



Dear 6<sup>th</sup> – 8<sup>th</sup> 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](#) (6<sup>th</sup> 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 6<sup>th</sup> 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 divertirse 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. Encontrarán artículos en inglés y español en [Tweentribune](#). Los estudiantes pueden leer y contestar las preguntas aquí. También 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 <a href="https://www.clever.com/in/maywood89">https://www.clever.com/in/maywood89</a></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	
	<a href="https://classroommagazines.scholastic.com/support/learnathome.html">https://classroommagazines.scholastic.com/support/learnathome.html</a> Choose books, videos, and activities by grade levels
	<a href="https://www.thespanishexperiment.com/stories">https://www.thespanishexperiment.com/stories</a> Children's stories in Spanish
	<a href="https://www.storylineonline.net/">https://www.storylineonline.net/</a> Actors and Actresses read books with illustrations
	<a href="https://www.getepic.com/">https://www.getepic.com/</a> 1000's of award winning books. English and Spanish Signup required, free 30 days
	<a href="https://newsela.com/">https://newsela.com/</a> English; <a href="https://newsela.com/rules/spanish">https://newsela.com/rules/spanish</a> Spanish News articles written for students with quizzes and writing prompts for 3-8; English and Spanish
	<a href="https://www.tweentribune.com/">https://www.tweentribune.com/</a> Informational text at different grade levels
	<a href="https://stories.audible.com/start-listen">https://stories.audible.com/start-listen</a> Free audiobooks for PreK-High school students



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



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


Dual Language	
	<a href="https://l2trec.utah.edu/news/utahdliathome/spanish.php">https://l2trec.utah.edu/news/utahdliathome/spanish.php</a> Spanish and Dual language activities and resources

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

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

Health	
	<a href="https://www.gonoodle.com/">https://www.gonoodle.com/</a> Movement and mindfulness videos
	<a href="https://aha-nflplay60.discoveryeducation.com/families">https://aha-nflplay60.discoveryeducation.com/families</a> Fun activities, videos, and virtual field trips

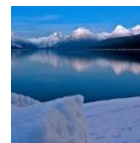
Art/Music	
	<a href="http://www.maywoodfinearts.org/?page_id=3043">http://www.maywoodfinearts.org/?page_id=3043</a> Take an online class with Maywood Fine Arts
	<a href="https://colormandala.com/">https://colormandala.com/</a> Color mandelas online

For Parents	
	<a href="http://www.parenttoolkit.com/">http://www.parenttoolkit.com/</a> English; <a href="http://www.parenttoolkit.com/home?lang=es">http://www.parenttoolkit.com/home?lang=es</a> 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](#)



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## 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 Lexia	Imagine Math Escritura Paseo Virtual Leer un libro Brincar la cuerda/sentadillas Lexia	Imagine Math Paquete de lectura Paquete de matemáticas Estudios Social Video YouTube de ejercicio	
Actividades/ Tareas					

Firma de Padres \_\_\_\_\_ Fecha \_\_\_\_\_

## Finding metaphors in hit songs and poems

By ThoughtCo.com, adapted by Newsela staff on 10.17.17

Word Count 1,790

Level 1020L



Rihanna pictured singing in 2012. There is more poetry in pop music than many people expect. Photo by: Jørund F. Pedersen/Wikimedia.

A metaphor, as defined by Literary.net, is a figure of speech that makes an "implied or hidden comparison between two things that are unrelated but share some common characteristics."

For example, "he is such a pig" is a metaphor that you might hear about someone who eats too much. A similar figure of speech is a simile. The difference between the two is that similes use words such as "like" and "as." The expression "she eats like a bird" is an example of a simile.

Take a look at the lyrics from Michael Jackson's song "Human Nature," which includes the following line:

*If this town is just an apple*

*Then let me take a bite*

In these lyrics, Jackson is referring to New York City, which is also called the Big Apple. The New York Public Library notes that the metaphor "the Big Apple" had various other meanings throughout history: "Throughout the 19th century, the term meant 'something regarded as the



most significant of its kind; an object of desire and ambition.'" The library also notes on its website that "to 'bet a big apple' was 'to state with supreme assurance; to be absolutely confident of.'"

Another example of a metaphor is Elvis Presley's 1956 song "Hound Dog," which includes the following lyrics:

*You ain't nothin' but a hound dog*

*Cryin' all the time*

Here there is the unflattering comparison to a former lover as a hound dog! The song was actually first recorded by Big Mama Thornton in 1952, a full four years before Elvis recorded his own version. Indeed, Elvis' music was greatly influenced by the blues sounds of great black artists from the 1930s, 1940s and 1950s.

As a final example, the title of "Your Love is a Song" by Switchfoot is itself a metaphor. There are also other examples of this figure of speech in the lyrics:

*Ooh, your love is a symphony*

*All around me, running through me*

*Ooh, your love is a melody*

*Underneath me, running to me*



This comparison of love to music is chronicled throughout history. Poets and writers have often compared love to various forms of music or beautiful objects. For example, Scotland's most famous poet, Robert Burns, compared his love to both a rose and a song in the 18th century:

*O my Luve's like a red, red rose,*

*That's newly sprung in June:*

*O my Luve's like the melodie,*

*That's sweetly play'd in tune.*

Metaphors and the other literary device of comparison, the simile, are very common in everyday speech, writing and music. Music is a great way to learn about both metaphors and similes. The following list features songs with metaphors.

**"Can't Stop The Feeling" - Justin Timberlake**

The song "Can't Stop the Feeling" by Justin Timberlake recently topped the music charts. In it he sings:

*I got that sunshine in my pocket*

*Got that good soul in my feet*

The sunshine in the pocket is an implied reference to the happiness felt when the singer sees his lover dance. There is also the play on words with the word "soul," which has to do with dancing to soul music. The word also sounds like "sole," the bottom of a foot.

The sun is a common metaphor in art and writing. Shakespeare used the sun in his play "Henry IV" as a metaphor for the monarchy: "Yet herein will I imitate the sun / Who doth permit the base contagious clouds / To smother up his beauty from the world ..."

The American poet E.E. Cummings also used the sun, but to describe his feelings of love: "Yours is the light by which my spirit's born: you are my sun, my moon, and all my stars."

### **"One Thing" - One Direction**

In the song, "One Thing," by One Direction, the lyrics include the following lines:

*Shot me out of the sky*

*You're my kryptonite*

*You keep making me weak*

*Yeah, frozen and can't breathe*

The image of Superman has long been a part of pop culture, from the 1930s comic books to many popular TV shows and films today. Kryptonite was Superman's weakness, and is commonly used as a metaphor for someone's Achilles' heel.

### **"My Heart's A Stereo" - Maroon 5**

The title of Maroon 5's song "My Heart's a Stereo" is a metaphor. This phrase is repeated multiple times to prove its point.

*My heart's a stereo*

*It beats for you so listen close*



The image of the beating heart is infused in literature, and hasn't always meant romance. Edgar Allan Poe's story "The Tell-Tale Heart" describes experiences of a man — a murderer — driven crazy by the increasingly loud thumping of his victim's beating heart. "It grew louder — louder — louder! And still, the men (the police who were visiting his home) chatted pleasantly and smiled. Was it possible they heard not?" In the end, the man cannot ignore the beating of the heart and confesses his crime to the police.



### **"Naturally" - Selena Gomez**

Selena Gomez's song, "Naturally," includes the following lyrics:

*You are the thunder and I am the lightning*

*And I love the way you*

*Know who you are and to me it's exciting*

*When you know it's meant to be*

This may be a pop song, but it harkens back to ancient Norse and Viking mythology, where the name of its main god, Thor, literally means "thunder." Thor's main weapon was his hammer, or in the Old Norse language, "mjöllnir," which translates as "lightning." The metaphor presents a pretty intense image for what, at first glance, seems like a light pop song.

### **"This Is What You Came For" - Rihanna; Lyrics By Calvin Harris**

Lightning is another common metaphor, and is seen in "This is What You Came For," with lyrics by Calvin Harris. The song describes a woman as having power by referencing her ability to strike with the force of lightning and get everyone's attention:

*Baby, this is what you came for*

*Lightning strikes every time she moves*

*And everybody's watching her*



Lightning is often a symbol of power, as also seen in the poem by Emma Lazarus, titled "The New Colossus," which begins:

*Not like the brazen giant of Greek fame,*

*With conquering limbs astride from land to land;*

*Here at our sea-washed, sunset gates shall stand*

*A mighty woman with a torch, whose flame  
Is the imprisoned lightning, and her name  
Mother of Exiles.*

The woman with a torch of imprisoned lightning is a reference to the Statue of Liberty. The torch shows her power as an ally to those who come to the shores of America.

### **"Sit Still, Look Pretty" - Daya**

Daya sings about not being a "puppet" in the song "Sit Still, Look Pretty." She is suggesting she does not want someone to control her, or pull her strings. She also uses a metaphor when she calls herself as a "queen" who does not want to be ruled by a "king":

*I know the other girlies wanna wear expensive  
things*

*Like diamond rings*

*But I don't wanna be the puppet that you're  
playing on a string*

*This queen don't need a king*



The use of puppets as a metaphor is also common in political science or civics classes. A puppet government is one that looks like it has authority, but is actually controlled by another power. This meaning of "puppet" is similar to the meaning of the lyrics of this song.

### **"H.O.L.Y." - Florida Georgia Line**

The song "H.O.L.Y." by Florida Georgia Line uses angels and other religious images. However, this does not make it a religious song. Instead, the lyrics express a belief in a lover that is like a religious belief.

*You're an angel, tell me you're never leaving*

*'Cause you're the first thing I know I can believe in*

and

*You made the brightest days from the darkest nights*

*You're the river bank where I was baptized*

*Cleanse all the demons*

*That were killing my freedom*

In many literary texts, babies and young people are "angelic" because they have not been in the world long enough to do bad deeds. In John Milton's "Paradise Lost," however, it is the brilliant Angel of Light, Lucifer, who challenges God. He then falls to become Satan, the Prince of Darkness.

### "Adventure Of A Lifetime" - Coldplay

Coldplay's "Adventure of a Lifetime" uses both metaphor and hyperbole, or exaggeration, in the lyrics:

*Turn your magic on, to me she'd say  
Everything you want's a dream away  
Under this pressure, under this weight  
We are diamonds*



Here, a love relationship that is under pressure is compared to the natural creation of diamonds. On the Live Science website, the recipe for creating diamonds is: Bury carbon dioxide 100 miles into Earth. Heat to about 2,200 degrees Fahrenheit. Squeeze under pressure of 725,000 pounds per square inch. Quickly rush towards Earth's surface to cool.

The pressure will produce a diamond, which is something valuable. Coldplay suggests the same for this relationship.

### "One" - U2

In U2's song, "One," the band sings about love and forgiveness. It includes the following lines:

*Love is a temple  
Love a higher law*



There's an interesting history in comparing love to the law. According to the book "Metaphor Networks: The Comparative Evolution of Figurative Language," the term "love" was considered equal to the term "law" during the Middle Ages.

Love was also a metaphor for economic debt. Geoffrey Chaucer, who is considered to be the father of English literature, wrote: "Love is an economic exchange," meaning, "I'm putting more into this (economic exchange) than you," according to the "Metaphor Networks."

Writing: Pick a detail from this article.  
Explain how it helps you understand  
the bigger ideas in the article.  
Write your answer  
in 2-3 paragraphs

## Quiz

- 1 The CENTRAL idea of the article is developed by:
- (A) including background that shows how often metaphors have been used by artists, and by including recent examples from pop artists
  - (B) explaining how metaphors and other figures of speech work, and by providing examples that are followed with interpretations
  - (C) showing how all metaphors are comparisons, and by explaining how writing and music use similar methods to express ideas
  - (D) introducing a literary definition for the term "metaphor," and by following it immediately with the example "he is such a pig"

- 2 Read the selection from the section "H.O.L.Y. - Florida Georgia Line."

*You made the brightest days from the darkest nights*

*You're the river bank where I was baptized*

*Cleanse all the demons*

*That were killing my freedom*

*In many literary texts, babies and young people are "angelic" because they have not been in the world long enough to do bad deeds. In John Milton's "Paradise Lost," however, it is the brilliant Angel of Light, Lucifer, who challenges God. He then falls to become Satan, the Prince of Darkness.*

What is the relationship between the excerpt from the song and the paragraph that follows?

- (A) The excerpt shows how the writer created a vivid metaphor based on religious language; the paragraph provides interpretations of biblical metaphors in classic texts.
  - (B) The excerpt provides a metaphor for the writer's personal religious experience; the paragraph gives another example of classic Christian allusions.
  - (C) The excerpt includes a metaphor that describes the writer's intense love; the paragraph mentions the religious imagery often used in literary classics.
  - (D) The excerpt highlights the religious overtones used by the writer; the paragraph shows how religious metaphors often appeared in classic texts.
- 3 Read the following selection from the introduction [paragraphs 1-9].

*In these lyrics, Jackson is referring to New York City, which is also called the Big Apple. The New York Public Library notes that the metaphor "the Big Apple" had various other meanings throughout history: "Throughout the 19th century, the term meant 'something regarded as the most significant of its kind; an object of desire and ambition.'" The library also notes on its website that "to 'bet a big apple' was 'to state with supreme assurance; to be absolutely confident of.'"*

What does the author convey by referring to the metaphor "the Big Apple"?

- (A) the sense that "the Big Apple" is an apt metaphor for New York
- (B) the sense that few people know the origins of common terms
- (C) the sense that metaphors can take on new meanings
- (D) the sense that New York is proud of its heritage

Read the paragraph from the section "One Thing - One Direction."

*The image of Superman has long been a part of pop culture, from the 1930s comic books to many popular TV shows and films today. Kryptonite was Superman's weakness, and is commonly used as a metaphor for someone's Achilles' heel.*

Which of the following phrases from the section provides a context clue to the meaning of the word "Achilles' heel"?

- (A) out of the sky
- (B) my kryptonite
- (C) making me weak
- (D) image of Superman

## Answer Key

- 1 The CENTRAL idea of the article is developed by:
- (A) including background that shows how often metaphors have been used by artists, and by including recent examples from pop artists
  - (B) explaining how metaphors and other figures of speech work, and by providing examples that are followed with interpretations**
  - (C) showing how all metaphors are comparisons, and by explaining how writing and music use similar methods to express ideas
  - (D) introducing a literary definition for the term "metaphor," and by following it immediately with the example "he is such a pig"

- 2 Read the selection from the section "H.O.L.Y. - Florida Georgia Line."

*You made the brightest days from the darkest nights*

*You're the river bank where I was baptized*

*Cleanse all the demons*

*That were killing my freedom*

*In many literary texts, babies and young people are "angelic" because they have not been in the world long enough to do bad deeds. In John Milton's "Paradise Lost," however, it is the brilliant Angel of Light, Lucifer, who challenges God. He then falls to become Satan, the Prince of Darkness.*

What is the relationship between the excerpt from the song and the paragraph that follows?

- (A) The excerpt shows how the writer created a vivid metaphor based on religious language; the paragraph provides interpretations of biblical metaphors in classic texts.**
  - (B) The excerpt provides a metaphor for the writer's personal religious experience; the paragraph gives another example of classic Christian allusions.
  - (C) The excerpt includes a metaphor that describes the writer's intense love; the paragraph mentions the religious imagery often used in literary classics.
  - (D) The excerpt highlights the religious overtones used by the writer; the paragraph shows how religious metaphors often appeared in classic texts.
- 3 Read the following selection from the introduction [paragraphs 1-9].

*In these lyrics, Jackson is referring to New York City, which is also called the Big Apple. The New York Public Library notes that the metaphor "the Big Apple" had various other meanings throughout history: "Throughout the 19th century, the term meant 'something regarded as the most significant of its kind; an object of desire and ambition.'" The library also notes on its website that "to 'bet a big apple' was 'to state with supreme assurance; to be absolutely confident of.'"*

What does the author convey by referring to the metaphor "the Big Apple"?

- (A) the sense that "the Big Apple" is an apt metaphor for New York
- (B) the sense that few people know the origins of common terms
- (C) the sense that metaphors can take on new meanings**
- (D) the sense that New York is proud of its heritage



Read the paragraph from the section "One Thing - One Direction."

*The image of Superman has long been a part of pop culture, from the 1930s comic books to many popular TV shows and films today. Kryptonite was Superman's weakness, and is commonly used as a metaphor for someone's Achilles' heel.*

Which of the following phrases from the section provides a context clue to the meaning of the word "Achilles' heel"?

- (A) out of the sky
- (B) my kryptonite
- (C) **making me weak**
- (D) image of Superman

Name: \_\_\_\_\_

Date: \_\_\_\_\_

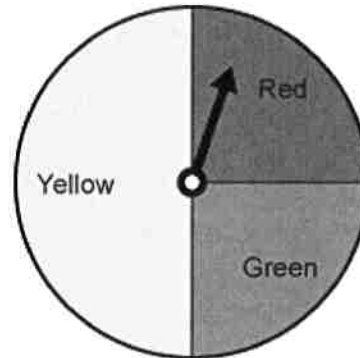
### Certain, Likely, Unlikely, Impossible

1. You roll a 6 sided die. How likely is it that the die will land on 3?



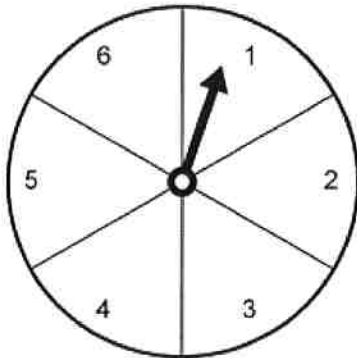
- certain
- likely
- unlikely
- impossible

2. How likely is it that the spinner will land on a yellow or green space?



- certain
- likely
- unlikely
- impossible

3. How likely is it that the spinner will land on the number 8?



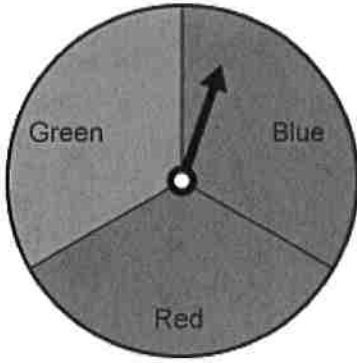
- certain
- likely
- unlikely
- impossible

4. You roll a die. How likely is it that it will land on a number less than 6?



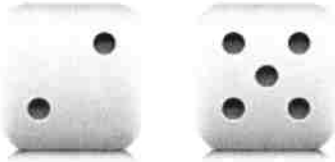
- certain
- likely
- unlikely
- impossible

5. You spin the spinner 3 times. How likely is it that it lands on blue all 3 times?



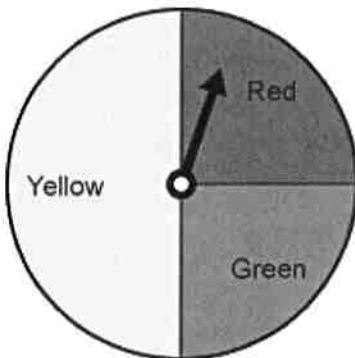
- certain
- likely
- unlikely
- impossible

7. You roll 2 dice. How likely is it that you roll a 2 and a 5?



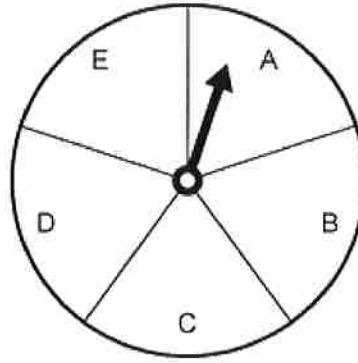
- certain
- likely
- unlikely
- impossible

9. How likely is it that the spinner lands on the color purple?



- certain
- likely
- unlikely
- impossible

6. How likely is it that the spinner will land on a letter of the alphabet?



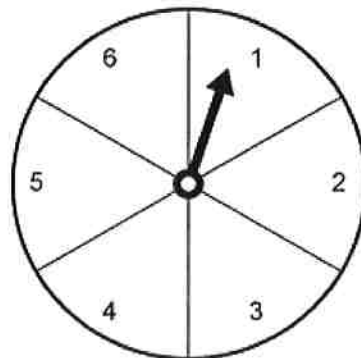
- certain
- likely
- unlikely
- impossible

8. You roll 2 dice. How likely is it that the 2 numbers will add to 12 or less?



- certain
- likely
- unlikely
- impossible

10. How likely is it that the spinner will land on a number greater than 2?



- certain
- likely
- unlikely
- impossible

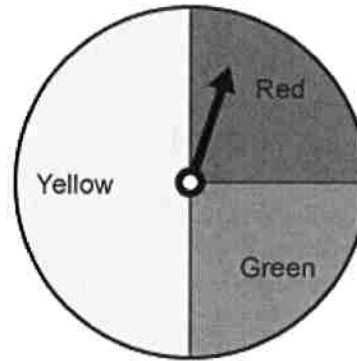
## Certain, Likely, Unlikely, Impossible Answer Key

1. You roll a 6 sided die. How likely is it that the die will land on 3?



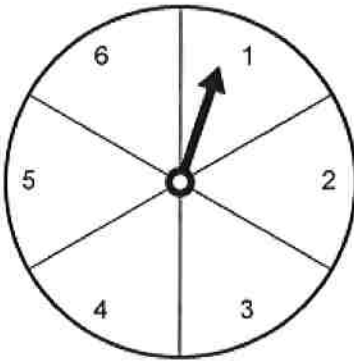
- a. certain
- b. likely
- c. unlikely**
- d. impossible

2. How likely is it that the spinner will land on a yellow or green space?



- a. certain
- b. likely**
- c. unlikely
- d. impossible

3. How likely is it that the spinner will land on the number 8?



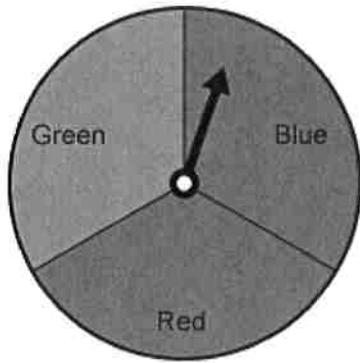
- a. certain
- b. likely
- c. unlikely
- d. impossible**

4. You roll a die. How likely is it that it will land on a number less than 6?



- a. certain
- b. likely**
- c. unlikely
- d. impossible

5. You spin the spinner 3 times. How likely is it that it lands on blue all 3 times?



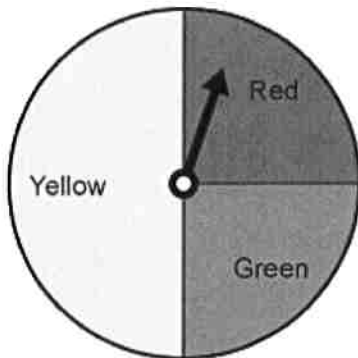
- a. certain  
b. likely  
**c. unlikely**  
d. impossible

7. You roll 2 dice. How likely is it that you roll a 2 and a 5?



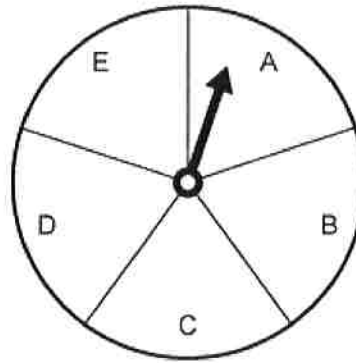
- a. certain  
b. likely  
**c. unlikely**  
d. impossible

9. How likely is it that the spinner lands on the color purple?



- a. certain  
b. likely  
c. unlikely  
**d. impossible**

6. How likely is it that the spinner will land on a letter of the alphabet?



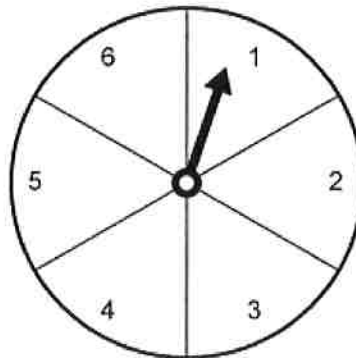
- a. certain**  
b. likely  
c. unlikely  
d. impossible

8. You roll 2 dice. How likely is it that the 2 numbers will add to 12 or less?



- a. certain**  
b. likely  
c. unlikely  
d. impossible

10. How likely is it that the spinner will land on a number greater than 2?



- a. certain  
**b. likely**  
c. unlikely  
d. impossible

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Understanding Operations with Negative Numbers

- A negative number multiplied by another negative number is positive.
  - True
  - False
- When you add two negative numbers together you will always get a positive answer.
  - True
  - False
- If a negative number is being multiplied by a positive number, the answer will be a \_\_\_\_\_ number.
  - positive
  - negative
- When adding integers, if the signs are different, the answer sign is
  - the sign that comes first.
  - positive.
  - negative.
  - the sign of the number with the largest absolute value.
- The product of 8, a, and b is represented by the expression  $8ab$ . If the value of a is negative, what must be said about the value of b in order for the product to remain negative?
  - b must be negative
  - b must be positive
  - b must be 1
  - the value of b does not matter
- Consider the problem:  
 $a \times b$   
If both a and b are negative then the answer will be \_\_\_\_\_.
  - positive
  - negative
  - equal
  - not enough information to tell
- Which expression would be evaluated as a negative number?
  - $(3)(-4)(-2)$
  - $(-3)(-4)(-2)$
  - $(3)(4)(2)$
  - $(-3)(-4)(2)$
- Which expression will have a negative product?
  - $-\frac{1}{2} \times \left(-\frac{3}{4}\right)$
  - $\frac{(-1)}{2} \times -\frac{3}{4}$
  - $\frac{1}{2} \times -\left(\frac{-3}{4}\right)$
  - $\left(\frac{1}{2}\right) \times \frac{3}{(-4)}$

## Understanding Operations with Negative Numbers Answer Key

1. A negative number multiplied by another negative number is positive.
  - a. **True**
  - b. False
3. If a negative number is being multiplied by a positive number, the answer will be a \_\_\_\_\_ number.
  - a. positive
  - b. **negative**
5. When adding integers, if the signs are different, the answer sign is
  - a. the sign that comes first.
  - b. positive.
  - c. negative.
  - d. **the sign of the number with the largest absolute value.**
7. The product of 8, a, and b is represented by the expression  $8ab$ . If the value of a is negative, what must be said about the value of b in order for the product to remain negative?
  - a. b must be negative
  - b. **b must be positive**
  - c. b must be 1
  - d. the value of b does not matter
9. Consider the problem:
 
$$a \times b$$
 If both a and b are negative then the answer will be \_\_\_\_\_.
  - a. **positive**
  - b. negative
  - c. equal
  - d. not enough information to tell
2. When you add two negative numbers together you will always get a positive answer.
  - a. True
  - b. **False**
4.  $(-5)(-7)(5)(-3)$  gives a \_\_\_\_\_ answer.
  - a. **negative**
  - b. positive
6. When multiplying integers that have the same sign, what will your answer be?
  - a. Negative
  - b. **Positive**
  - c. It depends on the numbers
  - d. It will have the sign of the biggest number
8. Which expression would be evaluated as a negative number?
  - a.  $(3)(-4)(-2)$
  - b.  **$(-3)(-4)(-2)$**
  - c.  $(3)(4)(2)$
  - d.  $(-3)(-4)(2)$
10. Which expression will have a negative product?
  - a.  $-\frac{1}{2} \times \left(-\frac{3}{4}\right)$
  - b.  $\frac{(-1)}{2} \times -\frac{3}{4}$
  - c.  $\frac{1}{2} \times -\left(\frac{-3}{4}\right)$
  - d.  **$\left(\frac{1}{2}\right) \times \frac{3}{(-4)}$**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### The Distributive Property

- Which of the following is an example of the distributive property?
  - $10 \times 1 = 10$
  - $3(4 + 2) = 3(4) + 3(2)$
  - $8 + 7 = 7 + 8$
  - $2 \times 0 = 0$
- Which of the following is an example of the distributive property?
  - $98 \times 1 = 98$
  - $3 + 92 = 95$
  - $72 + 51 = 51 + 72$
  - $6(16 + 4) = (6 \times 16) + (6 \times 4)$
- $5(2 - j) + (2j - 3)$ 
  - $10 - 3j$
  - $7 - 3j$
  - $7 + 3j$
  - $10 + 3j$
- $5 + 6(m + 1)$ 
  - $6m + 11$
  - $6m + 6$
  - $11m + 11$
  - $11m + 1$
- $-4(a + 3)$ 
  - $-4a + 12$
  - $-4a - 12$
  - $4a - 12$
  - none of the above
- Expand the expression.  
 $(-8)(-8 - d)$ 
  - $-64 - 8d$
  - $-64 + 8d$
  - $64 - 8d$
  - $64 + 8d$
- Find the equivalent of  $p(q - r)$ .
  - $(p)(q) - (r)$
  - $(pq)(-r)$
  - $(p)(q)(r)$
  - $(p)(q) - (p)(r)$
- Simplify the expression (show all your work):  
 $2(7 - s)$
- Simplify the expression (show all your work):  
 $(2r - 4)^2$
- Simplify the expression (show all your work):  
 $3(r + 4)$
- Simplify:  
 $-3(x + 2y) + x + y$   
\_\_\_\_\_



## The Distributive Property Answer Key

1. Which of the following is an example of the distributive property?
  - a.  $10 \times 1 = 10$
  - b.  $3(4 + 2) = 3(4) + 3(2)$**
  - c.  $8 + 7 = 7 + 8$
  - d.  $2 \times 0 = 0$
  
2. Which of the following is an example of the distributive property?
  - a.  $98 \times 1 = 98$
  - b.  $3 + 92 = 95$
  - c.  $72 + 51 = 51 + 72$
  - d.  $6(16 + 4) = (6 \times 16) + (6 \times 4)$**
  
3.  $5(2 - j) + (2j - 3)$ 
  - a.  $10 - 3j$
  - b.  $7 - 3j$**
  - c.  $7 + 3j$
  - d.  $10 + 3j$
  
4.  $5 + 6(m + 1)$ 
  - a.  $6m + 11$**
  - b.  $6m + 6$
  - c.  $11m + 11$
  - d.  $11m + 1$
  
5.  $-4(a + 3)$ 
  - a.  $-4a + 12$
  - b.  $-4a - 12$**
  - c.  $4a - 12$
  - d. none of the above
  
6. Expand the expression.  
 $(-8)(-8 - d)$ 
  - a.  $-64 - 8d$
  - b.  $-64 + 8d$
  - c.  $64 - 8d$
  - d.  $64 + 8d$**
  
7. Find the equivalent of  $p(q - r)$ .
  - a.  $(p)(q) - (r)$
  - b.  $(pq)(-r)$
  - c.  $(p)(q)(r)$
  - d.  $(p)(q) - (p)(r)$**
  
8. Simplify the expression (show all your work):  
 $(2r - 4)2$ 

**$4r - 8$**
  
9. Simplify the expression (show all your work):  
 $2(7 - s)$ 

**$14 - 2s$**
  
10. Simplify the expression (show all your work):  
 $3(r + 4)$ 

**$3r + 12$**
  
11. Simplify:  
 $-3(x + 2y) + x + y$   
 $-2x - 5y$

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## One-Step Algebraic Equations

**Instructions:** Solve each equation. Show your work.

1.  $m - 5 = 12$

2.  $x + 11 = 15$

3.  $5 + t = 23$

4.  $4 - k = 12$

5.  $-28 + y = -3$

6.  $-w - 7 = -74$

7.  $35 = v - 9$

8.  $-90 = 15 - m$

9.  $64 = 18 + r$

10.  $q - (-6) = -5$

11.  $5f = 35$

12.  $-12c = 96$

13.  $-6h = -90$

14.  $84 = -4u$

15.  $\frac{z}{2} = 26$

16.  $\frac{j}{9} = 5$

17.  $-\frac{n}{3} = 20$

18.  $\frac{c}{7} = -14$

19.  $24 = \frac{y}{3}$

20.  $-18 = -\frac{p}{4}$

## One-Step Algebraic Equations Answer Key

**Instructions:** Solve each equation. Show your work.

1.  $m - 5 = 12$

$$m = 17$$

3.  $5 + t = 23$

$$t = 18$$

5.  $-28 + y = -3$

$$y = 25$$

7.  $35 = v - 9$

$$v = 44$$

9.  $64 = 18 + r$

$$r = 46$$

11.  $5f = 35$

$$f = 7$$

13.  $-6h = -90$

$$h = 15$$

15.  $\frac{z}{2} = 26$

$$z = 52$$

17.  $-\frac{n}{3} = 20$

$$n = -60$$

19.  $24 = \frac{y}{3}$

$$y = 72$$

2.  $x + 11 = 15$

$$x = 4$$

4.  $4 - k = 12$

$$-8$$

6.  $-w - 7 = -74$

$$w = 67$$

8.  $-90 = 15 - m$

$$m = 105$$

10.  $q - (-6) = -5$

$$q = -11$$

12.  $-12c = 96$

$$c = -8$$

14.  $84 = -4u$

$$u = -21$$

16.  $\frac{j}{9} = 5$

$$j = 45$$

18.  $\frac{c}{7} = -14$

$$c = -98$$

20.  $-18 = -\frac{p}{4}$

$$p = 72$$

Name: \_\_\_\_\_

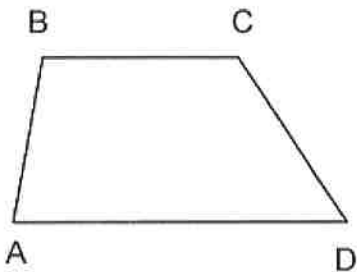
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## Areas of Quadrilaterals

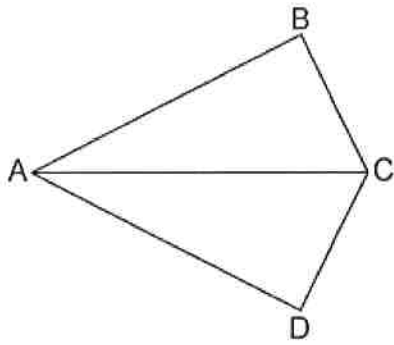
1. What formula can be used to find the area of the parallelogram?



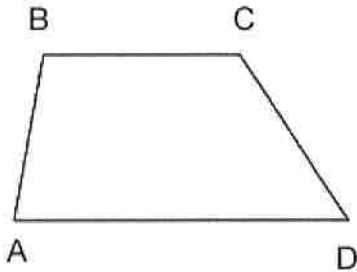
- a.  $ab$   
b.  $bh$   
c.  $abh$   
d.  $bh/2$
2. A square has a diagonal of  $6\sqrt{2}$ . What is the area of the square?  
a. 6  
b. 12  
c. 24  
d. 36
3. A rhombus has a side length of 6 and an altitude of 5. What is the area of the rhombus?  
a. 15  
b. 24  
c. 30  
d. 36
4. Find the area of trapezoid ABCD, given  $BC = 21$  inches,  $AD = 38$  inches, and a height of 16 inches.



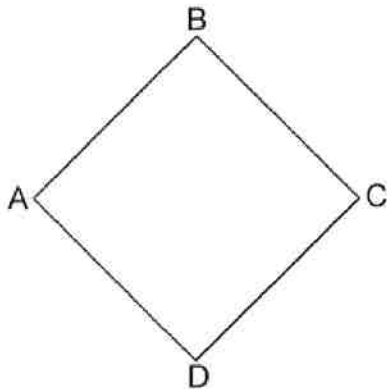
5. If the length of line  $BD$  is 5 and the length of line  $AC$  is 8, what is the area of the kite?



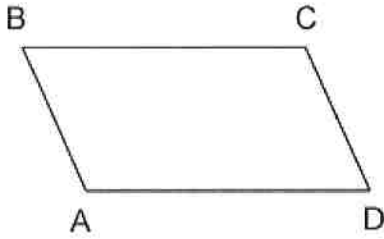
- a. 10  
b. 20  
c. 30  
d. 40
6. Trapezoid  $ABCD$  has an area of 57.  $BC = 7$  and  $AD = 12$ . What is the height of the trapezoid?



7. In rhombus  $ABCD$ , the length of  $AC$  is 10 and the length of  $BD$  is 9. What is the area of rhombus  $ABCD$ ?



8. AD measures 8 in parallelogram ABCD. If the area of ABCD is 44, what is the measure of the corresponding altitude?



9. Ms. Simpson is planning to put a wall around a rectangular part of her yard. She wants the area to be 338 square feet. The walled part of the yard will have a length of 26 feet.
- a. How many feet should the width of the wall be? Show your work to support your answer.
- b. She wants to put a 4-foot gate on one side of the yard. How many feet of walling does she need for the rest of the walled yard? Show your work to support your answer.



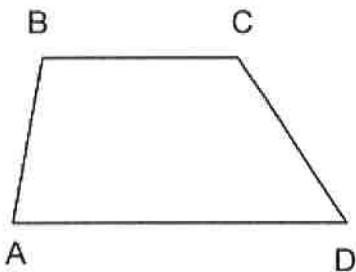
10. A parallelogram has a base of 10 and altitude of 3.  
A kite has diagonals of 6 and 9.  
Which has the greater area, the parallelogram or kite? Or, are the areas equal?  
Support your answer.

## Areas of Quadrilaterals Answer Key

1. What formula can be used to find the area of the parallelogram?

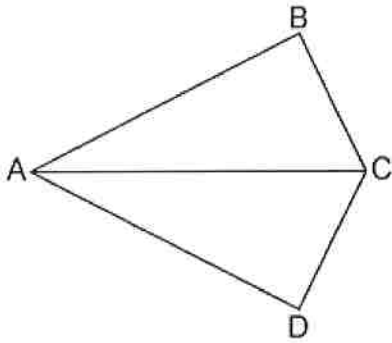


- a.  $ab$   
b.  $bh$   
c.  $abh$   
d.  $bh/2$
2. A square has a diagonal of  $6\sqrt{2}$ . What is the area of the square?  
a. 6  
b. 12  
c. 24  
d. **36**
3. A rhombus has a side length of 6 and an altitude of 5. What is the area of the rhombus?  
a. 15  
b. 24  
c. **30**  
d. 36
4. Find the area of trapezoid ABCD, given  $BC = 21$  inches,  $AD = 38$  inches, and a height of 16 inches.

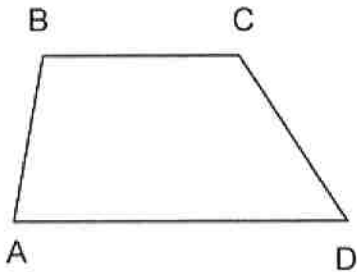


**472 inches squared**

5. If the length of line  $BD$  is 5 and the length of line  $AC$  is 8, what is the area of the kite?

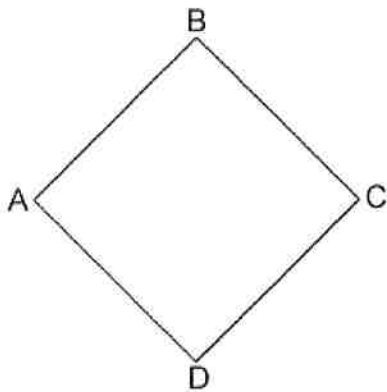


- a. 10  
**b. 20**  
c. 30  
d. 40
6. Trapezoid ABCD has an area of 57.  $BC = 7$  and  $AD = 12$ . What is the height of the trapezoid?



**6**

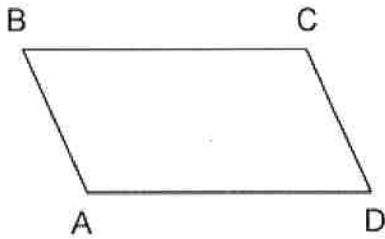
7. In rhombus ABCD, the length of  $AC$  is 10 and the length of  $BD$  is 9. What is the area of rhombus ABCD?



**45**

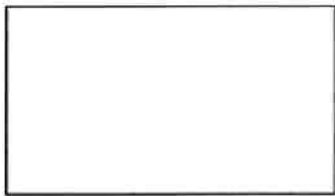


8. AD measures 8 in parallelogram ABCD. If the area of ABCD is 44, what is the measure of the corresponding altitude?



### 5.5

9. Ms. Simpson is planning to put a wall around a rectangular part of her yard. She wants the area to be 338 square feet. The walled part of the yard will have a length of 26 feet.
- a. How many feet should the width of the wall be? Show your work to support your answer.
- b. She wants to put a 4-foot gate on one side of the yard. How many feet of walling does she need for the rest of the walled yard? Show your work to support your answer.



**a.  $26 \text{ ft.} \times W = 338 \text{ sq. ft.}$   
 $W = 13 \text{ ft.}$**

**b.  $26 + 26 + 13 + 13 - 4 = 74 \text{ ft.}$**

10. A parallelogram has a base of 10 and altitude of 3.  
A kite has diagonals of 6 and 9.  
Which has the greater area, the parallelogram or kite? Or, are the areas equal?  
Support your answer.

**Parallelogram area = 30**

**Kite area = 27**

**area of parallelogram is greater**

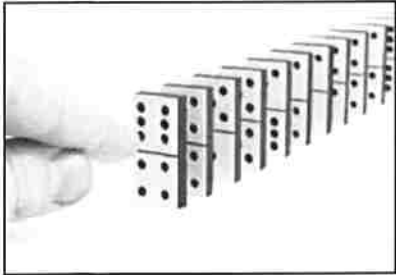
# Flow of Energy in Ecosystems

## Reflect

Animals, including humans, get their **energy** by eating other organisms. For example, you may have eaten an apple at breakfast that provided your body with energy later in the day. Where did the energy stored in the apple come from? We know that energy cannot be created or destroyed, so where does the source of energy in living systems begin, and how does it move through these systems?



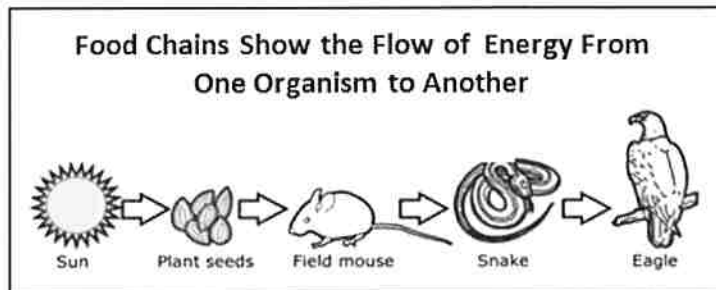
**energy** – the ability to do work or cause change



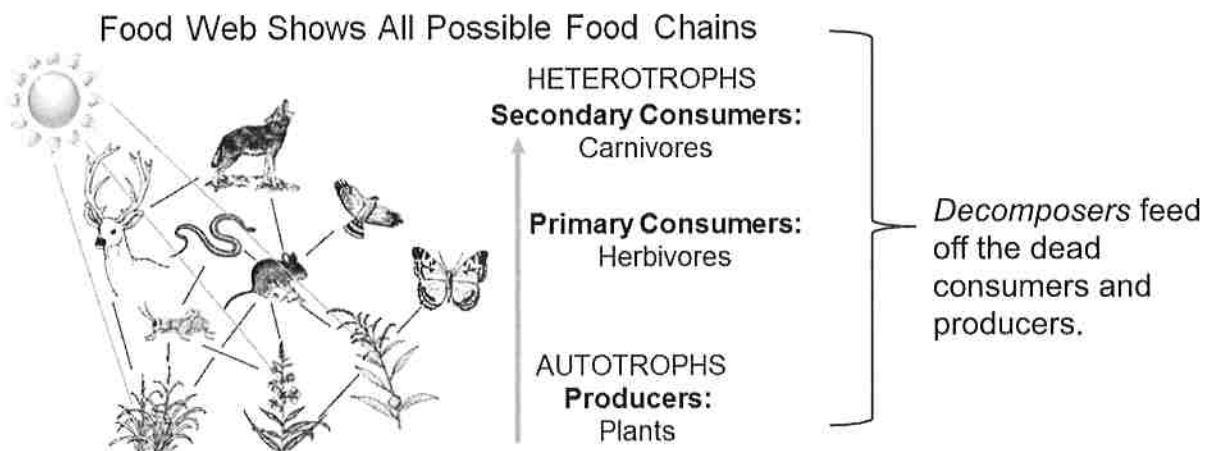
### Energy flows through ecosystems.

When you push on the first of a series of lined-up dominoes, the energy from your push is transmitted from one domino to the next. Your push represents the energy that started the movement. This energy moves along the line as each domino topples into the next.

Energy also moves from a starting point through living systems in a one-way direction shown in a *food chain*. This movement is described as a flow of energy. The sun is the major starting point for most of the living things on Earth.



*Food webs* are models that demonstrate how matter and energy are transferred between producers, consumers, and decomposers as the three groups interact within the connected food chains in an ecosystem. Transfers of matter into and out of the physical environment occur at every level. Eventually, decomposers recycle nutrients from dead plant or animal matter back to the soil in terrestrial environments or to the water in aquatic environments. The atoms that make up the organisms in an ecosystem are cycled repeatedly between the living and nonliving parts of the ecosystem.



# Flow of Energy in Ecosystems

## Trophic Levels in an Ecosystem

Energy flows in an ecosystem from one trophic level (feeding level) to the next. All organisms can also be classified as either autotrophs or heterotrophs.

- **Autotrophs**

- **Producers:** The first trophic level includes organisms that are called producers, or autotrophs, because they produce their own food. *Auto-* refers to "self," and *troph-* refers to "feeding," so autotrophs are self-feeders. Producers include plants, algae, and some bacteria that use photosynthesis to make their own food.

- **Heterotrophs**

- **Consumers:** The second trophic level of organisms get energy by eating other organisms. Consumers are further classified by the type of food eaten and by how many trophic levels of energy are involved.

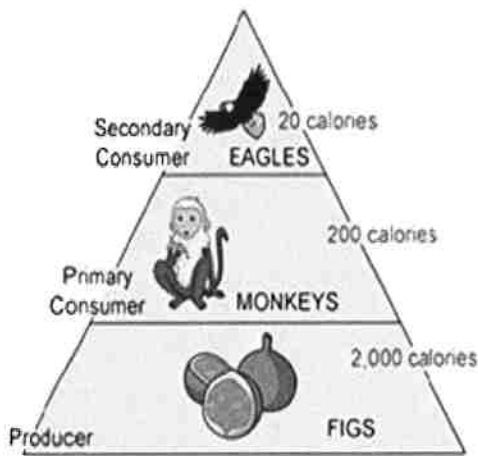
Herbivore	Carnivore	Omnivore
<ul style="list-style-type: none"><li>● It only eats producers (the root word <i>herb</i> refers to plants).</li><li>● They are also called <i>primary consumers</i>, because they are the first level in a food chain.</li><li>● Examples are rabbits, squirrels, and cows.</li></ul>	<ul style="list-style-type: none"><li>● It only eats other animals (the root word <i>carn</i> refers to meat).</li><li>● They can be <i>secondary consumers</i> (if they eat primary consumers) or <i>tertiary consumers</i> (if they eat secondary consumers).</li><li>● Examples are snakes, hawks, and lions.</li></ul>	<ul style="list-style-type: none"><li>● It eats both plants and animals.</li><li>● They can be primary consumers or secondary consumers, depending on what they choose to eat in a particular situation.</li><li>● Examples are raccoons, brown bears, and humans.</li></ul>

- **Decomposers:** Decomposers break down dead or decaying consumers and producers via chemical reactions and use the energy released from rearranging those molecules for growth and development. Decomposers can be fungi or bacteria.

# Flow of Energy in Ecosystems

## Look Out!

Remember these important concepts about the flow of energy in ecosystems:



- Not all trophic levels of a food chain receive the same amount of energy. Only about 10% of the sun's energy absorbed by plants is transferred to the consumers at the next trophic level. Where does 90% of the energy go? Some of it is used to fuel body processes such as growth, repair, and reproduction. Most of it is transferred to the atmosphere as heat. We can represent the energy flow of an ecosystem in an energy pyramid. The different levels of the pyramid represent the different groups of a food chain or food web. The producers are found at the bottom of the pyramid. The more levels there are in a pyramid, the less energy is available to the organism at the top.

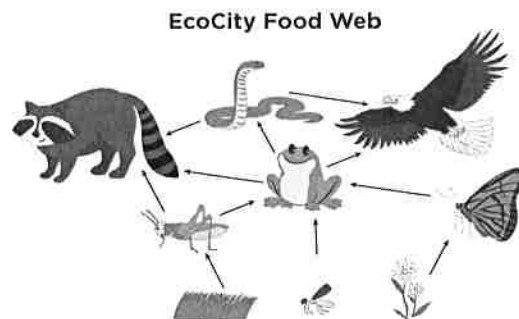
- Energy moves through an ecosystem in a single direction. First it flows from the sun to autotrophs, or *producers*. Then it flows from producers to *consumers*. Energy never flows backward from consumers to producers.
- When you draw a food chain, always begin with energy from the sun to a producer. Don't forget that the arrows should point to the organism receiving the energy.
- A small percentage of organisms use sulfur compounds from volcanic sea vents deep in the ocean as their source of energy. Instead of using sunlight in photosynthesis, these organisms use chemicals to aid in chemosynthesis. They make their own food, just like in photosynthesis.



## Reflect

**In terrestrial ecosystems, food webs involve organisms that live on land.**

A food chain is useful for tracing energy flow, but it only tells part of the story. A *food web* shows the complexity of interactions between the different trophic levels. The terrestrial food web on the right shows several overlapping food chains. The producers are plants. Insects such as grasshoppers and butterflies are primary consumers that eat the plants. Frogs and raccoons are secondary consumers that eat insects, and snakes and eagles are tertiary consumers (also carnivores) that eat secondary consumers.



# Flow of Energy in Ecosystems

## What Do You Think?

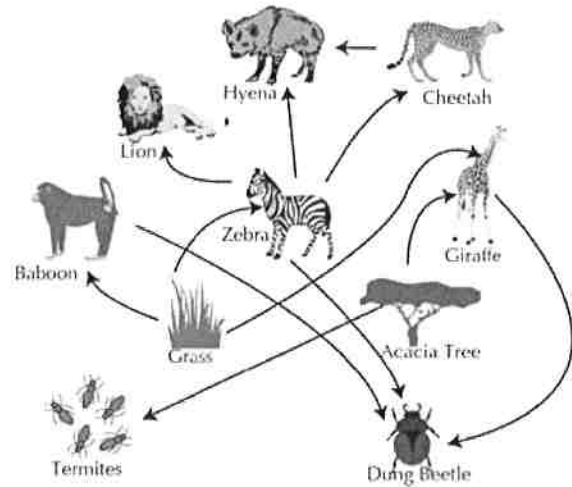
Take a look at the terrestrial food web to the right. Identify each organism as one or more of the following.

**Producer** (autotroph):

**Primary consumer** (heterotroph):

**Secondary consumer** (heterotroph):

**Tertiary consumer** (heterotroph):



Which organisms do you think would consume the dead plant and animal matter in this ecosystem?

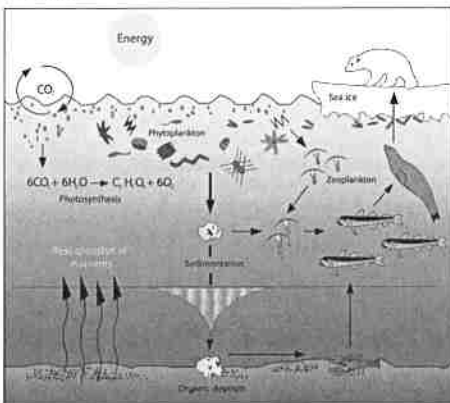
## Look Out!

In aquatic ecosystems, food webs involve organisms that live in water.

Aquatic ecosystems make up the largest part of our *biosphere*, the part of Earth that is able to support life. *Aquatic ecosystems* include marine and freshwater ecosystems.

- *Marine ecosystems* are saltwater environments such as oceans, coral reefs, and salt marshes.
- *Freshwater ecosystems* are water environments with a very low salt content and include rivers, streams, and ponds. Like all ecosystems, aquatic ecosystems consist of food webs with producers and consumers.





Many aquatic plants called *phytoplankton* are the main producers in aquatic ecosystems. Algae are a common type of phytoplankton. Tiny aquatic animals called *zooplankton* and small animals without backbones called *invertebrates* are primary consumers that feed on phytoplankton. Fish and larger aquatic life eat these primary consumers and make up the higher consumer levels of the food chain.



# Flow of Energy in Ecosystems

## Try Now

Study the images below. Identify the trophic levels shown in each image. Write "producer," "primary consumer," "secondary consumer," or "tertiary consumer" next to the image in the right column of the table.

Image	Trophic Level
	Squirrel:  Nut:
	Bear:  Fish:
	Caterpillars:  Leaf:
	Bird:  Insect:  Tree:

Grass, acacia tree

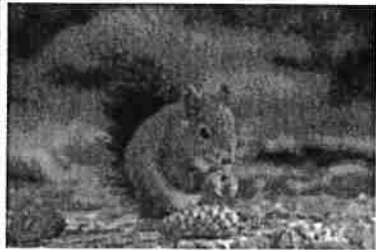

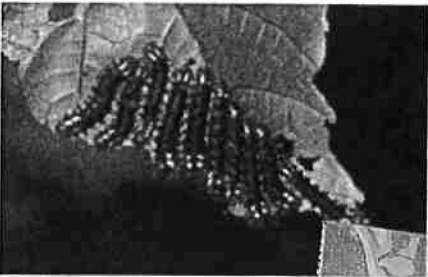
Zebra, baboon, giraffe, termites

Hyena, lion, cheetah, dung beetle

Hyena


Mushrooms, fungi, bacteria

Answer Key

Image	Trophic Level
	<p>Squirrel: Primary consumer</p> <p>Nut: Producer</p>
	<p>Bear: Secondary consumer</p> <p>Fish: Primary consumer</p>
	<p>Caterpillars: Primary consumer</p> <p>Leaf: Producer</p>

5/4/2020

Answer Keys | STEMscopes

Image	Trophic Level
	<p>Bird: Secondary consumer</p> <p>Insect: Primary consumer</p> <p>Tree: Producer</p>



## Lesson 3: Political Divisions

### Main Idea

**Political parties in the United States underwent change due to the movement to expand slavery.**

### Political Parties Undergo Change

Democrat Stephen Douglas had predicted that the Kansas-Nebraska Act would “raise a . . . storm.” He was right. The Kansas-Nebraska Act brought the slavery issue back into the national spotlight.

Some Whigs, Democrats, Free-Soilers, and abolitionists joined in 1854 to form the Republican Party, a political party united against the spread of slavery in the West. At their first nominating convention, the Republicans chose explorer John C. Frémont as their candidate. He had little political experience, but he stood against the spread of slavery.

The Whig Party fell apart due to conflict over the Kansas-Nebraska Act. Northern and southern Whigs refused to work together. A senator from Connecticut complained bitterly about the act, which led him to resign from the Senate.

*“The Whig Party has been killed off . . . by that miserable Nebraska business.”*

—Senator Truman Smith

*quoted in Battle Cry of Freedom by James M. McPherson*

Some Whigs and Democrats joined the American Party, also known as the Know-Nothing Party. At the party’s convention, delegates argued over slavery, then chose former president Millard Fillmore as their candidate for the election of 1856.

Democrats were in trouble because of disagreements over slavery. Those who supported the Kansas-Nebraska Act were not reelected. The Democrats knew they could not choose a strong supporter of the act, such as President Pierce or Senator Douglas. They nominated James Buchanan of Pennsylvania. Buchanan had a great deal of political experience as Polk’s secretary of state. Most importantly, he had been in Great Britain as ambassador during the Kansas-Nebraska Historical Source

### Free-Soilers and Slavery

This political cartoon from 1856 attacks Democratic politicians for their pro-slavery views. Leading Democrats are shown forcing slavery down the throat of a free-soiler, a resident of Kansas opposed to the spread of slavery. The free-soiler is tied down to the Democratic platform, which is labeled with the names of places where Democrats wanted to expand slavery.

On election day, Frémont won 11 of the 16 free states. But because the public saw Republicans as a single-issue party, he





had almost no support outside of the free states. Fillmore won only one state—Maryland. Buchanan won 14 of the 15 slave states and became the new president.

## Main Idea

**The *Dred Scott* decision created further division over the issue of slavery.**

### *Dred Scott Decision*

Just two days after Buchanan became president, the Supreme Court issued a historic ruling about slavery. News of the decision threw the country back into crisis. The Court reviewed and decided the complex case involving an enslaved man named Dred Scott.

#### Dred Scott Sues for Freedom

Dred Scott was the slave of Dr. John Emerson, an army surgeon who lived in St. Louis, Missouri. In the 1830s Emerson had taken Scott on tours of duty in Illinois and the Wisconsin Territory. After they returned to Missouri, the doctor died, and Scott became the slave of Emerson's widow. In 1846 Scott sued for his freedom in the Missouri state courts, arguing that he had become free when he lived in free territory. Though a lower court ruled in his favor, the Missouri Supreme Court overturned this ruling.



Dred Scott "had no rights which the white man was bound to respect," ruled Chief Justice Roger Taney.

Scott's case reached the U.S. Supreme Court 11 years later, in 1857. The justices—a majority of whom were from the South—had three key issues before them. First, the Court had to rule on whether Scott was a citizen. Only citizens could sue in federal court. Second, the Court had to decide if his time living on free soil made him free. Third, the Court had to determine the constitutionality of prohibiting slavery in parts of the Louisiana Purchase.

#### The Supreme Court's Ruling

Chief Justice Roger B. Taney (TAW-nee), himself from a slaveholding family in Maryland, wrote the majority opinion in the *Dred Scott* decision in March 1857. First, he addressed the issue of Dred Scott's citizenship. Taney said the nation's founders believed that African Americans "had no rights which a white man was

bound to respect." He therefore concluded that all African Americans, whether slave or free, were not citizens under the U.S. Constitution. Thus, Dred Scott did not have the right to file suit in federal court.

Taney also ruled on the other issues before the Court. As to whether Scott's residence on free soil made him free, Taney flatly said it did not. Because Scott had returned to the slave state of Missouri, the Chief Justice said, "his status, as free or slave, depended on the laws of Missouri.

Finally, Taney declared the Missouri Compromise restriction on slavery north of 36°30' to be unconstitutional. He pointed out that the Fifth Amendment said no one could "be deprived of life, liberty, or property without due process of law." Because slaves were considered property, Congress could not prohibit someone from taking slaves into a federal territory. Under this ruling, Congress had no right to ban slavery in any federal territory.

Most white southerners cheered this decision. It “covers every question regarding slavery and settles it in favor of the South,” reported a Georgia newspaper. Another newspaper, the New Orleans *Picayune*, assured its readers that the ruling put “the whole basis of the . . . Republican organization under the ban of law.” The ruling stunned many northerners. The Republicans were particularly upset because their platform in 1856 had argued that Congress held the right to ban slavery in the federal territories. Now the nation’s highest court had ruled that Congress did not have this right.

Indeed, some northerners feared that the spread of slavery would not stop with the federal territories. Illinois lawyer Abraham Lincoln warned that a future Court ruling, or what he called “the next *Dred Scott* decision,” would prohibit states from banning slavery.

“We shall *lie down* pleasantly dreaming that the people of *Missouri* are on the verge of making their state *free*; and we shall *awake* to the *reality*, instead, that the Supreme Court has made *Illinois a slave state*.”

—Abraham Lincoln

quoted in *Speeches and Letters of Abraham Lincoln 1832–1865*, edited by Merwin Roe

The ruling in the *Dred Scott* case also had an impact on the Supreme Court. Because the decision was so strongly in favor of slavery, the reputation of the Court suffered greatly in parts of the North.


### Main Idea

**The Lincoln-Douglas debates brought much attention to the conflict over slavery.**

### Lincoln-Douglas Debates

In 1858 Illinois Republicans nominated Abraham Lincoln for the U.S. Senate. His opponent was Democrat Stephen Douglas, who had represented Illinois in the Senate since 1847. Lincoln challenged Douglas in what became the historic Lincoln-Douglas debates. In all, Lincoln and Douglas agreed to hold seven debates in seven different Illinois cities. Each lasted three hours. In addition to their political differences, the two men presented a strong contrast in physical appearance. Lincoln stood no less than six feet four inches, more than a foot taller than Douglas.

A National Dialogue



When he ran against Douglas, Lincoln was little known outside of Illinois. But his forceful speeches against the expansion of slavery made him nationally famous.

In each debate, Lincoln stressed that the central issue of the campaign was the spread of slavery in the West. He said that the Democrats were trying to spread slavery across the nation.

Lincoln talked about the *Dred Scott* decision. He said that African Americans were “entitled to all the natural rights” listed in the Declaration of Independence, specifically mentioning “the right to life, liberty, and the pursuit of happiness.” However, Lincoln believed that African Americans were not necessarily the social or political equals of whites. Hoping to cost Lincoln votes, Douglas charged that Lincoln “thinks that the Negro is his brother. . . .”

Douglas also criticized Lincoln for saying that the nation could not remain “half slave and half free.” Douglas said that the statement revealed a Republican desire to make every state a free state. This, he warned, would only lead to “a dissolution [destruction] of the Union” and “warfare between the North and the South.”

### A House Divided

In 1858 Abraham Lincoln gave a passionate speech to Illinois Republicans about the dangers of the disagreement over slavery. Some considered it a call for war. The speech is best known for the statement, “A house divided against itself cannot stand,” which is a paraphrase of a line in the Bible.

*“In my opinion, it [disagreement over slavery] will not cease, until a crisis shall have been reached, and passed. ‘A house divided against itself cannot stand.’ I believe this government cannot endure, permanently half slave and half free. I do not expect the Union to be dissolved—I do not expect the house to fall—but I do expect it will cease to be divided. It will become all one thing or all the other. Either the opponents of slavery, will arrest the further spread of it, and place it where the public mind shall rest in the belief that it is in the course of ultimate extinction; or its advocates will push it forward, till it shall become alike lawful in all the States, old as well as new—North as well as South.”*

—Abraham Lincoln

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At the second debate, in the northern Illinois town of Freeport, Lincoln pressed Douglas on the apparent contradiction between the Democrats’ belief in popular sovereignty and the *Dred Scott* decision. Lincoln asked Douglas to explain how, if Congress could not ban slavery from a federal territory, Congress could allow the citizens of that territory to ban it.

Douglas responded that it did not matter what the Supreme Court decided about slavery. He argued that “the people have the lawful means to introduce it or exclude it as they please, for the reason that slavery cannot exist a day or an hour anywhere, unless it is supported by local police regulations.”

This notion that the police would enforce the voters’ decision if it contradicted the Supreme Court’s decision in the *Dred Scott* case became known as the Freeport Doctrine.

The Freeport Doctrine put the slavery question back in the hands of American citizens. It helped Douglas win the Senate seat. Lincoln, while not victorious, became a strong, important leader of the Republican Party.

## A Divided Nation

### Lesson 3



#### MAIN IDEAS

1. Political parties in the United States underwent change due to the movement to expand slavery.
2. The *Dred Scott* decision created further division over the issue of slavery.
3. The Lincoln-Douglas debates brought much attention to the conflict over slavery.

### Key Terms and People

**Republican Party** political party founded to fight slavery and its spread to the West

**James Buchanan** Democratic candidate and winner of the 1856 presidential election

**John C. Frémont** Republican candidate for the 1856 presidential election; against spread of slavery

**Dred Scott** slave who unsuccessfully sued for his freedom in 1846

**Roger B. Taney** Chief Justice of the Supreme Court during the *Dred Scott* decision

**Abraham Lincoln** early leader of the Republican Party

**Lincoln-Douglas debates** debates between senatorial candidates Abraham Lincoln and Stephen Douglas

**Freeport Doctrine** Stephen Douglas's belief that popular sovereignty made the decisions of citizens more important than decisions made by the Supreme Court in the *Dred Scott* case

### Lesson Summary

#### POLITICAL PARTIES UNDERGO CHANGE

As the 1850s progressed, Whigs, Democrats, Free-Soilers, and abolitionists united. They formed the **Republican Party** to fight slavery. Others left their parties to form the Know-Nothing Party. For the 1856 presidential election, the old Democratic Party nominated **James Buchanan**. Buchanan had been out of the country during the "Bleeding Kansas" dispute. He defeated Know-Nothing Millard Fillmore and Republican **John C. Frémont**.

Why might it matter to voters that James Buchanan had been out of the country during "Bleeding Kansas"?

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Lesson 3, *continued*

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**DRED SCOTT DECISION**

**Dred Scott** was a slave. His slaveowner was a doctor who traveled from Missouri, a slave state, to free areas and back again to Missouri. Scott sued for his freedom, since he had lived in free areas.

The Supreme Court's decision in this complex case was against Scott. Chief Justice **Roger B. Taney** wrote that African Americans were not citizens, and only citizens could sue in federal court. He said that living in free territory did not make Scott free. Lastly, the Fifth Amendment says no one can lose property without due process of law. Since slaves were property, Congress could not stop people from taking slaves into federal territory.

Many antislavery voices rose against the decision. This included the voice of an Illinois lawyer named **Abraham Lincoln**.

**LINCOLN-DOUGLAS DEBATES**

In 1858 Abraham Lincoln ran for a U.S. Senate seat as the Republican candidate. His opponent was Democrat Stephen Douglas, who was up for reelection. During the campaign, the two men met several times for the **Lincoln-Douglas debates**. In the debates, Lincoln was careful not to talk about slavery in the existing slave states. Instead, he claimed the Democrats were trying to spread slavery across the nation.

During the second debate, Lincoln questioned Douglas about popular sovereignty. He wondered whether that belief went against the *Dred Scott* decision. In other words, how could the people ban what the Supreme Court allowed? Douglas restated his belief in popular sovereignty. His response is remembered as the **Freeport Doctrine**.

Underline the three decisions the Supreme Court made in the *Dred Scott* case.

Why do you believe Lincoln would not talk about slavery in the existing slave states?

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Why did Lincoln question Douglas's belief in popular sovereignty?

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Lesson 3, *continued*

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**CHALLENGE ACTIVITY**

**Critical Thinking: Summarize** Write a paragraph summarizing the impact of the Fifth Amendment on the Supreme Court's ruling in the *Dred Scott* case.

**DIRECTIONS** Write two adjectives or descriptive phrases that describe the term.

1. Abraham Lincoln \_\_\_\_\_  
\_\_\_\_\_
2. Dred Scott \_\_\_\_\_  
\_\_\_\_\_
3. *Dred Scott* decision \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. Freeport Doctrine \_\_\_\_\_  
\_\_\_\_\_
5. James Buchanan \_\_\_\_\_  
\_\_\_\_\_
6. John C. Frémont \_\_\_\_\_  
\_\_\_\_\_
7. Lincoln-Douglas debates \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. Republican Party \_\_\_\_\_  
\_\_\_\_\_
9. Roger B. Taney \_\_\_\_\_  
\_\_\_\_\_
10. Stephen Douglas \_\_\_\_\_  
\_\_\_\_\_

## A Divided Nation

### Lesson 3



#### MAIN IDEAS

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**Why might it matter to voters that James Buchanan had been out of the country during "Bleeding Kansas"?**

Possible answer: Since he had been out of the country, he had fewer ties and associations with the events that happened in Kansas.

Lesson 3, *continued***DRED SCOTT DECISION**

**Dred Scott** was a slave. His slaveowner was a doctor who traveled from Missouri, a slave state, to free areas and back again to Missouri. Scott sued for his freedom, since he had lived in free areas.

The Supreme Court's decision in this complex case was against Scott. Chief Justice **Roger B. Taney** wrote that African Americans were not citizens, and only citizens could sue in federal court. He said that living in free territory did not make Scott free. Lastly, the Fifth Amendment says no one can lose property without due process of law. Since slaves were property, Congress could not stop people from taking slaves into federal territory.

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Underline the three decisions the Supreme Court made in the *Dred Scott* case.

Why do you believe Lincoln would not talk about slavery in the existing slave states?

Possible answer: Lincoln may have felt that discussing slavery in existing slave states would cause him to lose votes.

Why did Lincoln question Douglas's belief in popular sovereignty?

He questioned how people could ban what the Supreme Court had allowed in the *Dred Scott* decision.



Lesson 3, *continued***CHALLENGE ACTIVITY**

**Critical Thinking: Summarize** Write a paragraph summarizing the impact of the Fifth Amendment on the Supreme Court's ruling in the *Dred Scott* case.

Answers will vary but may include the following: The impact of the Fifth Amendment on the ruling was that Congress could not stop people from taking slaves into federal territory. In addition, any ban on slavery violated the Fifth Amendment, so Congress did not have the power to ban slavery in federal territory.

**DIRECTIONS** Write two adjectives or descriptive phrases that describe the term.

1. Abraham Lincoln Illinois lawyer; challenged Stephen Douglas in debates for Senate seat; early leader of the Republican Party
2. Dred Scott slave of doctor who traveled from slave state to free areas; sued for his freedom
3. *Dred Scott* decision Supreme Court ruling on Dred Scott's suit for freedom; living in free territory did not make Scott free; African Americans were not citizens; Congress could not stop people from taking slaves into federal territory
4. Freeport Doctrine Douglas's response to Lincoln's questions on *Dred Scott* decision; Douglas restated his belief in popular sovereignty
5. James Buchanan Democratic nominee for president; won the presidency in 1856; had been out of the country during "Bleeding Kansas"
6. John C. Frémont Republican presidential candidate in 1856; against the spread of slavery
7. Lincoln-Douglas debates debates between Lincoln and Douglas for Senate seat; Lincoln stressed that Democrats were trying to spread slavery; at the second debate, Douglas responded to Lincoln's questions with what became known as the Freeport Doctrine
8. Republican Party party formed in the 1850s by some Whigs, Democrats, Free-Soilers, and abolitionists; group against the spread of slavery in the West
9. Roger B. Taney Supreme Court Chief Justice during *Dred Scott* decision; said African Americans were not citizens
10. Stephen Douglas Democratic nominee for Senate opposing Lincoln; faced Lincoln in Lincoln-Douglas debates; originated Freeport Doctrine