send in photos in their prom attire to put on the air. John Krasinski's hit YouTube show, "Some Good News," hosted a virtual prom, with more than 3 million views so far.

What conclusion is BEST supported by the paragraph above?

- (A) Many people are watching shows such as "Some Good News" while staying home because of the coronavirus.
- (B) Many people are trying to help disappointed students who are missing major high school traditions.
- (C) Many people are holding events and gatherings online instead of in person because of the coronavirus.
- (D) Many people are relieved that their children are not spending time, money or energy planning for a prom.

2 The following sentence from the section "Dinner, Dancing Cheered On By Grandma" helps to prove the claim that Carlee Castillo enjoyed her at-home prom.

The playlist included Carlee's favorite Abba songs and hits from Britney Spears, Lorde and Tame Impala, and her dad even included a few hits from his own high school days back in the 1970s.

Which sentence from the section provides further support for the claim?

- (A) Promptly at 7 p.m. on April 17, Carlee descended the stairs in her prom dress and gold high-heeled sandals.
- (B) He then accompanied her to their dining room, which had been decorated with balloons in purple and white.
- (C) Sheila served takeout from Carlee's favorite Italian restaurant.
- (D) The night held a sweet sense of déjà vu for Cris, age 60, a corporate lawyer.

3 How did the at-home prom affect Carlee Castillo's dad?

- (A) It made him think about other times he had danced with his daughter.
- (B) It made him feel stressed about planning a good party.
- (C) It made him feel relieved that she was safe from the coronavirus.
- (D) It made him remember dancing with his own mother.

4 According to the article, WHY did Carlee feel happy about the music during her at-home prom?

- (A) They played some of her mother's favorite songs.
- (B) They played songs that her grandmother used to sing to her.
- (C) They played all of the songs she wanted to hear.
- (D) They played the same songs that her prom DJ had planned to play.

Answer Key

- 1 Read the following paragraph from the Introduction [paragraphs 1-4].

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Writing: How-to Essay

Practice

A **how-to essay** is a short piece of expository writing. Its purpose is to explain how to do something. An effective how-to essay includes these elements:

- a focused topic that can be fully explained in an essay
- definitions of terms or materials that may be unfamiliar to the reader
- a clear sequence of steps the reader must follow, presented in chronological order
- transitional words and phrases, such as *first*, *next*, and *last*, to make the order clear

A Read this how-to essay. Then, respond to each item.

To make homemade applesauce, you will need 6 red apples, 3/4 cup sugar, and a teaspoon or two of cinnamon. You will also need a large covered pot, a colander or strainer, a food mill (a kitchen utensil that mashes and grinds food), and a large bowl. First, cut the apples into quarters and remove the cores and seeds. (Leaving the skins on will give your applesauce a warm, pink color.) Then, place the cut apples into the large pot. Add water to cover them. Next, cover the pot, place it on a stove burner, and bring the water to a boil. After that, turn the heat down to low and let the apples simmer until they are soft, about twenty minutes. Place the colander in a sink and carefully drain the apples into it. Next, place the drained apples into the food mill and grind the contents into a large bowl. Discard the skins that collect in the mill. Finally, stir the sugar and cinnamon into your applesauce.

1. What does this essay instruct readers to do? _____
2. What ingredients and equipment are needed? _____

3. Which piece of equipment did the writer define? Why? _____

4. List three transitional words that help readers follow the steps.

B On a separate sheet of paper, write a how-to essay to explain how to do something that you enjoy. For example, explain how to make a craft project, do a science experiment, or play a board game. Explain any terms that may be unfamiliar to the readers, and make sure you give the steps in the correct order.

Writing: How-to Essay**Assess****A** Read this how-to essay. Then, respond to each item.

It's easy and fun to make old-fashioned cornbread, and once you taste it, you will never use a packaged mix again. First, gather the ingredients: 1 cup cornmeal, 1 cup sifted flour, 1 teaspoon baking soda, 1 teaspoon salt, 3/4 cup sugar, 1 egg, and 1 cup milk. You will need the following equipment: a 10- to 12-inch cast-iron skillet (a heavy, ovenproof frying pan) or a shallow, 9 x 13-inch baking pan; a mixing bowl; a wire whisk or wooden mixing spoon; and a wire cooling rack. Now, you can begin to cook.

Begin by preheating the oven to 400 degrees. Then, grease the skillet or baking pan with butter or cooking spray. After that, combine the cornmeal, flour, baking soda, salt, and sugar in the mixing bowl. Next, lightly whisk in the egg and milk. (Stir only until blended; overbeating will make your cornbread tough.) Pour the mixture into the greased pan, and bake until golden on top, about 25 minutes. Cool slightly on wire rack. Then, slice into wedges and serve immediately.

1. What does this essay instruct readers to do? _____
2. What ingredients and equipment are needed? _____

3. Which piece of equipment did the writer define? Why? _____

4. List three transitional words that help readers follow the steps.

B On a separate sheet of paper, write a how-to essay to explain how to do something that you enjoy. For example, explain how to put a friend's phone number into a cell phone's memory, how to put a zipper into a sewing project, or how to use a computer to make a greeting card. Explain any terms that may be unfamiliar to the readers, and make sure you give the steps in the correct order.

Answer Key

Writing: How-to Essay

Practice, p. 124 A Sample answers:

1. how to make homemade applesauce
2. Ingredients: apples, sugar, cinnamon; Equipment: large covered pot, colander or strainer, food mill, large bowl
3. a food mill; the writer thought the term might be unfamiliar to readers.
4. first, then, next, after that, finally B Essays should clearly explain a process. All equipment and materials should be mentioned, and unfamiliar terms should be defined. Steps should occur in chronological order, with transitional words and phrases used to make the order clear.

Assess, p. 125

A Sample answers:

1. how to make cornbread
2. Ingredients: cornmeal, flour, baking soda, salt, sugar, egg, and milk; Equipment: a castiron skillet or a baking pan; a mixing bowl; a wire whisk or wooden mixing spoon; and a wire cooling rack
3. the cast-iron skillet; the writer thought that readers might be unfamiliar with that piece of equipment.
4. first, now, begin, then, next

B Essays should clearly explain a process. All equipment and materials should be mentioned, and unfamiliar terms should be defined. Steps should occur in chronological order, with transitional words and phrases used to make the order clear.

Name: _____

Date: _____

Order of Operations

- What is the acronym for the order of operations?
 - DASEFX
 - PEMDAS
 - PDIDY
 - SINCOS
- If you weren't allowed to use your calculator, which part of the following expression should you calculate first?
 $(8 + 5 \times 2) \times 8$
 - $8 + 5$
 - 5×2
 - 2×8
- If you weren't allowed to use your calculator, which part of the following expression should you calculate first?
 $(4 + 6) + 9 \times 5$
 - $(4 + 6)$
 - $6 + 9$
 - 9×5
- Simplify.
 $4^2 - (-4) - (3^3 - 20)$
 - 23
 - 31
 - 13
 - 13
- Simplify.
 $3^3 - 2(6 - 11) + -12$
 - 26
 - 25
 - 35
 - 7
- Simplify.
 $9/7 - 3/7$
 - $6/7$
 - $12/7$
 - $12/14$
 - $7/6$

7. Use the correct order of operations to evaluate the following expression for $a=2$.

$$a + (6 \times 8) - (1 \times a)$$

- a. -60
- b. 46
- c. 48
- d. 62

8. Evaluate. $2 + 4 \times 6 \div 3 - 5$

9. Simplify: $5 + 15 \div (3 + 2)$

10. Evaluate using correct order of operations.

$$12 \times 1 + 2 - 2 + 40 \div 2^2 + 8$$

Order of Operations Answer Key

1. What is the acronym for the order of operations?
 - a. DASEFX
 - b. PEMDAS**
 - c. PDIDDY
 - d. SINCOS
2. If you weren't allowed to use your calculator, which part of the following expression should you calculate first?
 $(8 + 5 \times 2) \times 8$
 - a. $8 + 5$
 - b. 5×2**
 - c. 2×8
3. If you weren't allowed to use your calculator, which part of the following expression should you calculate first?
 $(4 + 6) + 9 \times 5$
 - a. $(4 + 6)$**
 - b. $6 + 9$
 - c. 9×5
4. Simplify.
 $4^2 - (-4) - (3^3 - 20)$
 - a. 23
 - b. 31
 - c. -13
 - d. 13**
5. Simplify.
 $3^3 - 2(6 - 11) + -12$
 - a. 26
 - b. 25**
 - c. 35
 - d. 7
6. Simplify.
 $9/7 - 3/7$
 - a. 6/7**
 - b. 12/7
 - c. 12/14
 - d. 7/6

7. Use the correct order of operations to evaluate the following expression for $a=2$.

$$a + (6 \times 8) - (1 \times a)$$

- a. -60
- b. 46
- c. 48**
- d. 62

8. Evaluate. $2 + 4 \times 6 \div 3 - 5$

5

9. Simplify: $5 + 15 \div (3 + 2)$

8

10. Evaluate using correct order of operations.

$$12 \times 1 + 2 - 2 + 40 \div 2^2 + 8$$

30

Name: _____

Date: _____

Simplifying Radicals

Instructions: Simplify the radicals below.

1. $\sqrt{16}$

2. $\sqrt{45}$

3. $\sqrt{98}$

4. $\sqrt{49}$

5. $\sqrt{54}$

6. $\sqrt{90}$

7. $\sqrt{225}$

8. $\sqrt{125}$

9. $\sqrt{200}$

10. $5\sqrt{64}$

Simplifying Radicals Answer Key

Instructions: Simplify the radicals below.

1. $\sqrt{16}$
4

3. $\sqrt{98}$
 $7\sqrt{2}$

5. $\sqrt{54}$
 $3\sqrt{6}$

7. $\sqrt{225}$
15

9. $\sqrt{200}$
 $10\sqrt{2}$

2. $\sqrt{45}$
 $3\sqrt{5}$

4. $\sqrt{49}$
7

6. $\sqrt{90}$
 $3\sqrt{10}$

8. $\sqrt{125}$
 $5\sqrt{5}$

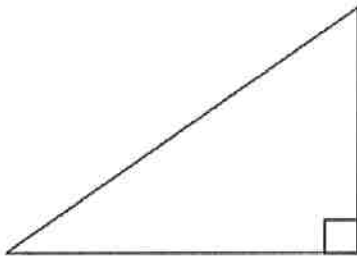
10. $5\sqrt{64}$
40

Name: _____

Date: _____

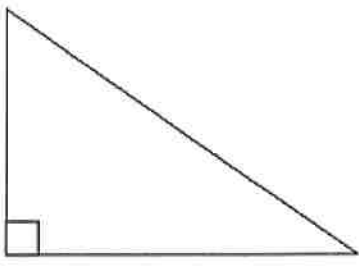
Triangles

- One angle of a triangle is 70° and the other is 30° . Therefore, the remaining angle measure is 95° .
 - True
 - False
- One leg of a right triangle is 15 and the other is 18. The measure of the hypotenuse is approximately 23.
 - True
 - False
- Given a triangle whose hypotenuse is 65 feet and one of the legs is 25 feet. Use the Pythagorean Theorem to find the length of the remaining side.
 - 62 feet
 - 60 feet
 - 56 feet
 - 53 feet
- A ramp is used to bring cargo on and off a cruise ship. The ramp is 6 feet high and its end sits 18 feet away from the ship. What is the slope of this ramp?

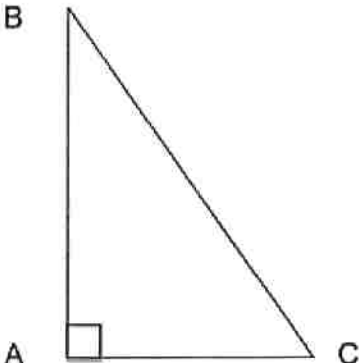


- $3/1$
 - $1/4$
 - $1/2$
 - $1/3$
- A right triangle's sides have the following measures: one leg - 8 and the hypotenuse - 17. Find the measure of the remaining side.
 - 12
 - 18
 - 17
 - 15

6. Alex is building a sandbox in the shape of a triangle. There is one right angle and the other angle measures 65° . What is the measure of the third angle?
- 25°
 - 30°
 - 65°
 - 155°
7. The measures of the angles in a right triangle are x , $2x$ and 90° . What is x ?
- 15°
 - 30°
 - 45°
 - 60°
8. Find the area of the right triangle shown. Side BA is 7.5 and side AC is 4.

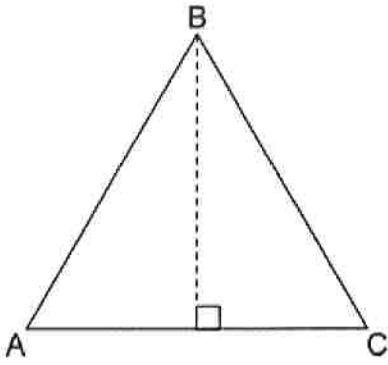
B**A****C**

- 5.75
 - 30
 - 11.5
 - 15
9. Find the area of the right triangle shown. Side AB has has a measure of 8 and side AC has a measure of 6.

B**A****C**

- 14
- 24
- 48
- 7

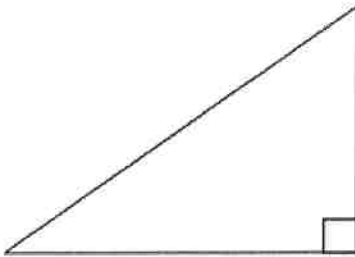
10. Find the area of one of the right triangles. The height is 4 and AC is 9.



- a. 13
- b. 6.5
- c. 18
- d. 36

Triangles Answer Key

- One angle of a triangle is 70° and the other is 30° . Therefore, the remaining angle measure is 95° .
 - True
 - False**
- One leg of a right triangle is 15 and the other is 18. The measure of the hypotenuse is approximately 23.
 - True**
 - False
- Given a triangle whose hypotenuse is 65 feet and one of the legs is 25 feet. Use the Pythagorean Theorem to find the length of the remaining side.
 - 62 feet
 - 60 feet**
 - 56 feet
 - 53 feet
- A ramp is used to bring cargo on and off a cruise ship. The ramp is 6 feet high and its end sits 18 feet away from the ship. What is the slope of this ramp?



- 3/1
 - 1/4
 - 1/2
 - 1/3**
- A right triangle's sides have the following measures: one leg - 8 and the hypotenuse - 17. Find the measure of the remaining side.
 - 12
 - 18
 - 17
 - 15**

6. Alex is building a sandbox in the shape of a triangle. There is one right angle and the other angle measures 65° . What is the measure of the third angle?

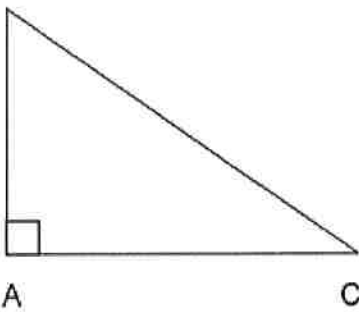
a. 25°
b. 30°
c. 65°
d. 155°

7. The measures of the angles in a right triangle are x , $2x$ and 90° . What is x ?

a. 15°
b. 30°
c. 45°
d. 60°

8. Find the area of the right triangle shown. Side BA is 7.5 and side AC is 4.

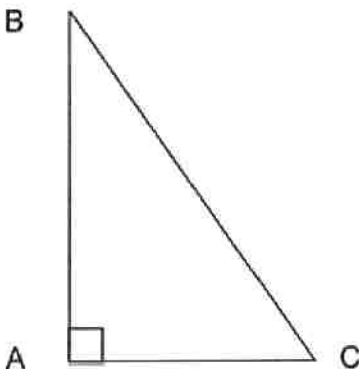
B



a. 5.75
b. 30
c. 11.5
d. 15

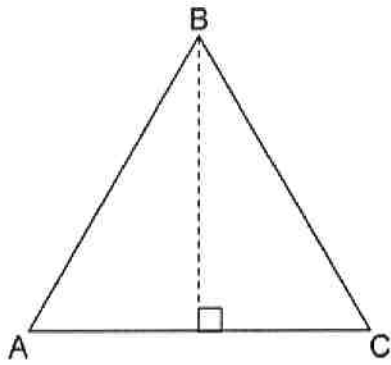
9. Find the area of the right triangle shown. Side AB has has a measure of 8 and side AC has a measure of 6.

B



a. 14
b. 24
c. 48
d. 7

10. Find the area of one of the right triangles. The height is 4 and AC is 9.



- a. 13
- b. 6.5
- c. 18**
- d. 36

Name: _____

Date: _____

Rotation, Reflection, and Translation

- The letter L when seen as a reflection is an example of a flip.
 - True
 - False
- To walk from your apartment to the library you must go three blocks west then two blocks north. This is an example of a _____.
 - rotation
 - reflection
 - translation
- Which of the following letters looks the same after it is reflected?
 - R
 - J
 - H
 - P
- Which of the following is the best example of a translation?
 - an ice skater spins in place
 - a tightrope walker steps forward
 - a gymnast presses into a handstand
 - a tennis player pivots to hit the ball
- Draw a rectangle. Draw a second rectangle which is a 90 degree rotation of your first rectangle.
- When the hour hand on the clock moves from the 12 to the 6, this is an example of a _____.
 - translation
 - reflection
 - rotation
- What figure is formed when a triangle has rotated $\frac{1}{4}$ turn?
 - circle
 - square
 - rectangle
 - triangle
- Which of the following represents a rotation?
 - riding a sled down a hill
 - a fan blade on a moving fan
 - the image of a tree on a lake
 - jumping straight up
- Define the following words:
rotation-
translation-
reflection-
- Draw a reflection of the letter K along a vertical axis.

Rotation, Reflection, and Translation Answer Key

- The letter L when seen as a reflection is an example of a flip.
a. True
b. False
- To walk from your apartment to the library you must go three blocks west then two blocks north. This is an example of a _____.
a. rotation
b. reflection
c. translation
- Which of the following letters looks the same after it is reflected?
a. R
b. J
c. H
d. P
- Which of the following is the best example of a translation?
a. an ice skater spins in place
b. a tightrope walker steps forward
c. a gymnast presses into a handstand
d. a tennis player pivots to hit the ball
- Draw a rectangle. Draw a second rectangle which is a 90 degree rotation of your first rectangle.
Drawings should show 2 rectangles, rotated 90 degrees relative to each other
- When the hour hand on the clock moves from the 12 to the 6, this is an example of a _____.
a. translation
b. reflection
c. rotation
- What figure is formed when a triangle has rotated 1/4 turn?
a. circle
b. square
c. rectangle
d. triangle
- Which of the following represents a rotation?
a. riding a sled down a hill
b. a fan blade on a moving fan
c. the image of a tree on a lake
d. jumping straight up
- Define the following words:
rotation-
translation-
reflection-
Rotation is the turning of the figure.
Translation is the sliding of the figure.
Reflection is the flipping of a figure.
- Draw a reflection of the letter K along a vertical axis.
backwards K



Name: _____ Date: _____

Energy Transfer Optimization

Thermal energy can transfer within a system by means of conduction, convection, and radiation. Thermal energy will continue to move in a predictable pattern from a warmer site to a cooler site in a system until all sites have reached the same temperature.

Types of Thermal Energy Transfer

Type of Transfer	Definition	Example
Conduction	Transfer of thermal energy that occurs in solids, liquids, and gases when two substances of different temperatures touch	<ul style="list-style-type: none">• Metal cup containing hot cocoa• Ironing clothes
Convection	Transfer of thermal energy through circular motion caused by heating and cooling in fluids	<ul style="list-style-type: none">• Boiling soup• Lava lamp
Radiation	Transfer of thermal energy by electromagnetic rays	<ul style="list-style-type: none">• Energy emitted by a light bulb• Energy from the Sun• Body heat

In the following experiment, a pan of ice was placed on a hot plate set at 100°C. The temperature of the water was recorded every three minutes, as shown in the chart below.

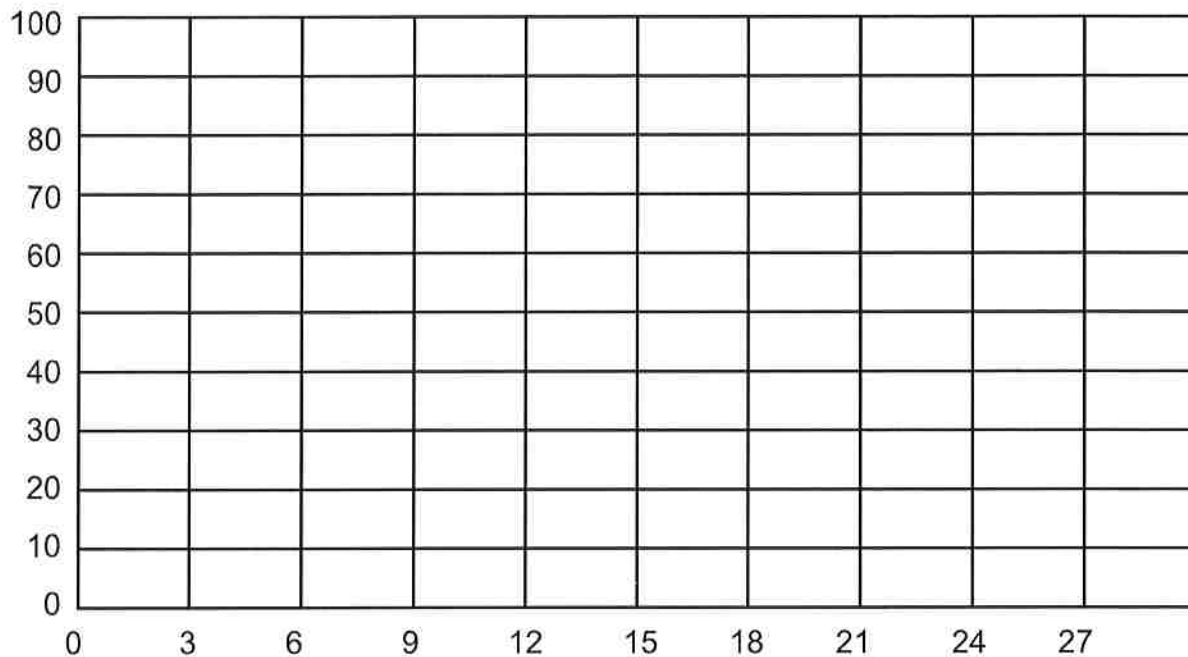
Minutes	0	3	6	9	12	15	18	21	24	27
Temp of Water in °C	0	0	10	25	40	55	70	85	100	100

1. Which type of thermal energy transfer occurred during the experiment?
2. Describe how the energy was transferred during the experiment.



Math Connections

3. Create a scatterplot of the data on the graph below. Label the graph with a title and correct variables on each axis.



4. In the experiment, one variable is independent and one variable is dependent. The independent variable is the one that is changed to cause the other variable. Which variable is the independent variable?
5. The dependent variable is the variable that is measured or observed. This variable is dependent on the changes of the independent variable. Which variable is the dependent variable?
6. What was the rate of change in the temperature of the water per minute during the period from 6 to 24 minutes? The rate of change is also called the slope of the line. It can be calculated by using two points on the line and substituting them in the following formula:

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$



7. When did the water achieve thermal equilibrium? Why did the temperature stop rising?
8. Think about what would happen if the water continued to boil for 45 minutes. Describe the particle movement and what would occur in the water.

Answer Key

Math Connections

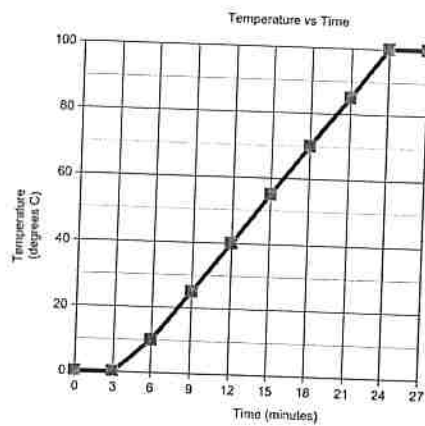
Question 1

Conduction

Question 2

Student answers may vary.

Question 3



Question 4

The independent variable is time in minutes. This is the variable that is being changed by the person in the experiment.

Question 5

The dependent variable is temperature in °C. This is the variable that is dependent on the change of the independent variable.

Question 6

$90 / 18 = 5$ degrees per minute

Question 7

The water achieved thermal equilibrium at the 24-minute mark. The temperature stopped rising because the water reached its boiling point. It is not possible to raise the temperature of a liquid beyond its boiling point. At that point, the liquid changes state and becomes a gas.

Question 8

The water molecules would continue to move faster and cause a state change from liquid to gas. The water vapor would escape from the pan, and the amount of water in the pan would continue to decrease until no more water is left in the pan.



Lesson 3: Rapid Changes

Main Idea

Technological advances continue to solve everyday problems.

Technology Moves Forward

As you have seen throughout these modules, technological changes and new inventions have dramatic effects on life in the United States and around the world. This continues to be true of our lives today. Just think about all the ways you use technology every day.

One of the technologies that has changed everyday life is the Internet. This is a global system of computer networks that allows people anywhere in the world to communicate and share information. Scientists at the U.S. Department of Defense first developed the Internet in 1969. Early computer networks were used mainly by government and university researchers. Then in the 1990s, computer programmers developed the World Wide Web, enabling people to access information from computers around the world.

New Technology



Advances in computing power and wireless devices have changed the way people across the world communicate. Social networking has become an important part of everyday life for many Americans.

Internet use exploded in the 1990s. Computers and the Internet made it easier and faster for people at home, work, and school to access and share information. This important development was known as the Information Revolution.

The communication networks made possible by the Internet made economic interdependence among nations increase tremendously. Excitement about the

Internet and the Information Revolution helped fuel the economic boom of the 1990s. Although not all Internet companies succeeded, the Internet has changed the way we find information and communicate with each other. Internet use continues to grow rapidly around the world today. Many companies capitalize on technological innovations by developing products for personal use. Consumers now want the most current technology in cell phones, laptop computers and tablets, and other personal electronic devices. It is a huge industry.

Cyberbullying

A downside of the technological innovations now available to people is cyberbullying. Bullying is harassing a person with threats, lies, or embarrassment of some kind. Bullies intentionally try to hurt their victims. Cyberbullying is a type of bullying that is done online using cell phone text messages and voicemails or computer emails and instant messages. Cyberbullies can be people that one has met in person. They can also be online acquaintances or even strangers. Most often, cyberbullies know their targets.

The following types of cyberbullying are crimes in some states, but not in all:

- threats of violence
- a hate crime (harassment based on race, color, national origin, gender, disability, or religion)
- sexually explicit messages or photos
- stalking
- images of someone in a place where that person would expect privacy

The best defenses against this growing problem are to never give out personal information (such as passwords), to not respond to any threatening messages, to not send embarrassing pictures, and to be as polite as possible in messages. Police should be notified if there are state or local cyberbullying laws that apply. A cyberbullying instance that includes a hate crime may break federal civil rights laws.

Medical Advances

Technology is also helping with new medical research. For example, researchers have made important breakthroughs in understanding connections between genetics and illness. In 2003 scientists completed the Human Genome Project. This identified more than 30,000 genes in human DNA. This information could be used to find treatments for a wide range of diseases, including cancer.



Medical Research

Medical research has improved the lives of millions, as new medicines combat old and new diseases.

Improved technology has made medical diagnoses more successful as well. Magnetic resonance imaging (MRI), for example, produces cross-sectional images of any part of the body. As advances are made, the MRI procedure becomes faster, cheaper, and more widely available. Medical researchers foresee using tiny “nanosensors” about 50,000 times thinner than the width of a human hair to find tumors. They predict using “nanobots” to repair tissues and even genes.

Another ongoing challenge for medical researchers is fighting acquired immunodeficiency syndrome (AIDS). AIDS is caused by the human immunodeficiency virus (HIV). It effectively shuts down the body’s immune system. This makes it more likely that people with AIDS will contract other illnesses and die. As of 2015 as many as 36 million people worldwide had died from AIDS. Scientists have developed drugs that help control HIV. But they have not yet found a cure. Public health officials advocate abstinence and “safer sex” practices to help prevent the spread of HIV. In 2002 leaders from around the world founded the Global Fund to Fight AIDS, Tuberculosis, and Malaria. The Global Fund provides money to treat these deadly diseases and search for cures.

Environmental Damage and Protection

Scientists are also searching for ways to help protect the environment. Because environmental quality affects every nation, international solutions are required. In the 1980s, for example, many people became concerned about the condition of the ozone layer. This is a thin layer of gas in the upper atmosphere that blocks harmful solar rays. The United States joined with more than 100 other nations to ban the use of chemicals that were

harming the ozone layer. By 2004 some scientists reported that damage to the ozone layer was slowly being repaired.

Energy consumption in the United States has been increasing along with its population. Today, American transportation remains almost completely dependent on petroleum. In 2014 Americans consumed about 8.8 million barrels of petroleum in the form of gasoline per day. Americans are using more technologies requiring electricity in their homes and workplaces. These technologies include air conditioning, heating, appliances, and electronics. This has increased the use of coal, natural gas, and other energy sources. But while the total energy consumption is going up due to increased population, energy use per household has declined. This is the result of new, more energy-efficient technologies.

Factors in Climate Change



Burning fossil fuels is the top contributor to the greenhouse effect and a major source of air pollution. Beijing, China, suffers such severe air pollution that it is sometimes dangerous to go outside. Major sources of pollutants include exhaust emissions from motor vehicles, coal-burning plants, and dust from storms and construction.

Harnessing the Wind

Wind farms can consist of several hundred wind turbines that generate electricity. These farms can cover an extended area of hundreds of square miles, but the land between the turbines is often farmed.

Scientists continue to look for ways to reduce American dependence on pollution-producing energy sources. One solution is to cut consumption of raw materials. Objects such as glass and plastic bottles and jars, newspapers, cardboard, and aluminum cans may be recycled. In 2007 recycling saved the energy equivalent of nearly 11 billion gallons of gasoline.

Another environmental issue facing the world is climate change, or global warming. Burning fossil fuels such as gasoline and coal releases carbon dioxide into Earth's atmosphere. Many scientists warn that rising levels of carbon dioxide are causing a greenhouse effect. Heat from the sun is trapped in Earth's atmosphere. This could cause temperatures to rise, which could trigger rising sea levels and more severe weather patterns. A



2001 United Nations scientific report predicted that Earth's average temperature could rise between 2 and 10 degrees by 2100. In December 2015, representatives from 195 nations reached a historic agreement at a meeting in Paris. All 195 committed to lowering greenhouse gas emissions to help avoid the most drastic effects of global warming.

Concerns about global warming and high oil prices have encouraged development of new transportation technologies. In 2007 Americans bought record numbers of hybrid cars, which run partially on electricity. Scientists are also developing vehicles that will run entirely on hydrogen and release almost no pollution.

Space Exploration

Some scientists take on issues facing our planet. Others look to the challenge of exploring space. In 2004 NASA landed two robotic vehicles on Mars. The rovers began exploring the Martian surface. They sent back images that people could see on NASA's website. In 2009 a probe discovered a significant amount of water on the moon's surface. More unmanned missions are planned.

Martian Selfie



Martian Selfie

In October 2015 NASA's Curiosity rover took pictures of itself and sent them back to Earth, becoming one of the first Martian selfies.

In October 2015 NASA's Curiosity rover took pictures of itself and sent them back to Earth, becoming one of the first Martian selfies.

Although shuttle accidents in 1986 and 2003 killed 14 astronauts, NASA's space shuttle program flew over 100 missions since its initial shuttle launch in 1981. In 2010 President Obama proposed a cut to NASA's budget for *Constellation*, a program that planned to send humans to the moon for the first time since 1972. In 2011 the *Atlantis* crew completed the final mission of NASA's 30-year shuttle program. However,

human exploration of space continues on the International Space Station, a space laboratory that has been orbiting Earth and conducting research since 2010.

Main Idea

The American population is aging and becoming more diverse than ever before.

The Changing American Population

The American population will continue to grow in the twenty-first century. The population is changing and becoming more diverse.

Ethnic Diversity

The U.S. Census Bureau reports that our population is more ethnically diverse than ever before. In 2013 the bureau reported that Hispanics made up about 17 percent of the country's total population, making them the country's largest minority group. African Americans made up just over 13 percent of the American population. Asian Americans were about 5 percent.

Not only is American society increasingly diverse. Individual Americans reflect this diversity as well. In the year 2000 the Census Bureau began allowing people to indicate in official surveys that they were of more than one race, and more than 6.8 million Americans did so. In 2008 American voters chose a man of mixed race, Barack Obama, as president for the first time.

These changes are greatly influenced by immigration patterns. Of the more than 40 million foreign-born residents, 53 percent were born in Latin America and 28 percent were born in Asia. Based on these trends, the Census Bureau predicts that the country's non-Hispanic white populations will become a minority by the year 2050. The settlement pattern of most immigrants is that they settle in a U.S. city heavily populated by people of a similar background.

Immigration Reform

The excerpt below comes from a bill to reform immigration. Although the bill never became law, it did propose how to establish the rights and responsibilities the United States has for its citizens and for the people who come from other countries to live here.

(2) We have a right, and duty, to maintain and secure our borders, and to keep our country safe and prosperous. As a Nation founded, built and sustained by immigrants we also have a responsibility to harness the power of that tradition in a balanced way that secures a more prosperous future for America.

(3) We have always welcomed newcomers to the United States and will continue to do so. But in order to qualify for the honor and privilege of eventual citizenship, our laws must be followed. The world depends on America to be strong—economically, militarily and ethically. The establishment of a stable, just, and efficient immigration system only supports those goals. As a Nation, we have the right and responsibility to make our borders safe, to establish clear and just rules for seeking citizenship, to control the flow of legal immigration, and to eliminate illegal immigration, which in some cases has become a threat to our national security.

—bill introduced by Senator Charles Schumer and co-sponsored by the Gang of Eight

quoted in the proposed Border Security, Economic Opportunity, and Immigration Modernization Act of 2013

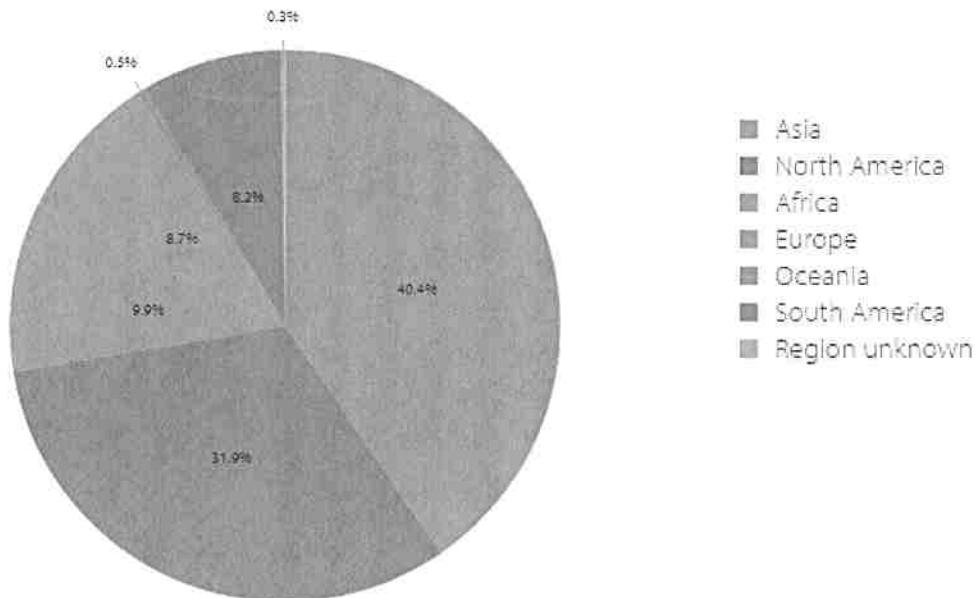
Reasons for immigrating to a country are sometimes referred to as push-pull factors. Push factors are those that cause people to leave their homeland and migrate to another place. An example of a push factor is an environmental condition, such as drought or other natural disaster, that turns habitable land into uninhabitable land. Another example of a push factor is a political situation, such as war or the persecution of certain groups of people for ethnic or religious reasons. These and other push factors can motivate people to immigrate to another country in search of a better situation.

Pull factors draw or attract people to another location. Countries with good economic opportunities and high salaries are the destinations for immigrants attracted to those pull factors. Many immigrants to the United

States are drawn by economic opportunities. Another example of a pull factor is a favorable climate that attracts immigrants to a country.

Immigrants Legally Admitted, by Region, 2013

Immigrants to the United States today come from all over the world.



Religion

Throughout American history, immigrants have added their religious beliefs to the cultural identity of the United States. Most of the first settlers in the original English colonies were Protestant Christians. Later, immigration increased the numbers of Catholics, Jews, and other religions. Today, immigrants continue to add to our nation's religious diversity. As more immigrants come from Asia and Africa, religions from those world regions have become a part of the American experience.

Currently, about 80 percent of Americans identify themselves as Christians. Among organized religions, the next largest group is Judaism, at about 2 percent of the population. Islam, Buddhism, and Hinduism continue to grow in the United States, although members of each of these faiths make up less than 1 percent of the total U.S. population.

Older Americans

The U.S. Census Bureau found in 2010 that Americans were older than ever before. The median age was 37.2—six years older than in 1990. Increased longevity and the aging of the baby-boom generation were the reasons behind the rising median age. On average, Americans live to 78.2 years of age.



U.S. Population

The American population is living longer and is more ethnically and religiously diverse than ever before. Many of the immigrants today, particularly those from Asia and Africa, are Buddhist, Hindu, Muslim, or Sikh, rather than Christian.

This older population places new demands on U.S. programs that provide elder care. These programs need to be reworked because millions of Americans will soon be affected. This includes health care programs such as Medicare, which pays medical expenses for senior citizens. The costs of providing Medicare are skyrocketing. By 2010 the costs exceeded \$465 billion. The expense will continue to increase as the elderly population increases quickly.

The older population will also drain another U.S. program for the elderly—Social Security. It pays benefits to retired Americans. The Social Security system was designed to rely on continued funding from a vast number of younger workers who would contribute taxes to support a small number of retired workers. This worked well when there were many more workers than retirees to support. But in the near future, there will be so many retired people depending on the system that there will not be enough workers to supply the funding needed.

This has led to many debates on how to reform the Social Security and Medicare systems, but no solutions have been decided upon yet. For Social Security, some solutions have been proposed, such as raising deductions for workers, taxing the benefits paid to wealthier Americans, and raising the age at which retirees can collect benefits. The debates are ongoing.

The Twenty-First Century**Lesson 3****MAIN IDEAS**

1. Technological advances continue to solve everyday problems.
2. The American population is aging and becoming more diverse than ever before.

Key Terms and People

Internet global system of computer networks

Information Revolution changes that made it easier and faster for people to access and share information

AIDS acquired immunodeficiency syndrome; disease that causes the body's immune system to shut down

ozone layer gas in the upper atmosphere that blocks harmful rays from the sun

global warming increase in Earth's temperature; also referred to as climate change

Medicare health care program that pays medical expenses for senior citizens

Social Security government program that pays benefits to retired Americans

Lesson Summary**TECHNOLOGY MOVES FORWARD**

Technological changes and inventions have had a large effect on American life. Recently, use of the **Internet** has exploded. This has made it easier for people to share information. This **Information Revolution** helped fuel the economic boom of the 1990s. Tablets, cell phones, and laptop computers are just some of the current technology in use today.

One problem people face because of technological innovations is cyberbullying. This kind of harassment happens online. It is done using text messages, email, or other electronic communication.

Despite this drawback, modern technology has many benefits. For example, technology is helping to facilitate medical research. The Human Genome Project was completed in 2003.

Circle three types of technology in use today.

What effect has technology had on science and the environment?

Lesson 3, *continued*

Researchers have made connections between genetics and disease. Researchers are also looking for new treatments for **AIDS**, which has killed more than 39 million people worldwide.

Scientists are looking for new ways to protect the environment. Banning the use of certain chemicals has reduced damage to the **ozone layer**. A 2004 report showed that the ozone layer is perhaps slowly being repaired. Concerns about **global warming** have led to the development of new kinds of transportation. These new vehicles use batteries, less gas, or fuels such as hydrogen, which produce less pollution.

Other scientists look beyond Earth to explore space. Today, human exploration of space continues on the International Space Station.

Underline the sentence that describes one approach to solving the problem of global warming.

THE CHANGING AMERICAN POPULATION

The American population continues to grow and change. In 2005 about 14 percent of the country's total population was Hispanic. African Americans made up about 13 percent. Asian Americans were about 5 percent. In 2008 Barack Obama became the first African American to be elected president of the United States.

Immigration is a main cause of increased diversity in the United States. Certain push factors such as natural disasters or war lead people to leave their homelands. Pull factors such as the chance for a job attract immigrants to the United States.

The population of the United States is changing in another way. Americans are older than ever before. They depend more and more on programs that provide elder care. The costs of programs such as **Medicare** and **Social Security** are skyrocketing.

How does the age of Americans affect the country's economy?

Lesson 3, *continued*

CHALLENGE ACTIVITY

Critical Thinking: Explain Write two paragraphs that explain how your local community is affected both by technology and changes in population.

DIRECTIONS Match the terms in the first column with their correct definitions from the second column by placing the letter of the correct definition in the space provided before each term.

- | | |
|---------------------------------|---|
| _____ 1. Internet | a. a layer of the atmosphere that protects people from harmful solar rays |
| _____ 2. Information Revolution | b. program that pays retirement benefits to older citizens |
| _____ 3. AIDS | c. program that pays health care costs of senior citizens |
| _____ 4. ozone layer | d. an often fatal medical condition affecting the body's immune system |
| _____ 5. global warming | e. a global system of computer networks that enables worldwide sharing of information |
| _____ 6. Medicare | f. shaped the economy of the 1990s by changing how people and businesses communicated |
| _____ 7. Social Security | g. changes in the climate that are most likely worsened by human air pollution |

DIRECTIONS Read each sentence and fill in the blank with the word in the word pair that best completes the sentence.

- Senior citizens in the United States who need health care rely on _____. (Social Security/Medicare)
- More than 23 million people have died of _____. (global warming/AIDS)
- Banning the use of certain chemicals has reduced damage to the _____. (ozone layer/Internet)
- Today, individuals share information electronically with others around the world through use of the _____. (Internet/Information Revolution)

Answer Key

Name _____ Class _____ Date _____

The Twenty-First Century

Lesson 3



MAIN IDEAS

1. Technological advances continue to solve everyday problems.
2. The American population is aging and becoming more diverse than ever before.

Key Terms and People

Internet global system of computer networks

Information Revolution changes that made it easier and faster for people to access and share information

AIDS acquired immunodeficiency syndrome; disease that causes the body's immune system to shut down

ozone layer gas in the upper atmosphere that blocks harmful rays from the sun

global warming increase in Earth's temperature; also referred to as climate change

Medicare health care program that pays medical expenses for senior citizens

Social Security government program that pays benefits to retired Americans

Lesson Summary

TECHNOLOGY MOVES FORWARD

Technological changes and inventions have had a large effect on American life. Recently, use of the **Internet** has exploded. This has made it easier for people to share information. This **Information Revolution** helped fuel the economic boom of the 1990s. Tablets, cell phones, and laptop computers are just some of the current technology in use today.

One problem people face because of technological innovations is cyberbullying. This kind of harassment happens online. It is done using text messages, email, or other electronic communication.

Despite this drawback, modern technology has many benefits. For example, technology is helping to facilitate medical research. The Human Genome Project was completed in 2003.

Circle three types of technology in use today.

What effect has technology had on science and the environment?

It facilitates medical research and helps protect the environment.

Lesson 3, *continued*

Researchers have made connections between genetics and disease. Researchers are also looking for new treatments for **AIDS**, which has killed more than 39 million people worldwide.

Scientists are looking for new ways to protect the environment. Banning the use of certain chemicals has reduced damage to the **ozone layer**. A 2004 report showed that the ozone layer is perhaps slowly being repaired. Concerns about **global warming** have led to the development of new kinds of transportation. These new vehicles use batteries, less gas, or fuels such as hydrogen, which produce less pollution.

Other scientists look beyond Earth to explore space. Today, human exploration of space continues on the International Space Station.

THE CHANGING AMERICAN POPULATION

The American population continues to grow and change. In 2005 about 14 percent of the country's total population was Hispanic. African Americans made up about 13 percent. Asian Americans were about 5 percent. In 2008 Barack Obama became the first African American to be elected president of the United States.

Immigration is a main cause of increased diversity in the United States. Certain push factors such as natural disasters or war lead people to leave their homelands. Pull factors such as the chance for a job attract immigrants to the United States.

The population of the United States is changing in another way. Americans are older than ever before. They depend more and more on programs that provide elder care. The costs of programs such as **Medicare** and **Social Security** are skyrocketing.

Underline the sentence that describes one approach to solving the problem of global warming.

How does the age of Americans affect the country's economy?

An aging population means that the costs of government programs that assist the elderly are soaring.

Lesson 3, *continued*

CHALLENGE ACTIVITY

Critical Thinking: Explain Write two paragraphs that explain how your local community is affected both by technology and changes in population.

Answers will vary. Students should write two paragraphs explaining the effects of technology and changes in population on their local community.

DIRECTIONS Match the terms in the first column with their correct definitions from the second column by placing the letter of the correct definition in the space provided before each term.

- | | |
|---|---|
| <p><u> e </u> 1. Internet</p> <p><u> f </u> 2. Information Revolution</p> <p><u> d </u> 3. AIDS</p> <p><u> a </u> 4. ozone layer</p> <p><u> g </u> 5. global warming</p> <p><u> c </u> 6. Medicare</p> <p><u> b </u> 7. Social Security</p> | <p>a. a layer of the atmosphere that protects people from harmful solar rays</p> <p>b. program that pays retirement benefits to older citizens</p> <p>c. program that pays health care costs of senior citizens</p> <p>d. an often fatal medical condition affecting the body's immune system</p> <p>e. a global system of computer networks that enables worldwide sharing of information</p> <p>f. shaped the economy of the 1990s by changing how people and businesses communicated</p> <p>g. changes in the climate that are most likely worsened by human air pollution</p> |
|---|---|

DIRECTIONS Read each sentence and fill in the blank with the word in the word pair that best completes the sentence.

8. Senior citizens in the United States who need health care rely on _____ Medicare _____. (Social Security/Medicare)
9. More than 23 million people have died of _____ AIDS _____. (global warming/AIDS)
10. Banning the use of certain chemicals has reduced damage to the _____ ozone layer _____. (ozone layer/Internet)
11. Today, individuals share information electronically with others around the world through use of the _____ Internet _____. (Internet/Information Revolution)