

Webster County Schools

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8th Grade

Packet 4

Lesson 10

Punctuation to Indicate
a Pause or Break**Introduction**

Sometimes in your writing, you will want to signal a pause. The pause may be in the middle of a sentence or at the end of it. You can use commas, dashes, or ellipses to cue different types of pauses.

Punctuation	When to Use	Examples
Commas	to set off nonessential information	Professional sports, such as football and basketball , can be more fun to watch live than on TV. Yesterday's game was thrilling, especially at the end.
Dashes	to indicate a change in thought or an abrupt break, or to emphasize set-off text	Some people think baseball is boring— nine innings of players standing around. The batter swung and— with the crack of his bat —knocked the ball out of the park.
Ellipses	to indicate an unfinished action or the process of thinking	With two seconds left on the clock, the player dribbled down the court . . . slam dunk!

**Guided Practice**

Add the type of punctuation shown in parentheses to correctly signal the pause in each sentence. Use a caret (^) to add dashes and ellipses.

Hint

When you use commas or dashes to signal a pause in the middle of a sentence, be sure to use the same punctuation before and after the pause.

Example:

Camella—that girl over there—plays hockey.

NOT

Camella, that girl over there—plays hockey.

- 1 Did you see the game between the Hornets and the Grizzlies the one that went into overtime? (comma)
- 2 Suddenly the referee blew his whistle stopping the game for a penalty. (ellipsis)
- 3 A professional athlete runs the risk of serious injury a disaster that could even end a career. (dash)
- 4 Our softball team has a game next Thursday not Friday. (comma)
- 5 Curtis a newcomer to our team usually scores the most runs. (dashes)
- 6 At 6:00 A.M. a time when most people are asleep Curtis and his brother are out practicing. (commas)
- 7 My mom says I can go to the game if I accomplish one thing an A on my algebra test. (dash)
- 8 Stepping up to the plate he keenly focused his eyes on the pitcher. (ellipsis)



Independent Practice

For numbers 1–5, choose the best way to punctuate the pause in each sentence.

- 1**
- A** The ball slowly rolled around the rim and finally, dropped through the hoop.
 - B** The ball slowly rolled, around the rim, and finally dropped through the hoop.
 - C** The ball slowly rolled . . . around the rim and finally dropped through the hoop.
 - D** The ball slowly rolled around the rim . . . and finally dropped through the hoop.

- 2**
- A** That tennis ball is flying toward you—watch out!
 - B** That tennis ball is—flying toward you watch out!
 - C** That tennis ball! is flying toward you, watch out!
 - D** That tennis ball is—flying toward you—watch out!

- 3**
- A** The score after six innings—if she remembered correctly was 4 to 1.
 - B** The score after six innings if she remembered correctly, was 4 to 1.
 - C** The score after six innings . . . if she remembered correctly was 4 to 1.
 - D** The score after six innings, if she remembered correctly, was 4 to 1.

Answer Form

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

4 (A) (B) (C) (D)

5 (A) (B) (C) (D)

Number
Correct

5

- 4**
- A** Let's get something to eat, maybe popcorn or nachos—at halftime.
 - B** Let's get something to eat—maybe popcorn or nachos—at halftime.
 - C** Let's get something to eat maybe popcorn or nachos, at halftime.
 - D** Let's get something to eat—maybe popcorn or nachos, at halftime.

- 5**
- A** Competing in the Olympics, what an amazing experience, that would be.
 - B** Competing in the Olympics . . . what an amazing experience, that would be.
 - C** Competing in the Olympics . . . what an amazing experience that would be.
 - D** Competing in the Olympics—what an amazing experience—that would be.

Lesson 14

Greek and Latin Word Parts



Introduction

Many words in English have Greek and Latin roots and affixes.

- A **root** is a word part that contains the main meaning of the word. In the word *secede*, the root *cede* means "move" or "go." *Secede* means "to move apart, or to separate."

Root	Meaning	Root	Meaning
<i>cede, cede</i>	"go, move"	<i>pon, pos</i>	"put, place"
<i>cur</i>	"run"	<i>ven, vent</i>	"come"
<i>mit, miss</i>	"send"	<i>ject</i>	"throw"

- An **affix** is a word part added to a root. **Prefixes** are affixes that come before the root, and **suffixes** are affixes that come after it.

Prefix	Meaning	Suffix	Meaning
<i>inter-</i>	"between"	<i>-ion</i>	"act or process of"
<i>pro-</i>	"forward; in favor of"	<i>-or</i>	"state, quality, or action"
<i>pre-</i>	"before"	<i>-ent</i>	"someone who does an action; occurring in a certain way"

- You can use the meanings of roots and affixes to figure out the meaning of many English words.



Guided Practice

Read the passage. Circle the root in each underlined word.

On a separate piece of paper, write the meanings of the word parts and define the word.

Hint

The meaning of the root does not usually fit exactly with the definition of the word. Think of affixes and roots as clues that you can use along with the context to figure out the meaning of an unknown word.

Our car was proceeding along the highway when we heard the forecast. The weather had been mixed all day, and now we knew that the intermittent rains were the precursor to a big storm. The station resumed its programming, but soon the announcer interjected another warning. My brother, who was driving, was a proponent of going home, but my sister Lexy wanted to continue. We needed an intervention, so I used my cell phone to call my mom.



Independent Practice

For numbers 1–4, read each sentence. Then answer the question.

- 1** My mom told us that the trajectory of the storm had changed and the river might overflow.

The prefix *tra-* means “across,” the root *ject* means “throw,” and the suffix *-ory* means “a place where.” What is the meaning of trajectory as used in the sentence?

- A** the time when something important begins
- B** the type
- C** the path something takes as it moves over
- D** the size and shape

- 2** Lexy could be tenacious, but my mother’s news put an end to all discussion.

The root *ten* means “hold,” and the suffix *-ious* means “characterized by.” What is the meaning of tenacious as used in the sentence?

- A** stubborn
- B** talkative
- C** cranky
- D** bossy

Answer Form

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

4 (A) (B) (C) (D)

Number
Correct

4

- 3** We subsequently turned the car around and returned home.

The prefix *sub-* means “under or after,” and the root *sequ* means “follow.” What is the meaning of subsequently as used in the sentence?

- A** slowly but surely
- B** immediately after
- C** completely
- D** eventually


- 4** After the huge storm, everyone wondered how long it would take the floodwaters to recede.

The prefix *re-* means “back,” and the root *cede* means “go.” What is the meaning of recede as used in the sentence?

- A** flow over
- B** rise higher
- C** remain stable
- D** withdraw from

Lesson 19

Denotation and Connotation

 **Introduction** Words can have two kinds of meanings that convey very different ideas or images. A word's **denotation** is its basic meaning, or dictionary definition. A word's **connotation** is the feeling or impression that people associate with the word.

- A word can have a **positive**, **negative**, or **neutral** connotation. When you write, think about the connotations of the words you choose and the effect they will have on your readers.

Positive Connotation	Neutral Connotation	Negative Connotation
Several people lingered in the theater after auditions.	Several people stayed in the theater after auditions.	Several people loitered in the theater after auditions.
My aunt picked me up in her compact two-door car.	My aunt picked me up in her small two-door car.	My aunt picked me up in her cramped two-door car.

- To say that a car is **small** is a neutral statement about the car. A car that is **compact**, however, can fit everything you need into just a small space. This word has a positive connotation. A **cramped** car, on the other hand, conjures images of tightly squeezed passengers and belongings. The connotation is negative.

 **Guided Practice** Read each sentence. Each underlined word has a neutral or a positive connotation. Write a word that has a negative connotation to replace each underlined word.

Hint

Words that have the same, or a similar, denotation are synonyms. You can use a thesaurus to find the synonyms for each underlined word. Then choose and write the synonym that has a negative connotation.

1 It was adventurous of me to try out for the role of villain.

2 I'm quiet and shy, and the character is powerful. _____

3 My best friend was surprised that I was so firm in my decision.

4 I nervously held the script as I read my first lines. _____

5 My right leg shook as I faced the hero. _____

6 When offered the part, I deliberated for a while. _____

7 But then I decided that I had spent too much time being shy.

8 Sometimes, I wonder what kind of silliness I'll try next.



Independent Practice

For numbers 1–3, which word has the same denotation as the underlined word but has a more negative connotation?

1 The director was unpredictable in his reactions to the actors and scenes.

- A** changeable
- B** volatile
- C** whimsical
- D** variable

2 The actors felt that the director's comments were sometimes clever.

- A** perceptive
- B** insightful
- C** keen
- D** shrewd

3 The director's feedback excited the actors.

- A** agitated
- B** inspired
- C** invigorated
- D** energized

Answer Form

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

4 (A) (B) (C) (D)

5 (A) (B) (C) (D)

Number
Correct

5

For numbers 4 and 5, which word has the same denotation as the underlined word but has a more positive connotation?

4 The director's great arrogance made it difficult for him to compromise in his way of doing things.

- A** conceit
- B** smugness
- C** confidence
- D** haughtiness

5 At the end of the rehearsals, the actors admitted that this director brought out the best in them.

- A** declared
- B** confessed
- C** gossiped
- D** vented

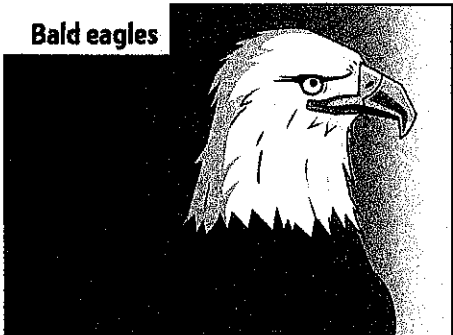
Lesson 10 Part 1: Introduction 
Analyzing Word Meanings

Theme: *Animal Survival*

What's the difference between saying "He doesn't eat very much" and saying "He eats like a bird"? The two phrases mean the same thing, but the first sentence is literal, and the second is figurative. **Literal meaning** refers to the dictionary definition of a word or phrase. Words or phrases with a **figurative meaning** express ideas in unusual or creative ways.

Words may also have positive, neutral, or negative **connotations**, which are the feelings or ideas associated with a word. And, some words have **technical meanings** specific to a certain subject area. When you read, be aware of these different types of meaning. It will improve your understanding of an author's message.

Read the magazine article below. Circle an example of figurative language, underline words with strong connotations, and put a box around any technical words or phrases.

<p>Bald eagles</p> 	<p>Bald eagles are majestic creatures. They sail and dive through the air like trained acrobats. They also have wingspans of up to 90 inches. That's more than seven feet long!</p>
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Read the chart to analyze some of the words you may have marked in the article.

Type of Language	Example	Effect on Meaning
Connotative	"majestic"	<i>Majestic</i> encourages readers to think that the birds are more than ordinarily beautiful.
Technical	"wingspan"	<i>Wingspan</i> is a specific term used to explain one of the eagle's characteristics.
Figurative	"They sail and dive through the air like trained acrobats."	The simile <i>They sail and dive through the air like trained acrobats</i> compares an eagle's movement to an acrobat's.

Authors choose words and phrases carefully to convey meaning and feeling. Determining word meanings can help you understand how an author's specific word choice affects the text.



Read the beginning of the scientific account about mollusks.

Genre: Scientific Account

The Mollusk Family *By Deshawn Miller*

Did you ever imagine that a tiny snail and a giant octopus might be part of the same family tree? Most people don't realize that snails, mussels, squid, and even octopods belong to the same category of creatures known as mollusks. These amazing creatures are invertebrates, which means they do not have spines.

Mollusks share three basic body parts: a foot, a body, and a mantle. The foot is a fleshy part of the mollusk's body, made up mostly of muscle tissue. In a snail, the foot is the part of the mollusk that meets the ground and gently rolls the body forward. From this slow, measured motion comes the phrase "a snail's pace." A mollusk's soft body is like a fragile bag that holds the heart, the guts, and various internal organs. The mantle, which is often a shell or a tough, sturdy covering, functions like a suit of armor to protect the body.

(continued)

Explore how to answer this question: "How do the word choices in the scientific account help you understand the author's intended meaning?"

Reread the account. Circle an example of figurative language, underline words with strong connotations, and put a box around any technical words or phrases.

In the account, find an example of each type of language named in the first column. Add it to the chart. Then, in the last column, explain the effect the word or phrase has on meaning.

Type of Language	Example	Effect on Meaning
Figurative		
Connotative		
Technical		

With a partner, discuss your completed charts. Then identify one more example for each type of language.



Continue reading the account. Use the Close Reading and the Hint to help you answer the question.

Close Reading

Circle two phrases in the first paragraph that help you understand the technical term *defense mechanisms*.

(continued from page 96)

Because many mollusks creep along slowly, they need defense mechanisms. Mollusks with shells simply retreat into their body armor to protect themselves from predators. But the Blue-Ringed Octopus, a mollusk found in the South Pacific, defends itself with a bite so fierce it is almost always fatal to humans.

Overall, mollusks are peaceful inhabitants of our planet. Whether they live on land or in the sea, they are not aggressive. Our taste for cooked mussels, clams, and oysters, in fact, makes us far more dangerous to mollusks than they are to us.

Hint

Think about the connotations, or feelings, that the words suggest. How do those feelings differ?

Circle the correct answer.

Which statement best explains why the author has used the words *retreat*, *fierce*, and *fatal* in the first paragraph above?

- A to warn readers that mollusks are often aggressive and dangerous
- B to emphasize the contrast between different mollusk defenses
- C to explain the mystery behind a mollusks' defense system
- D to call attention to the unusual shells grown by the mollusk family

Show Your Thinking

Look at the answer you chose above. Explain how the connotations of the words helped you to understand the ideas about mollusk defense mechanisms that the author wants to convey.



With a partner, discuss how the use of figurative, connotative, and technical language in the account gives you a clearer picture of the characteristics of the mollusk family.



Read the scientific account. Use the Study Buddy and Close Reading to guide your reading.

Genre: Scientific Account



As I read, I'm going to look for any connotative, figurative, or technical language the author uses to describe the attributes of armadillos.

Close Reading

Underline examples of figurative language in the first and fourth paragraphs.

Circle words with strong connotations used to describe the armadillo.

Armadillo Attributes *By Karen Olson*

- 1 The word *armadillo* comes from a Spanish word meaning “little armored one.” The armadillo earned its name from the bony carapace that shields the armadillo’s body like hinged plates of armor. This protective covering has helped this homely mammal survive for about 55 million years.
- 2 Armadillos are related to sloths and anteaters. They may also be descendants of ancient dinosaurs. Some scientists believe modern armadillos are related to an extinct mammal called the glyptodont (GLIP-toh-dont). Like armadillos, glyptodonts originated in South America.
- 3 Today, more than 20 species of armadillos live in Central and South America. The nine-banded armadillo is the only species in the United States. It is now found in Texas, Oklahoma, Arkansas, Missouri, Louisiana, and parts of Florida.
- 4 Armadillos have many strange yet fascinating traits. In order to swim, they can swallow air to inflate their stomachs, becoming as buoyant as a balloon floating on the water. When threatened, armadillos may react defensively by jumping three to four feet into the air. Some are able to curl up into tight balls.
- 5 Armadillos have terrible eyesight, so they use their foolproof sense of smell to find food. They probe grasses, decaying logs, or sandy soil with their pointy snouts. Once they locate beetles, ants, or other insects they like to eat, they eagerly dig them out with sharp claws and trap them with narrow, sticky tongues.
- 6 Armadillos are the only mammals with protective shells. You might assume that these shells and other traits make armadillos immune from danger; however, predators such as dogs, wolves, and coyotes hunt these peaceful animals. Sadly, speeding cars and trucks can also injure or kill them. Despite these ever-present threats, armadillos continue to survive in a variety of habitats and climates.



Hints

Find this word in paragraph 6.

Look for context clues in paragraph 6 that might help you understand the meaning of "immune."

Look back at the descriptive words you circled. Which words have a positive connotation? Which words have a negative connotation?

Use the Hints on this page to help you answer the questions.

- 1 What does the word "immune" mean as it is used in the passage?
 - A defensive
 - B unaffected
 - C threatened
 - D unaware
- 2 Which of the phrases from the passage best helps the reader understand the meaning of "immune"?
 - A "may react defensively"
 - B "these peaceful animals"
 - C "can also injure or kill them"
 - D "in a variety of habitats and climates"
- 3 Explain why the author uses words like *homely*, *strange*, *fascinating*, *terrible*, *foolproof*, and *peaceful* to describe armadillos. Write a paragraph about what these word choices reveal about how the author would like readers to feel about armadillos. Use at least three specific details from the text in your response.



Read the scientific account. Then answer the questions that follow.

Animal Regeneration

by Aleya Brown

1 Regeneration is the ability of an organism to regrow a lost body part. All creatures have the power to regenerate lost body parts to some degree. If a human scrapes a knee or breaks a bone, for example, tissue is regenerated to heal the wound. Even a lost fingernail will regenerate over time. If the finger is severed, however, the limits of regeneration have been reached; humans cannot regrow limbs or organs. In contrast, if an earthworm is cut in half, the end of the worm with a head can grow a new tail. If the end of the worm with the tail survives, it too may grow a new tail. Unfortunately, it starves to death eventually because it cannot feed itself without a head or mouth.

2 Which creatures have strong regenerative powers? Lower animals, such as worms, lizards, spiders, and starfish, have some of the greatest regenerative powers. Crayfish, for example, have a remarkable safety device at the base of each claw and leg called a “breaking joint.” When a predator grabs a limb or claw, the appendage breaks away so the crayfish can escape. Over time, as the crayfish molts, or sheds its soft shell, the broken limb or pincer grows larger and larger until it has been completely regenerated.

3 Some animals are able to survive in large part because of their regenerative powers. A type of flatworm called planaria lives under rocks in clear creeks and streams. The flatworm has no real defense mechanisms to protect it from predators, but it can be cut into as many as 32 pieces, and each piece may form a new worm, complete with a head, eyes, and internal organs. In the case of the planaria, an event that could be fatal is turned into an awesome act of procreation.

4 Many more animals display noteworthy regenerative powers. Sharks replace lost teeth throughout their lifetimes. A single shark may grow as many as 24,000 teeth in its lifetime, ensuring a long career at the top of the food chain. Much like planaria, sea cucumbers, which have bodies that grow up to three feet long, can be cut into pieces and survive. Each piece may grow into a new sea cucumber. Spiders, like crayfish, can regrow legs. Many lizards also have “breakaway” tails that snap off when caught by predators. They then grow new ones, which lack the original spine. Starfish can lose arms and grow new ones. Sometimes an entirely new starfish can grow from a single lost arm.

5 Interestingly enough, the scales of a fish tell stories about regeneration. Much like the rings inside a tree trunk, fish scales reveal details about an organism’s past. Each scale lies in a pocket of skin and grows along with the fish. Scientists read the markings on a scale to determine the age of the fish, seasons of famine or drought, and other important information. It is often necessary to look at many scales to get a complete story, however, because scales are often lost and regenerated. These new scales lack the markings that happen over time. They are like a blank page in the history of the fish.



6 Scientists are extremely interested in regeneration because of the possible implications for healing humans. Some scientists think it is possible that higher animals retain the ability to regenerate body parts, but that the reaction triggering the body to regenerate has been lost. By studying lower animals, such as worms, spiders, and sponges, scientists hope to discover what triggers regeneration. The dream is that this knowledge could one day be used to help humans regrow internal organs and limbs. Currently, human regeneration may sound like something out of a science-fiction movie. The implications of such a discovery, however, would be so far-reaching that they are hard to fathom. For now, the miracle of regeneration is intriguing enough to keep scientists working for years to come.

Answer the questions. Mark your answers to questions 1–5 on the Answer Form to the right.

Answer Form

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

4 (A) (B) (C) (D)

5 (A) (B) (C) (D)

Number Correct / 5

1

What is the meaning of "procreation" as it is used in paragraph 3 of the passage?

- A survival
- B repetition
- C cooperation
- D reproduction

2

Read this sentence from the passage.

Crayfish, for example, have a remarkable safety device at the base of each claw and leg called a "breaking joint."

Which of the following best matches the author's connotative meaning of the word "remarkable" as it is used in the sentence?

- A unusual
- B significant
- C extraordinary
- D noticeable



3

As used in paragraphs 2, 3, and 4 of the passage, the word *powers* is closest in meaning to

- A influence
- B authority
- C forcefulness
- D abilities

4

Which of the phrases from the passage best helps the reader understand the meaning of the word "appendage"?

- A "have a remarkable safety device"
- B "grabs a limb or claw"
- C "sheds its soft shell"
- D "grows larger and larger"

5

Read this sentence from the passage.

The dream is that this knowledge could one day be used to help humans regrow internal organs and limbs.

Which word best matches the meaning of "dream" as it is used in this sentence?

- A hope
- B fantasy
- C plan
- D illusion

 **Self Check** *Go back and see what you can check off on the Self Check on page 94.*

Name _____

vis, vid see

Root

invisible – adj. impossible to see; not visible. Many gases are invisible to the human eye.
televise – v. to broadcast something by television. NBC will televise the Olympics this summer.
video – n. the moving images that are seen in a recording or broadcast; a movie, television show, or event that has been recorded onto a videocassette, DVD, or other media so that it can be watched on a television or computer screen. Dad created a video of our vacation to Alaska.
visitation – n. an official visit by an important person, especially to look at or inspect something; the act of visiting your children or the right to visit your children after you are divorced and while they are living with the other parent. Both parents agreed to mutually-beneficial terms for visitation of the children.
visual – adj. relating to seeing or to the eyes. Most students are visual learners, so teachers often use projectors or other visual media to accommodate.

-ward -wise -ly in the direction or manner of Suffix

otherwise – adv. in a different way or manner; if something did not happen or was not true; if not; or else. Mrs. Erwin showed us a shortcut to the math problem that would otherwise take us hours to figure out.
forward – adv. toward the front. Walk eight steps forward, and you should see the door on your right.
directly – adv. in a direct way; without delay. The suspect refused to answer questions directly.
originally – adv. in the beginning; when something first happened or began; in a new, fresh, or unique way. We originally planned to go to Hawaii this summer, but we are going to Florida instead.
occasionally – adv. sometimes but not often. School occasionally dismisses at noon.

Name _____

A. Understand Words

Directions: Write the vocabulary word for each definition below.

1. toward the front _____
2. sometimes but not often _____
3. in the beginning; when something first happened or began; in a new, fresh, or unique way _____
4. in a direct way; without delay _____
5. in a different way or manner; if something did not happen or was not true; if not or else _____
6. relating to seeing or to the eyes _____
7. official visit by an important person, especially to look at or inspect something; the act of visiting your children or the right to visit your children after you are divorced and while they are living with the other parent _____
8. impossible to see; not visible _____
9. to broadcast something by television _____
10. the moving images that are seen in a recording or broadcast; a movie, television show, or event that has been recorded onto a videocassette, DVD, or other media so that it can be watched on a television or computer screen _____

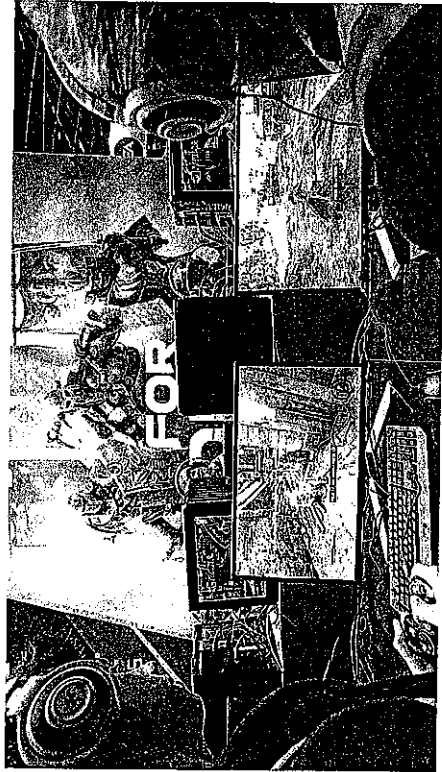
B. Rewrite Definitions

Directions: Reread the definitions and sentence examples for each word. Then, write your own definition for each word that contains *no more than five* words and uses the root or prefix meaning as part of the definition. An example is done for you.

11. invisible: can't see it _____
12. televise: _____
13. video: _____
14. visitation: _____
15. visual: _____
16. otherwise: _____
17. forward: _____
18. directly: _____
19. originally: _____
20. occasionally: _____

Issue Overview: Do video games cause violence?

By procon.org, adapted by Newsela staff on 11.28.16
 Word Count 852
 Level 1090L



Gamers play the video game "For Honor," developed by Ubisoft Montreal and published by Ubisoft, during "Paris Games Week" in Paris, France, October 28, 2016. Photo: Getty Images.

After schoolwork, chores and practice, free time means video game time for many American kids. As many as 97 percent of kids ages 12 to 17 in the United States play video games. Children are large contributors to the tens of billions of dollars that U.S. video game makers and sellers earn each year.

There seem to be countless types of video games to choose from. They include sports, racing, dancing and simulations. More than half of the 50 top-selling video games contain violence. Some think this may be a problem.

Violent video games have been blamed for school shootings, bullying and violence toward women. Critics argue that these games desensitize players to violence. They worry that these games teach children that violence is acceptable.

On the other hand, video game supporters say there is no evidence that video games cause social violence. They argue that violent video games may provide a safe outlet for angry feelings. This may actually reduce crime.

This article is available at 5 reading levels at <https://newsela.com>.

Congress Considers Regulating Sale Of Video Games

The debate over violent video games started in 1976 with "Death Race." Players drove over "gremlins" that resembled stick-figure humans. Protesters dragged "Death Race" machines out of arcades and burned them in parking lots. Production of the game was stopped.

In 1993, there was more public outcry over the violent video games "Mortal Kombat" and "Night Trap." Congress discussed regulating the sale of video games. In response, the video game industry established the Entertainment Software Rating Board (ESRB) to rate video game content. The ratings are: "Early Childhood," "Everyone," "Everyone 10+," "Teen," "Mature" and "Adults Only." Of all the games rated by ESRB in its 20-year history, 94 percent have been rated "Everyone," "Everyone 10+," or "Teen." However, there are still thousands of games rated "Mature."

Many kids ages 12 to 17 still play "Mature" or "Adults Only" video games though. In a 2008 survey, 50 percent of boys and 14 percent of girls said a game with one of these ratings was among their favorite games.

Possible Link Between Video Games And Violence Toward Women

Through the years, the issue of video game violence resurfaced. In 2005, the American Psychological Association called for less violence in video games marketed to youth. The group said there might be links between video games and violence toward women.

Critics argue that playing violent video games is responsible for the increasing rates of bullying in recent years. Some researchers are concerned that violent video games teach children that violence is an acceptable approach to solving conflicts and achieving goals.

Attention on video game violence was renewed again in 1999. The two teenage shooters of the Columbine High School mass killings in Colorado often played violent video games. Many focused on the role of video games in the school shooting. There also have been mass shootings where the shooter did not play video games. The 2007 Virginia Tech shooting is one such example.

U.S. Supreme Court Rules

Several states and cities have passed laws against the sale of violent video games to kids. However, the restrictions were struck down. Courts have said there is no clear link between video game violence and real-world violence. In 2011, the U.S. Supreme Court ruled that a California law banning the sale of violent video games to minors violated the right to free speech.

This article is available at 5 reading levels at <https://newsela.com>.

- 3 In this article, there are two groups of people who disagree about video games. Which of these options explains the MAIN difference between these two perspectives?
- (A) One group believes that violent video games promote crime, and the other group believes that video games are teaching children to solve conflicts on their own.
 - (B) One group believes that violent video games promote aggression and violence, and the other group believes that there is no substantial connection to increased violence.
 - (C) One group believes that video games are promoting violence, and the other group believes that video games have directly increased shootings, bullying and violence toward women.
 - (D) One group believes that violent video games are connected to increased hostile behavior, and the other group believes the studies that showed that connection were flawed.
- 4 Which statement would a critic of violent video games MOST likely agree with?
- (A) Video game ratings need to be more highly regulated.
 - (B) The evidence that video games cause social violence is thin; we need more research.
 - (C) Video games are distracting children from their schoolwork and chores.
 - (D) Evidence shows video games lead to hostile behavior, and they may also make violence seem acceptable.

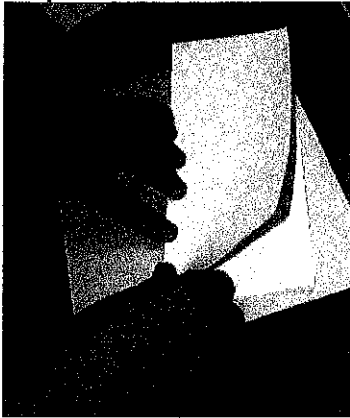
What is the main idea and two supporting details?

Name Bugs

- computer paper
- a Sharpie
- something to decorate with; can be dollar store watercolor paint, crayons, markers, or any combination of them

You are going to write your name on a folded piece of paper. Cursive makes beautiful name creatures. Printing makes cool name aliens and robots. Either is fun!

Step One:



Fold a piece of paper lengthwise, keeping the folded part in toward your body. I tell kids to turn it so you can quack like a duck.

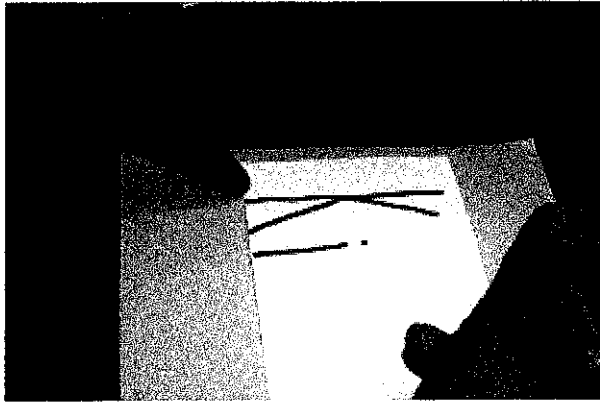
It's a great idea to have a piece of scratch paper underneath your folded paper.

Step Two:

Choose whether to write the name in cursive, or to print it neatly. You are going to do this part with a Sharpie. Whether you print or write cursive, the most important thing to do it to bring the letters all the way down to the fold of the paper, especially on the first and last letter.

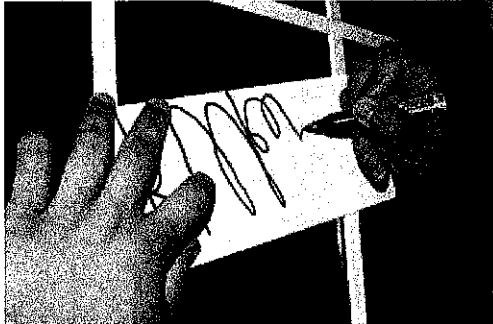


Note how close we write the letter to the fold:



Step Three

This is the trickiest step; after this it is all easy. Flip over the folded paper and hold it up to a window; with that little bit of light shining through, you can see the image of the word. Using the Sharpie, trace over the entire name. It will look strange!



Step Four

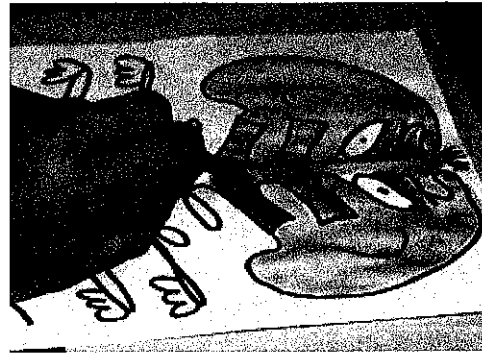
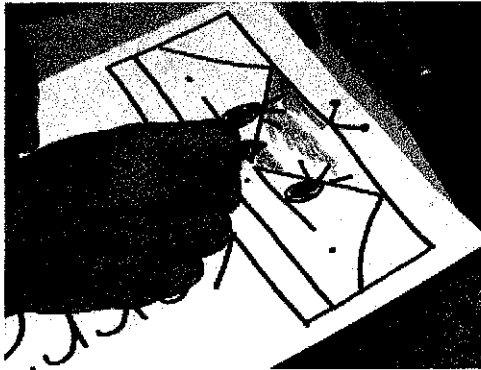
Now the fun begins! Open up the paper and see what you have! Look for its personality. Is it a monster? An alien? A strange insect? Turn it 180 degrees if you don't see something and look at it from that perspective. If something doesn't jump right out at you, look for what might be eyeballs—once you settle on the eyeballs, the rest comes.



Once you get the eyes placed, features start to become evident. Add hands, antennae, hair, ears, nostrils, a mouth, shoes... just whatever your little creature needs to bring it alive. Let your imagination run wild!

Step Five:

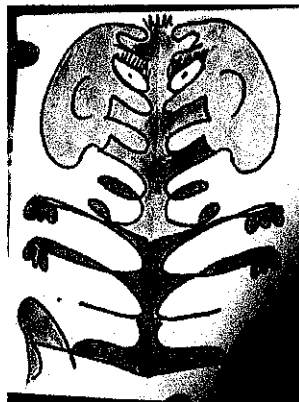
You will be amazed at how much the color will bring the personalities out of these little creations. Crayons or markers work great; or if you love to paint, nothing beats a strip of dollar store watercolors. If you don't know what something is on your creature, just start coloring the different sections and the ideas will start flowing. You can always add more details, too.



Put on the finishing touches and enjoy your Name Bugs! Can you recognize the name? If you want to fold the finished bug and look at it again, you can still recognize the root word in it, but when you open it up the magic happens.



It's also fun to create bugs out of other names; some of my favorites have been from positive words to celebrate, such as JOY, HOPE, and SMILE. And of course, celebrating your own name gives you a signature critter; you can scan it in, reduce it down, and use it as an avatar or strange signature.







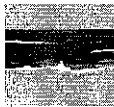




Name: _____

Date: _____

Energy Resources

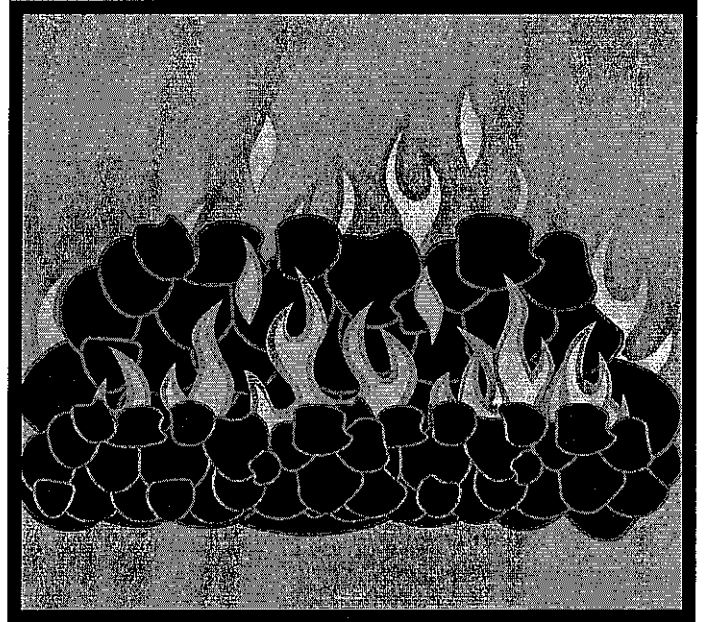
Directions: Complete the table with information about different methods of generating electricity.

Energy Resource	Description (explain how it works)	Advantages	Disadvantages
Solar 			
Fossil Fuels 			
Wind 			
Tidal 			

Energy Resource	Description (explain how it works)	Advantages	Disadvantages
Wave 			
Geothermal 			
Nuclear 			
Hydroelectric 			
Biomass 			

Fossil Fuels

Coal is burned to heat water. The water turns to steam and makes a turbine spin. The turbine is connected to a generator that produces a current.

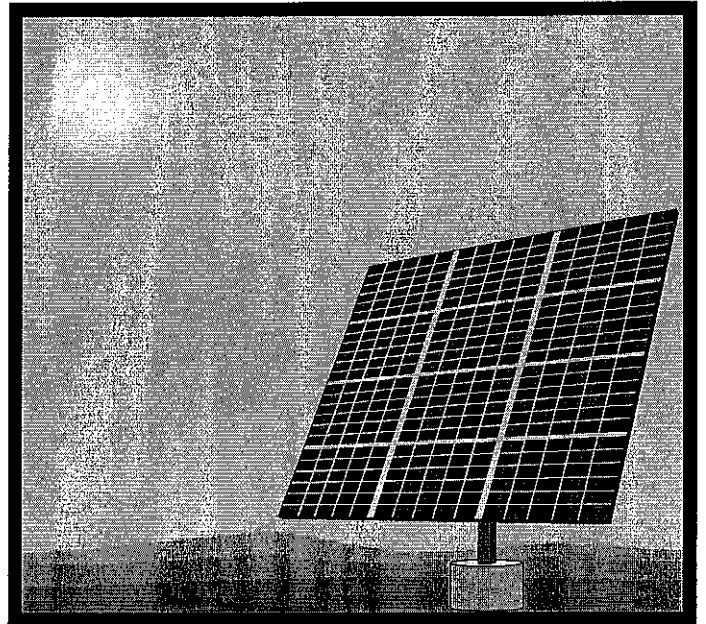


- Safe and reliable
- Cheap

- Involves burning, which releases greenhouse gases into the atmosphere
- Nonrenewable energy resource

Solar

Photovoltaic cells absorb light energy from the Sun and convert it into electrical energy.



- Easy to install
- No fuel cost
- No CO₂ or other atmospheric pollutants.
- Can be expensive to set up
- Effectiveness depends on how much sunlight an area receives

Tides

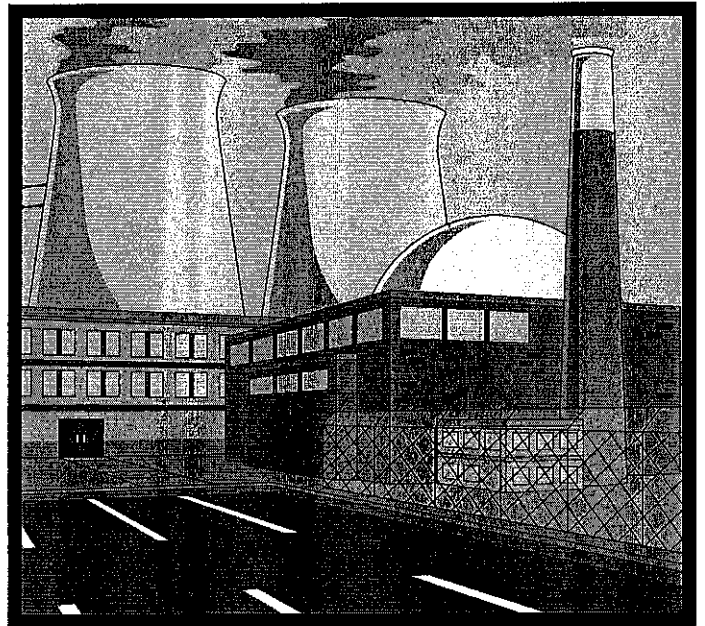
Tides are the movement of water caused by the gravitational pull of the moon. Barrages are built across the mouth of rivers, estuaries, and in bays. These barrages contain turbines that spin when the water moves. The turbines drive generators that produce an electric current.



- No greenhouse gases or other atmosphere pollution
- No fuel cost
- Expensive setup costs
- Barrages can harm habitats
- Barrages can block access to waterways

Nuclear

Nuclear reactions release energy as heat. This heat is used to heat water and turn it into steam. This steam then drives a turbine, which turns a generator and produces an electric current.

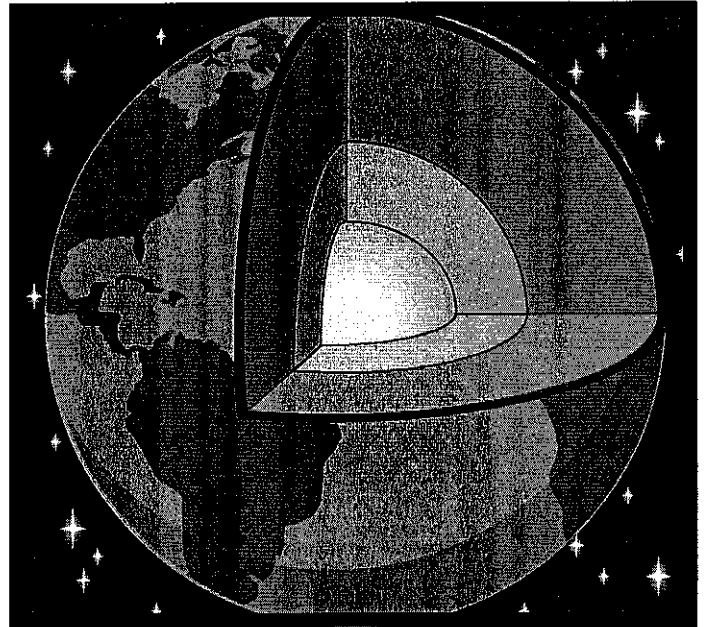


- Generally safe
- No pollution or green house gases are emitted as nothing is burned
- A small amount fuel can produce a large amount of electrical energy

- Waste remains radioactive and dangerous for thousands of years
- Can be dangerous if struck by a natural disaster

Geothermal

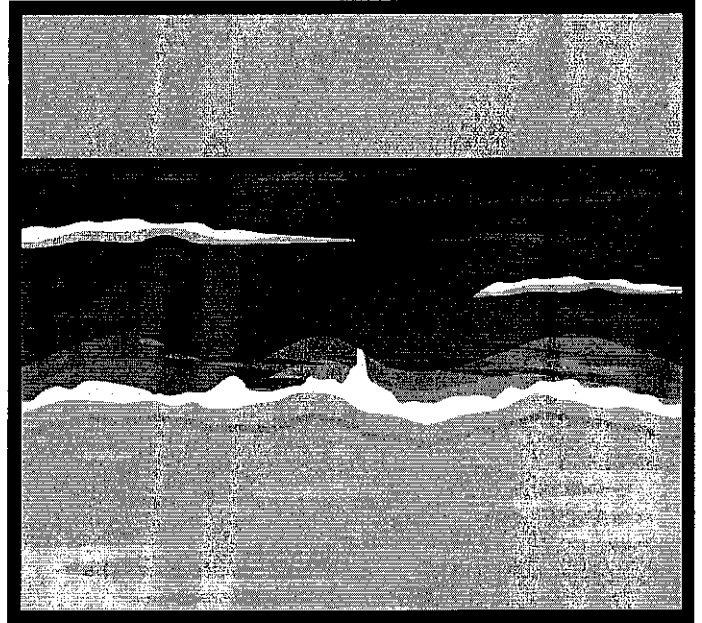
Water is heated by hot rocks under the ground and turned into steam. This steam is then passed through tubes to a turbine which spins as the steam passes over it. The spinning turbine drives a generator and produces an electric current.



- **Reliable**
- **No pollution or green house gases are emitted as nothing is burned**
- **No fuel costs**
- **Can only be used in certain parts of the world**
- **Could potentially release underground greenhouse gases**
- **High setup costs**

Wave

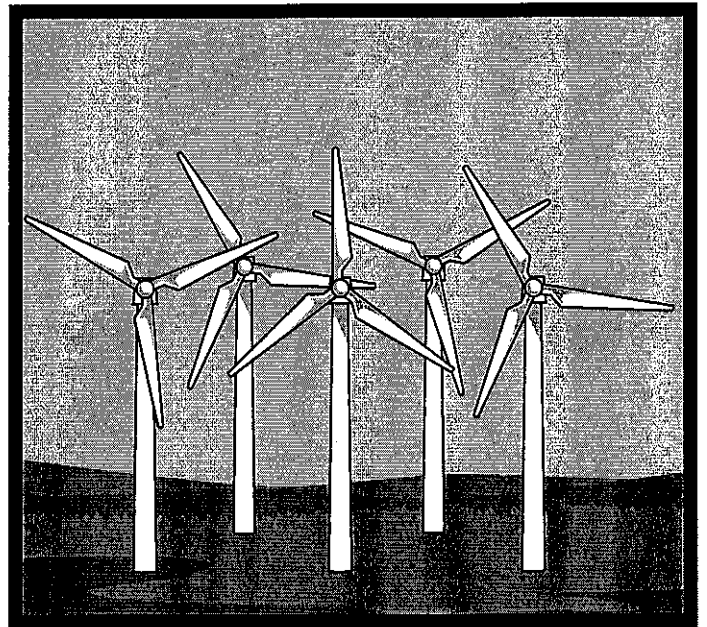
Waves are caused by wind and occur on the surface of the ocean. Wave energy can be harnessed to generate electricity. There are many different ways of doing this.



- No greenhouse gases or other atmosphere pollution
- No fuel cost
- Not suitable everywhere
- Could have an effect on marine life
- Could destroy the natural beauty of coastal areas

Wind

Wind hits the turbine blades and makes them spin. This movement turns the generator that produces an electrical current.

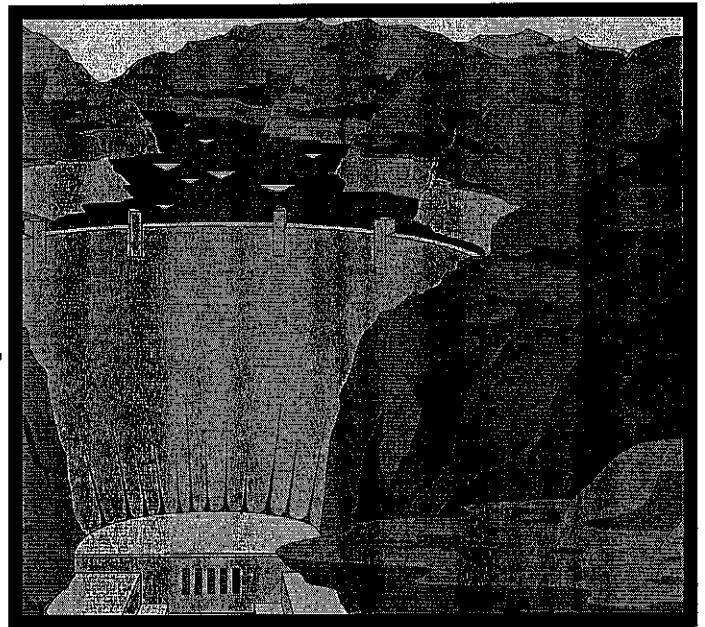


- No greenhouse gases or other atmosphere pollution
- No fuel cost

- Interfere with natural beauty
- Setup costs can be high, particularly for multiple turbines
- Effectiveness depends on the amount of wind

Hydroelectricity

Water is kept behind a dam in a high place. This water has gravitational potential energy and is converted into kinetic energy as the water falls. This moving water makes a turbine spin. The turbine is connected to a generator that produces an electric current.

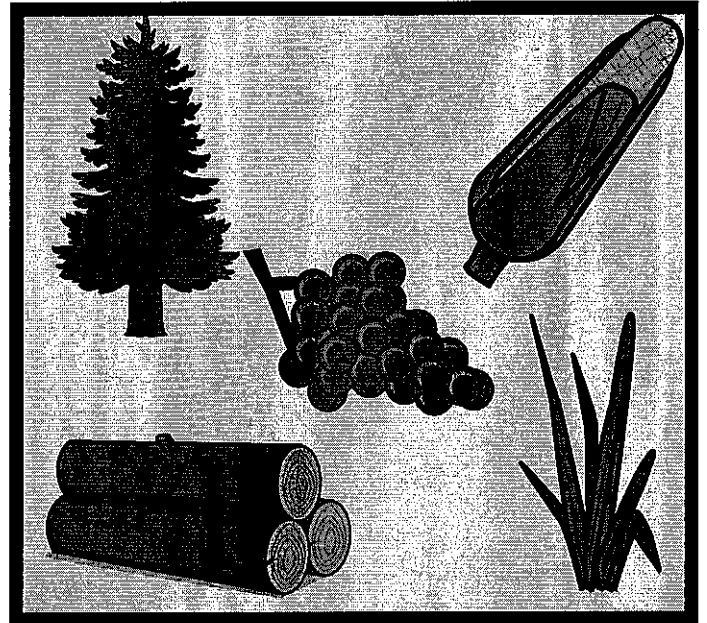


- No pollution or greenhouse gases are emitted as nothing is burned
- Will never run out (unless there are droughts)

- Very expensive to build
- Large areas of land could be flooded for the reservoirs
- Dams can stop migrating fish

Biomass

Biomass is material that comes from living things, like plants and animals. It is burned and used to heat water. This water turns into steam and is used to make a turbine spin. This turbine is connected to a generator that generates electricity.



- Renewable energy resource
- Reliable
- Carbon dioxide released by burning can be absorbed by regrowing the plants
- Land used for crops may have to be used for growing energy crops
- Requires large amounts of water

Name: _____

Date: _____

Renewable or Nonrenewable?

Define:

Renewable

Nonrenewable

Sort the following energy resources into the table below.

Biomass	Hydroelectric	Fossil Fuels
Solar	Geothermal	Wave
Wind	Nuclear	Tidal

Renewable

Nonrenewable

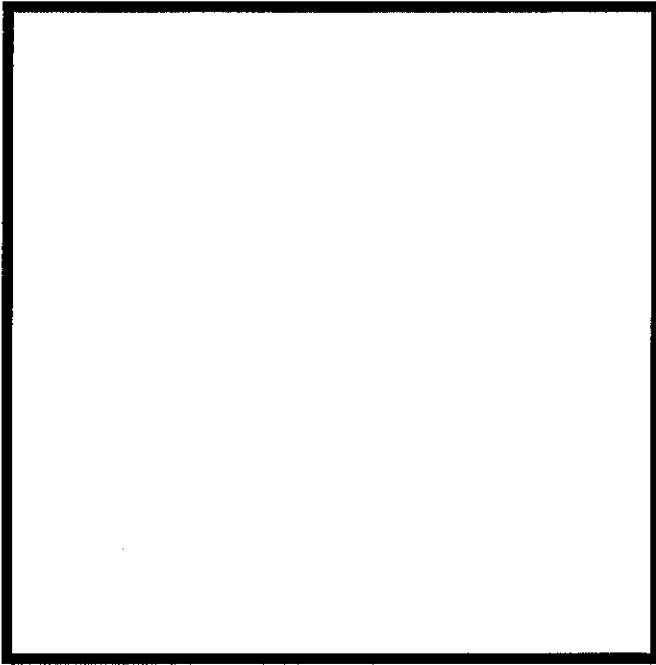
Renewable	Nonrenewable

Name: _____

Date: _____

Energy Resource

Directions: Research an energy resource. Draw a picture in the box to represent it and answer the questions below.



Is it renewable or nonrenewable?

How does it work?

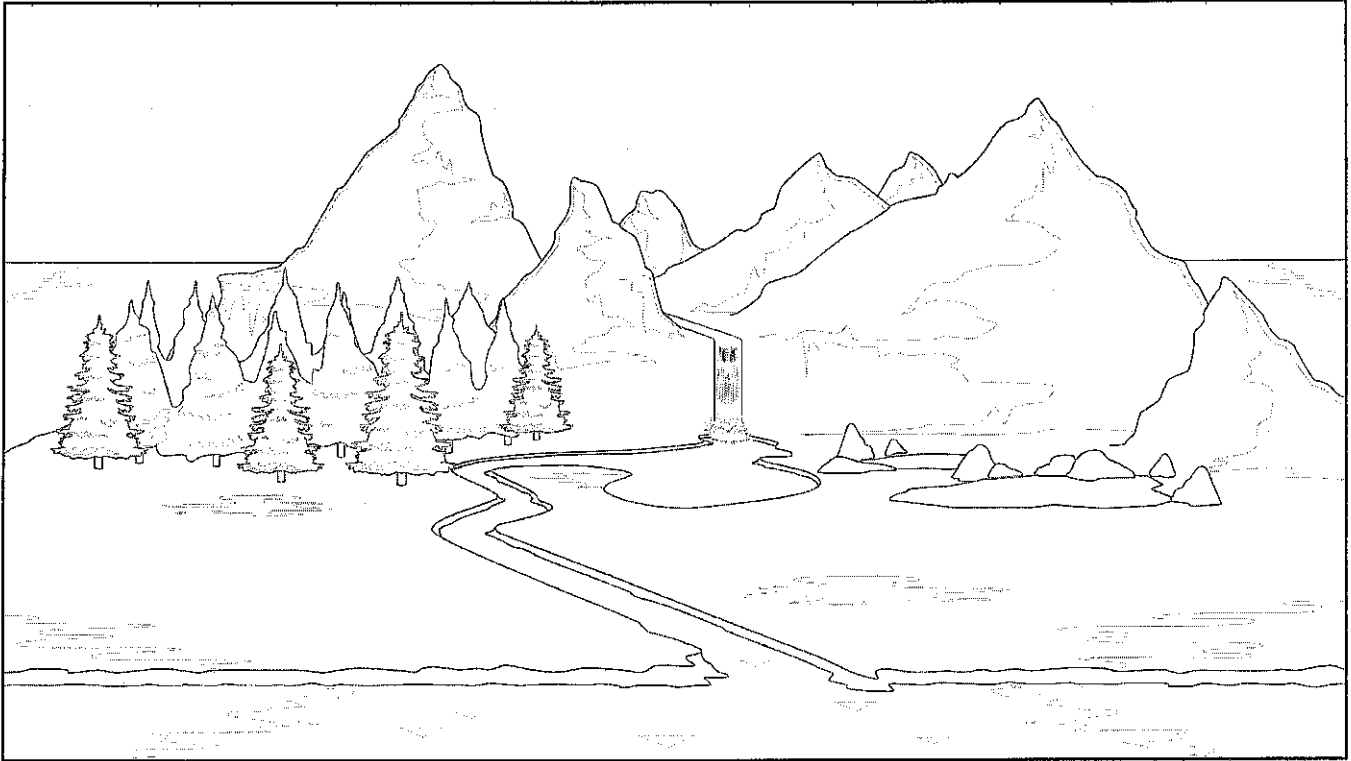
What are the advantages?

What are the disadvantages?

Where could this energy resource be used?

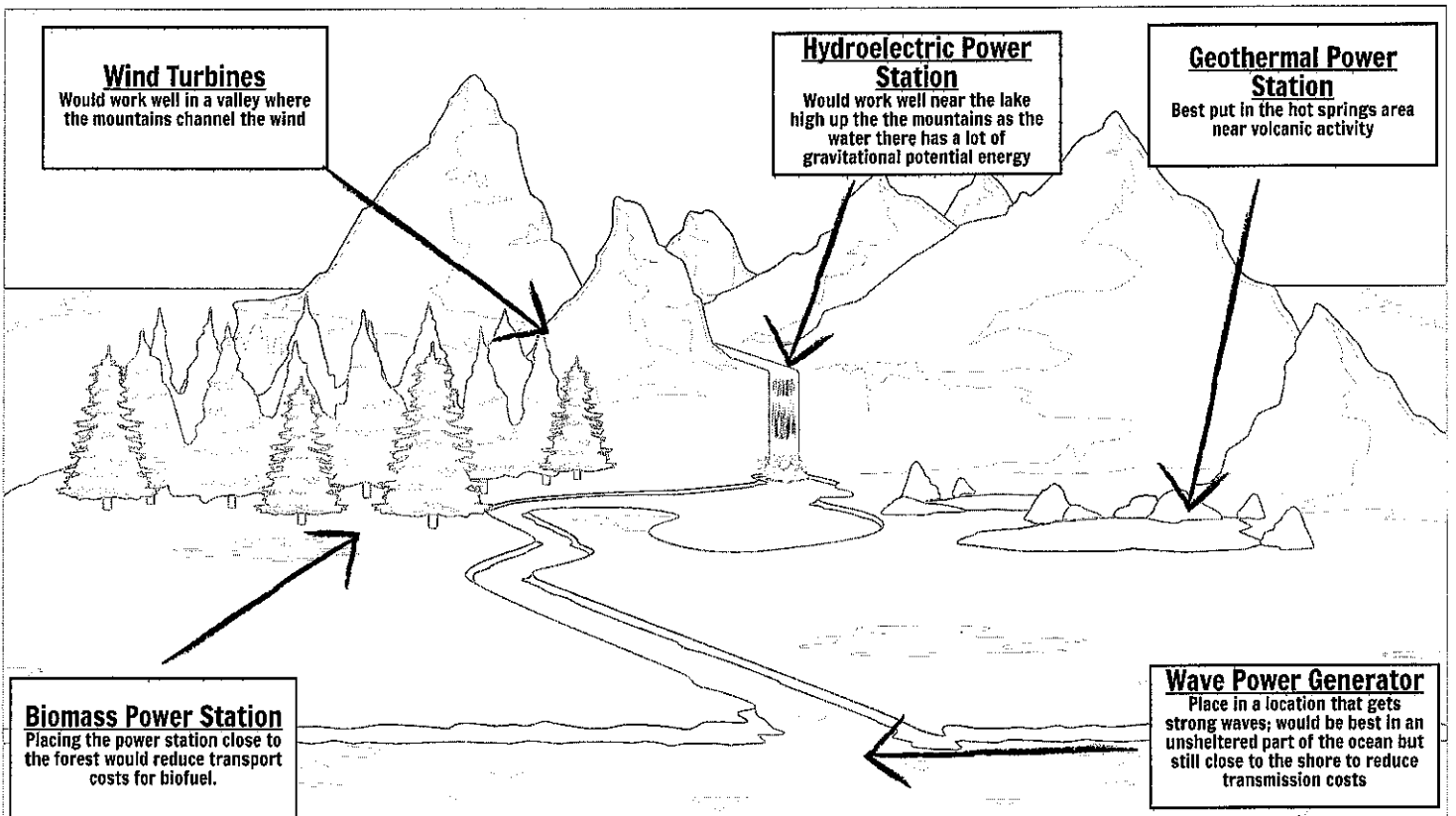
Energy Resource Island

Directions: Label the diagram below. Show where different energy resources could be placed around the island and explain your reasons why.



Explain your reasons behind the locations chosen on the island

Renewable Energy Island



Defining battles of the Civil War

By National Geographic Society, adapted by Newsela staff on 05.13.19

Word Count 929

Level 1050L

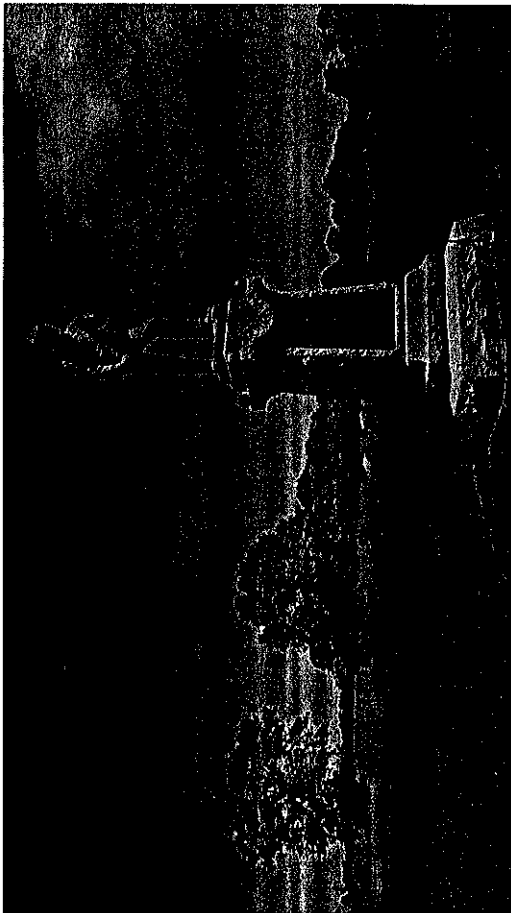


Image 1. The northern cornfield in 2017 at Antietam, Maryland. In September 1862, General Robert E. Lee's invasion of the North during the Civil War was stopped in rural Maryland with more than 23,000 Americans killed in a single day. Photo: Andrew Lichtenstein/Corbis via Getty Images

The American Civil War was the bloodiest war in American history. During the four years it lasted, more than 50 major battles were fought. Below are five of the most significant battles, listed in chronological order.

First Bull Run (July 21, 1861)

The first Battle of Bull Run was the first major land battle of the Civil War. It is also known as the first Battle of Manassas.

The Union Army under General Irvin McDowell marched from Washington, D.C., to seize the Confederate capital of Richmond, Virginia. Approximately 25 miles into the march, their path was blocked by the Confederate Army under the command of General P. G. T. Beauregard.

NATIONAL GEOGRAPHIC

At first, it seemed as if the Union Army would prevail, but as the battle raged throughout the morning, the Confederates held their ground. Once the Confederate Army received reinforcements early that afternoon, their counterattack defeated the Union troops. Union forces then retreated to Washington, D.C.

Combined casualties were few in comparison with other battles — around 4,800. However, as a result of the battle, the North first realized it was in for a long, bitter war.

Shiloh (April 6-7, 1862)

By February 1862, the Union Army had achieved victories in central Kentucky and Tennessee. The army planned to move south and capture an important Confederate east-west railway hub in northern Mississippi. To defend the hub, Confederate General Albert Sidney Johnston fortified the town of Corinth, Mississippi. The Union planned to unite two armies, under Ulysses S. Grant and Don Carlos Buell, and then take Corinth.

Grant's army arrived first and set up camp in the town of Pittsburg Landing, Tennessee, near the Shiloh Meeting House. Johnston planned to strike Grant's army before Buell arrived, and at dawn on April 6, his forces attacked. Grant's forces were surprised but remained in the field after a day of fierce fighting. Buell's forces finally arrived overnight, and the combined Union forces attacked at dawn. During the fighting, General Johnston was fatally wounded. The defeated Confederate forces — now under the command of Beauregard — withdrew.

The battle resulted in combined casualties of more than 23,000.

Antietam (September 17, 1862)

Confederate General Robert E. Lee had decided to take the war to the North. He devised a plan to split his army and take supplies in Maryland, move into Pennsylvania, and threaten Washington, D.C. His plans accidentally fell into Union hands, and the Union Army marched to confront the forces he commanded at Antietam Creek. However, Union General McClellan waited 18 hours before moving his troops. This gave the Confederates time to bring in reinforcements.

The day ended in a draw, with 23,000 men killed. However, the battle halted Lee's plans to invade the North for the time being. Nonetheless, President Abraham Lincoln was furious that McClellan had allowed Lee to escape.

Gettysburg (July 1-3, 1863)

Although Antietam was a setback to Lee's plans, the Union failed to take advantage of the situation. Lincoln replaced McClellan, but his new generals lost decisively at Fredericksburg, Virginia (December 13, 1862), and Chancellorsville, Virginia (April 30 – May 4, 1863). These Confederate victories encouraged Lee to renew his plan to invade the North.



Lee moved the Army of Northern Virginia north, and the new Union General George Meade shadowed him to protect Philadelphia, Baltimore and Washington, D.C. The forces met at Gettysburg, Pennsylvania, on the morning of July 1.



Despite early successes, the Confederate forces were not able to drive the Union Army off of the heights. The following day, as reinforcements arrived for both sides, Lee again failed to defeat the Union Army.

July 3 saw one last push from the Confederates. Lee ordered what has become known as the Pickett's Charge — an assault of some 15,000 Confederate troops — up Cemetery Ridge. Although the charge broke through Union lines, the Confederates were unable to hold on to their gains and retreated.

Lee prepared for the counterattack he expected the next day, but it never came. He withdrew his forces on July 4, and the Union Army did not pursue. While Meade won the battle and stopped the invasion, he failed to destroy Lee's army and put an end to the rebellion.

Union casualties numbered around 23,000, while Confederate casualties numbered around 28,000.

Vicksburg (May 22–July 4, 1863)

Vicksburg, Mississippi, lies on the east bank of the Mississippi River about halfway between Memphis, Tennessee, to the north and New Orleans, Louisiana, to the south. Capturing it would give control of the entire Mississippi to the Union. However, the city, located on a bluff overlooking the river, was heavily defended with trenches, gun batteries, and a Confederate Army led by General John C. Pemberton.

In May, Union General Ulysses S. Grant led an army south on the west side of the Mississippi past Vicksburg, then crossed over and led his troops back north to lay siege to the city. By mid-June, the Confederates were running low on supplies. General Pemberton surrendered on July 4.

The victories — a day apart — at Gettysburg and Vicksburg marked the turning point of the Civil War.

These are just some of the war's major battles. The Civil War killed hundreds of thousands and scarred the countryside. Today, many battlefield sites contain monuments and plaques and have been set aside as national parks.

Quiz

1

Read the paragraph from the section "First Bull Run (July 21, 1861)."

At first, it seemed as if the Union Army would prevail, but as the battle raged throughout the morning, the Confederates held their ground. Once the Confederate Army received reinforcements early that afternoon, their counterattack defeated the Union troops. Union forces then retreated to Washington, D.C.

Which word from the selection shows a triumphant tone?

- (A) prevail
- (B) raged
- (C) reinforcements
- (D) counterattack

2

Read the selection from the section "Gettysburg (July 1-3, 1863)."

Although Antietam was a setback to Lee's plans, the Union failed to take advantage of the situation. Lincoln replaced McClellan, but his new generals lost decisively at Frederick'sburg, Virginia (December 13, 1862), and Chancellorsville, Virginia (April 30 – May 4, 1863).

Which two words would BEST replace "setback" and "decisively" in the selection above?

- (A) obstacle; mysteriously
- (B) impediment; clearly
- (C) catalyst; courageously
- (D) revitalization; harshly

3

How are the article's sections organized to help develop understanding?

- (A) Each of the five sections after the introduction highlight a significant battle in the Civil War in order of importance.
- (B) Each of the five sections after the introduction highlight a significant battle in the Civil War in chronological order by end date.
- (C) The first three sections after the introduction describe battles that the Union Army won and the last two sections describe battles that the Confederate Army won.
- (D) The first three sections after the introduction describe battles that the Confederate Army won and the last two sections describe battles that the Union Army won.

4

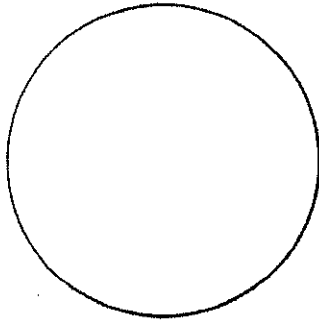
What is one reason why the author includes the information about the battles at Gettysburg and Vicksburg?

- (A) The battles at Gettysburg and Vicksburg were the last two battles when the Confederate Army was victorious.
- (B) The battles at Gettysburg and Vicksburg were the two battles that were the bloodiest and most ineffective.
- (C) The battles at Gettysburg and Vicksburg were the last two battles fought between the Union Army and Confederate Army.
- (D) The battles at Gettysburg and Vicksburg were the two battles where the tide turned in favor of the Union Army.

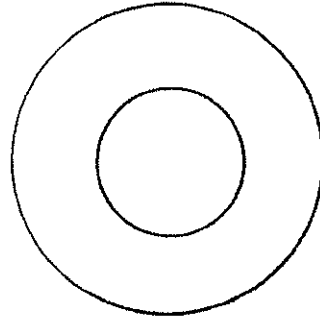
Eyeball

① Start with a circle.

TIP:
try and
find a
circle you
can trace!

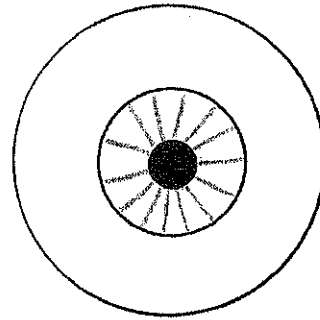
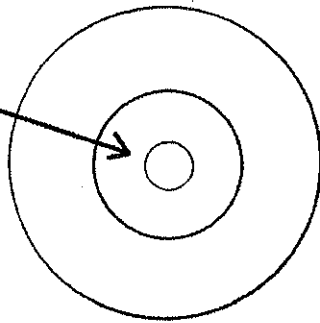


② Add a small circle in the center. This will be the iris.



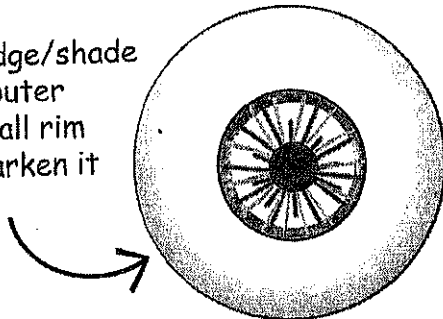
③ Add the last smaller circle in the center of the iris. ④ Shade the pupil black. Draw "spokes" around the pupil.

This
is
the
pupil



⑤ Darken edges of iris. Add more "spokes".

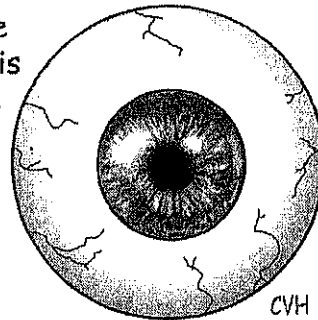
Smudge/shade
the outer
eyeball rim
to darken it



⑥ Shade entire iris. Add more spokes as needed.

Erase some
areas on iris
to indicate
"shine"

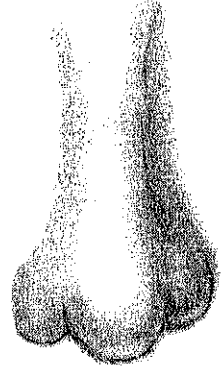
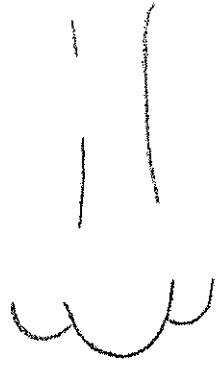
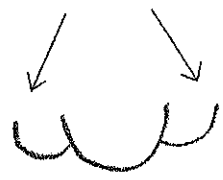
Add a few
thin lines
for veins



Draw a Human Nose

A Simple Nose

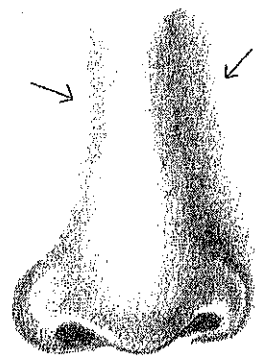
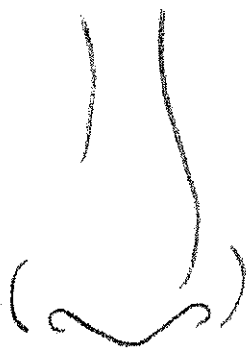
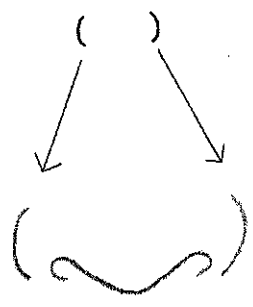
1. Start with a "U" shape
2. Add 2 small "U" shapes to sides
3. Lightly draw sides of nose
4. Shade one side darker



nose is always thinner at top and wider at base

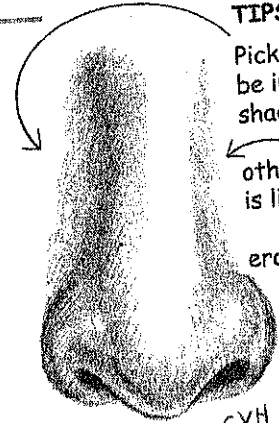
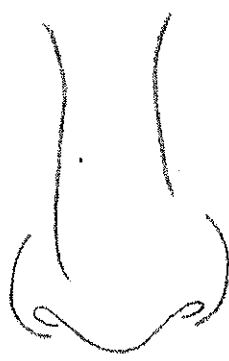
More Advanced

1. Start with a wide "U" and curve the ends
2. Add a "parenthesis" shape to sides
3. Lightly draw sides of nose
4. Shade one side darker



TIP: sides of nose are not lines, they are shaded

Another



TIPS:
Pick a side to be in the shadows
other side is lighter
erase some spots for highlights

Solving Multi-Step Equations

Solve each equation.

1) $4n - 2n = 4$

2) $-12 = 2 + 5v + 2v$

3) $3 = x + 3 - 5x$

4) $x + 3 - 3 = -6$

5) $-12 = 3 - 2k - 3k$

6) $-1 = -3r + 2r$

7) $6 = -3(x + 2)$

8) $-3(4r - 8) = -36$

9) $24 = 6(-x - 3)$

10) $75 = 3(-6n - 5)$

Solving Multi-Step Equations

Solve each equation.

1) $4n - 2n = 4$

{2}

2) $-12 = 2 + 5v + 2v$

{-2}

3) $3 = x + 3 - 5x$

{0}

4) $x + 3 - 3 = -6$

{-6}

5) $-12 = 3 - 2k - 3k$

{3}

6) $-1 = -3r + 2r$

{1}

7) $6 = -3(x + 2)$

{-4}

8) $-3(4r - 8) = -36$

{5}

9) $24 = 6(-x - 3)$

{-7}

10) $75 = 3(-6n - 5)$

{-5}

Exponent Rules Review Worksheet

NOTE: Anything to the zero power equals 1!

Product Rule: When multiplying monomials that have the same base, add the exponents.

$$x^m \cdot x^n = x^{m+n}$$

Example 1: $x \cdot x^3 \cdot x^4 = x^{1+3+4} = x^8$ Example 2: $(2x^2y)(-3x^3y^4) = 2 \cdot (-3) \cdot x^2 \cdot x^3 \cdot y \cdot y^4 = -6x^5y^5$

Power Rule: When raising monomials to powers, multiply the exponents.

$$(x^m)^n = x^{m \cdot n}$$

Example 3: $(x^2y^3)^4 = x^{2 \cdot 4} y^{3 \cdot 4} = x^8y^{12}$ Example 4: $(2x^3yz^2)^3 = 2^3 x^{3 \cdot 3} y^3 z^{2 \cdot 3} = 8x^9y^3z^6$

Quotient Rule: When dividing monomials that have the same base, subtract the exponents.

$$\frac{x^m}{x^n} = x^{m-n}$$

Example 5: $\frac{x^3}{x^{-2}} = x^{3-(-2)} = x^5$ Example 6: $\frac{5^6}{5^2} = 5^{6-2} = 5^4$ Example 7: $\frac{36m^3n^5}{-9mn^4} = \frac{36}{-9} \cdot \frac{m^3}{m} \cdot \frac{n^5}{n^4} = -4m^2n$

Simplify each of the following. Copy the problem. Work on your own paper.

1) $a \cdot a^2 \cdot a^3$ 2) $(2a^2b)(4ab^2)$ 3) $(6x^2)(-3x^5)$ 4) $b^3 \cdot b^4 \cdot b^7 \cdot b$ 5) $(3x^3)(3x^4)(-3x^2)$

6) $(2x^2y^3)^2$ 7) $(5x^2y^4)^3$ 8) $(6x^4y^6)^3$ 9) $(4x^3y^3)^3$ 10) $(7xy)^2$

11) $\frac{x^3}{x}$ 12) $\frac{18c^3}{-3c^2}$ 13) $\frac{9a^3b^5}{-3ab^2}$ 14) $\frac{-48c^2d^4}{-8cd}$ 15) $\frac{22y^6z^8}{2yz^{-7}}$

16) $x^2 \cdot x^7$ 17) $(x^2)^7$ 18) $(-2x^4)^5$ 19) $2x^3 + 7x^3$ 20) 7^0

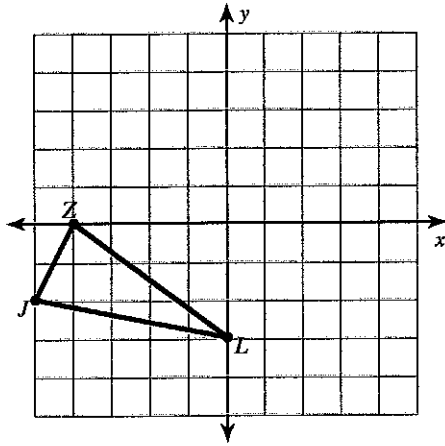
21) $8x^0$ 22) -3^4 23) $(-3)^4$ 24) $6x^0y^8 - (2y^2)^4$ 25) $(x+2y)(x-2y)$

26) $\frac{2x^3}{-8x^4}$ 27) $\frac{xy^7}{x^3y^4}$ 28) $6x^5 \cdot 3x^5 \cdot x^0$ 29) $(3st^{12})^3$ 30) $\left(\frac{3m^2n^7}{m}\right)^5$

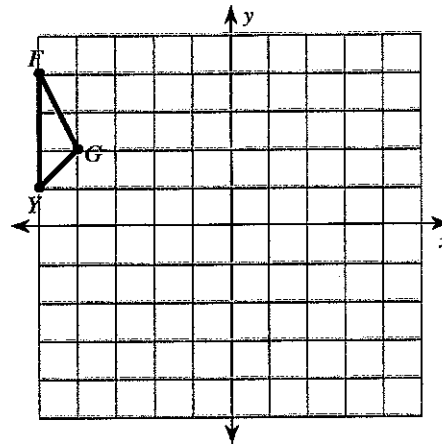
All Transformations

Graph the image of the figure using the transformation given.

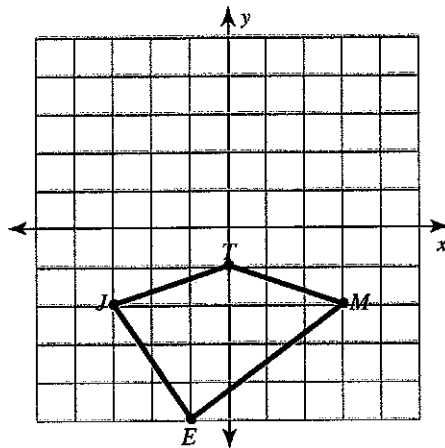
- 1) rotation 90° counterclockwise about the origin



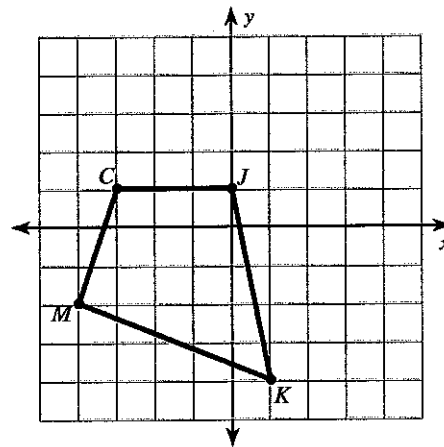
- 2) translation: 4 units right and 1 unit down



- 3) translation: 1 unit right and 1 unit up

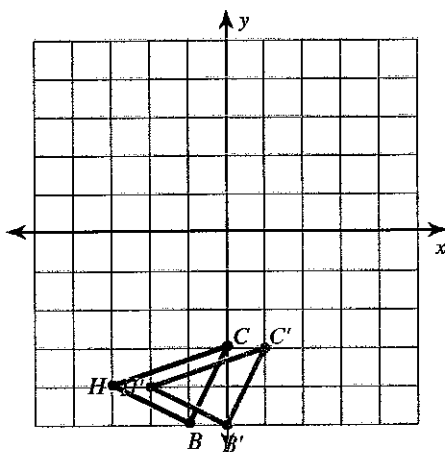


- 4) reflection across the x-axis

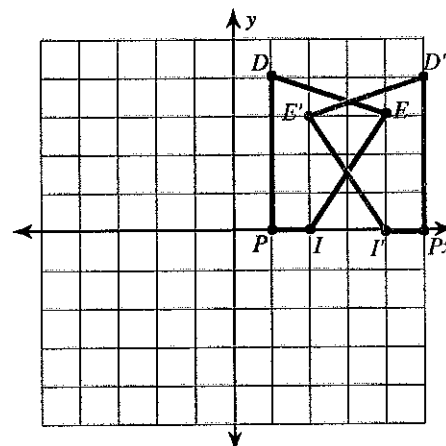


Write a rule to describe each transformation.

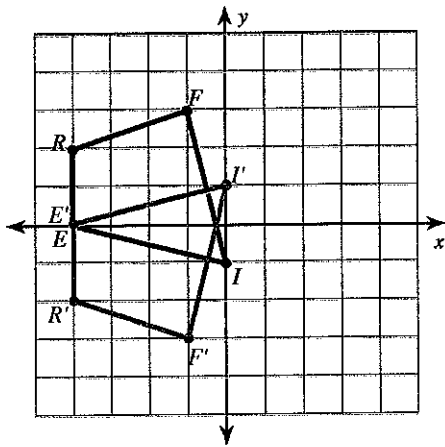
- 5)



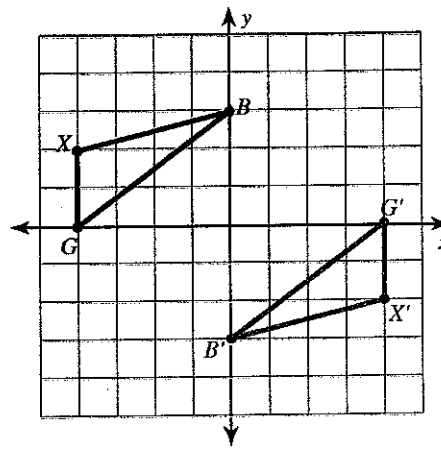
- 6)



7)

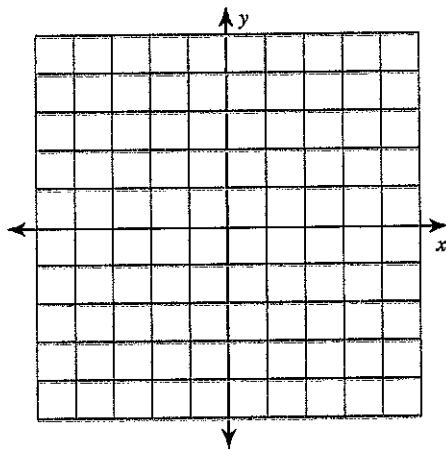


8)

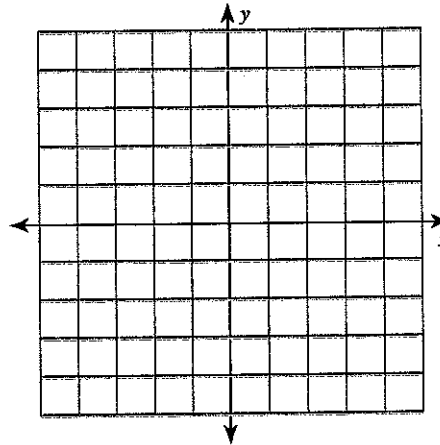


Graph the image of the figure using the transformation given.

- 9) rotation 90° clockwise about the origin
 $B(-2, 0)$, $C(-4, 3)$, $Z(-3, 4)$, $X(-1, 4)$



- 10) reflection across $y = x$
 $K(-5, -2)$, $A(-4, 1)$, $I(0, -1)$, $J(-2, -4)$



Find the coordinates of the vertices of each figure after the given transformation.

- 11) rotation 180° about the origin
 $E(2, -2)$, $J(1, 2)$, $R(3, 3)$, $S(5, 2)$

- 12) reflection across $y = 2$
 $J(1, 3)$, $U(0, 5)$, $R(1, 5)$, $C(3, 2)$

- 13) translation: 7 units right and 1 unit down
 $J(-3, 1)$, $F(-2, 3)$, $N(-2, 0)$

- 14) translation: 6 units right and 3 units down
 $S(-3, 3)$, $C(-1, 4)$, $W(-2, -1)$

Sustainability



Garbology

Garbology is not a real word. It means literally the study of trash or garbage. All trash or garbage is classified into either “luxury” or “essential”. In this activity, you will define each and tell the difference between the two.

Step 1: Make a list

Think about the stuff you throw away. Make a list of items that you have thrown away over the past two days. List them below. Make sure you list between 10 and 20 items. If you must go back further than two days, please do so.

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.
11.	12.	13.	14.	15.
16.	17.	18.	19.	20.

Step 2: Are they similar?

List 3-5 things that all the items on your list have in common.

- 1.
- 2.
- 3.
- 4.
- 5.

Step 3: Luxury or Essential?

Use the Internet to define the words below:

1. Garbage:
2. Luxury:
3. Essential:

Now write a definition for each in your OWN words.

1. Luxury:
2. Essential:

Step 4: Classify and Categorize

Take each of the items you listed in Step 1 and separate them into either luxury or essential.

Luxury	Necessity

Step 5: What can you tell?

All of these items are typical of what is found in people’s garbage. In 3-5 complete sentences, answer the following question:

What information can be learned by looking at people’s garbage?

Grade 8 Reference Sheet

1 inch = 2.54 centimeters	1 kilometer = 0.62 miles	1 cup = 8 fluid ounces
1 meter = 39.37 inches	1 pound = 16 ounces	1 pint = 2 cups
1 mile = 5280 feet	1 pound = 0.454 kilograms	1 quart = 2 pints
1 mile = 1760 yards	1 kilogram = 2.2 pounds	1 gallon = 4 quarts
1 mile = 1.609 kilometers	1 ton = 2000 pounds	1 gallon = 3.785 liters
		1 liter = 0.264 gallons
		1 liter = 1000 cubic centimeters

Area (A)	
Triangle	$A = \frac{1}{2}bh$
Parallelogram	$A = bh$
Circle	$A = \pi r^2$
Circumference (C)	
Circle	$C = \pi d$ $C = 2\pi r$
Volume (V)	
General Prisms	$V = Bh$
Cylinder	$V = \pi r^2 h$
Sphere	$V = \frac{4}{3}\pi r^3$
Cone	$V = \frac{1}{3}\pi r^2 h$

General Formulas	
Pythagorean Theorem	$a^2 + b^2 = c^2$

Reteaching 10-1

8th Math Packet #4

Scatter Plots

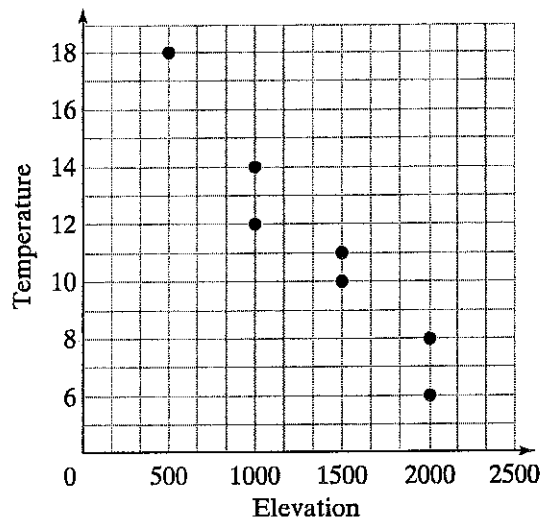
You can make a scatterplot to show data.

Elevation (m)	500	1000	1000	1500	1500	2000	2000
Temperature (°C)	18	14	12	11	10	8	6

Step 1 Use the horizontal axis to represent elevation. The elevation ranges from 500 to 2,000. A reasonable scale is 0 to 2,000 where each grid line increases by 500.

Step 2 Use the vertical axis to represent the temperature. The temperature ranges from 18°C to 6°C. A reasonable scale is 0 to 20 where each grid line increases by 2°C.

Step 3 Plot the data. For example, at an elevation of 500 m, the temperature is 18°C. Plot (500, 18).

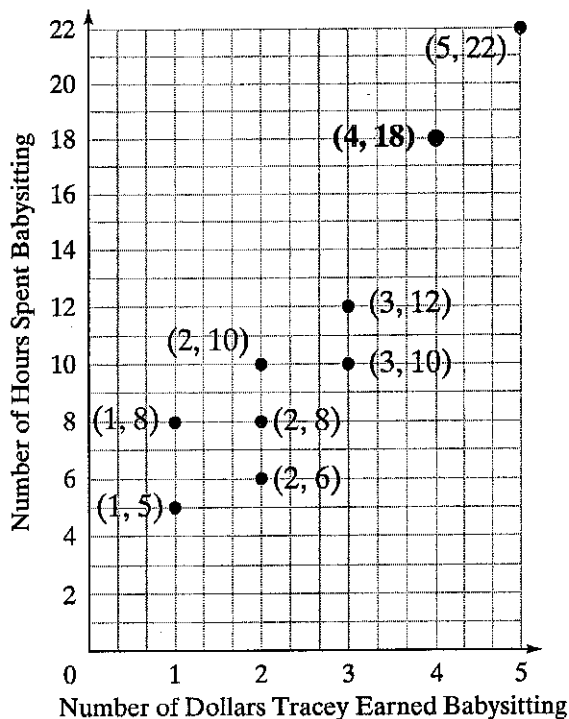


1. What information is shown on the horizontal axis of the scatter plot?

2. What information is shown on the vertical axis of the scatter plot?

3. What does the highlighted point represent?

4. How many hours did she have to babysit to earn \$22?



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Reteaching 10-2

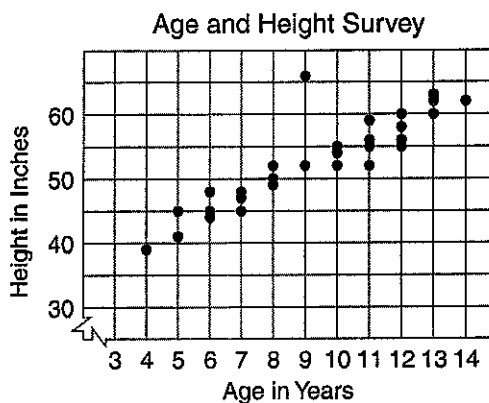
Analyzing Scatter Plots

Example Make a scatter plot for the data below.

- ① Choose a scale along each axis to represent the two sets of data.
- ② Locate the ordered pairs on the graph for the data.
- ③ Determine if there is an association that describes the data. Is it positive, negative, or is there no association? This data shows a positive association.
- ④ Decide if the data is clustered together or if there is an outlier. This data is mostly clustered together, but there is one point (9, 66) that is higher than the others, so it is an outlier.

Age and Height Survey

Age (y)	Height (in.)	Age (y)	Height (in.)	Age (y)	Height (in.)
11	55	4	39	12	55
10	55	13	62	10	54
8	49	11	52	7	47
6	45	5	41	13	63
10	52	14	62	9	66
11	59	12	56	9	52
7	45	8	52	12	58
12	60	6	44	13	60
6	48	7	48	8	50
5	45	4	39	11	56



Use the data below for Exercises 1–5.

Weight (lb)	78	63	67	52	81	92	60	34	83	47	73	98	45	31	95	71	76	41
Height (in.)	56	52	55	47	58	60	50	39	58	45	54	61	45	36	60	54	56	41

1. Draw the scatter plot.
2. Does the data appear to be linear? Explain.

3. Do you identify outliers in the data? Explain.

4. Does the data show a positive, negative, or no correlation?

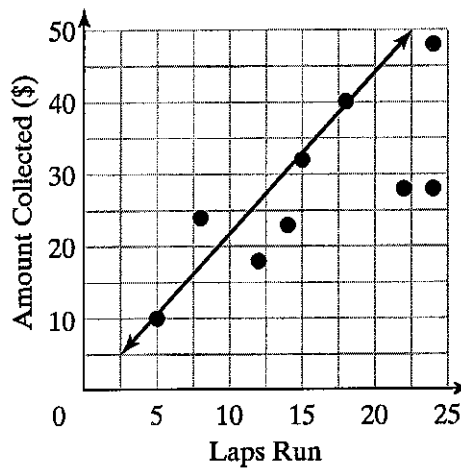
5. What does the graph indicate about the data?

Reteaching 10-3

Modeling Data with Lines

A trend line is a line you draw on a graph to approximate the relationship between data sets.

- To find the trend line, first plot the data.
- Then look for a trend. Draw a line that has a slope with the same trend.
- Make sure there are about as many points above the line as below it.
- You can use two points on the trend line to calculate its slope. Then you can use the slope and estimate the y-intercept to write an equation to describe the line.
- You can use a trend line equation to estimate values and make predictions.



Number of Laps	5	8	12	15	18	22	24	14
Amount Collected (\$)	10	24	18	32	40	28	48	23

Plot the data and label the graph.

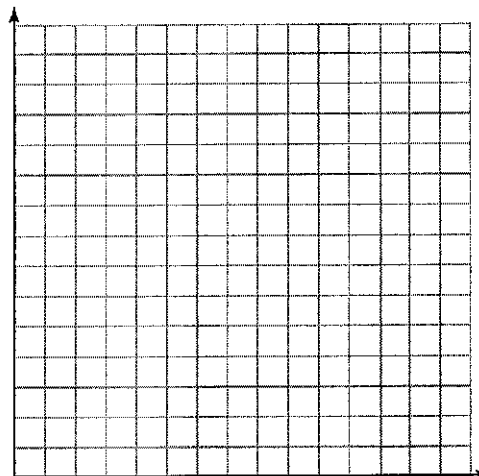
Seedling Height (cm)	9	14	16	20	38	42	54	62
Day	5	8	12	16	22	25	28	30

1. Draw a trend line to represent the data.
2. Find the slope of the trend line.

3. Estimate the y-intercept of the trend line.

4. Write an equation to describe the trend line.

5. Use the equation to predict the seedling height on day 45.



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Reteaching 10-4

Two-Way Tables

A frequency table organizes and displays data for two different categories.

Suppose 157 babies were born in a hospital one day. The table shows how many were boys and girls and how much the babies weighed. You can find a relative frequency by dividing the frequency by the column or row total. About what percent of the babies who weighed less than 8 pounds were boys?

	Less Than 8 Pounds	8 Pounds or More
Boys	55	32
Girls	46	24
Total	101	56

frequency = 55 boys weighed less than 8 lb

total = 101 babies weighed less than 8 lb in all

relative frequency = $55/101$, or about 54%, of the babies who weighed less than 8 pounds were boys

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A group of 65 students was surveyed about whether they had ridden a roller coaster or a Ferris wheel.

	Ridden a Roller Coaster	Never Ridden a Roller Coaster
Ridden a Ferris wheel	18	8
Never ridden a Ferris wheel	24	15
Total	42	23

- About what percent of the students surveyed have never ridden a roller coaster or a Ferris wheel?

- About what percent of the students surveyed have ridden both a roller coaster and a Ferris wheel?

- About what percent of the students surveyed have ridden either a roller coaster or a Ferris wheel, but not both?

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Reteaching 10-1 ** Answers **

Scatter Plots

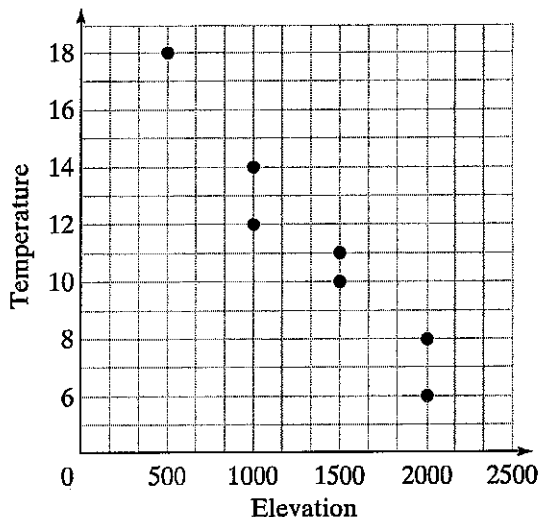
You can make a scatterplot to show data.

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Step 1 Use the horizontal axis to represent elevation. The elevation ranges from 500 to 2,000. A reasonable scale is 0 to 2,000 where each grid line increases by 500.

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Step 3 Plot the data. For example, at an elevation of 500 m, the temperature is 18°C. Plot (500, 18).



1. What information is shown on the horizontal axis of the scatter plot?

number of hours spent babysitting

2. What information is shown on the vertical axis of the scatter plot?

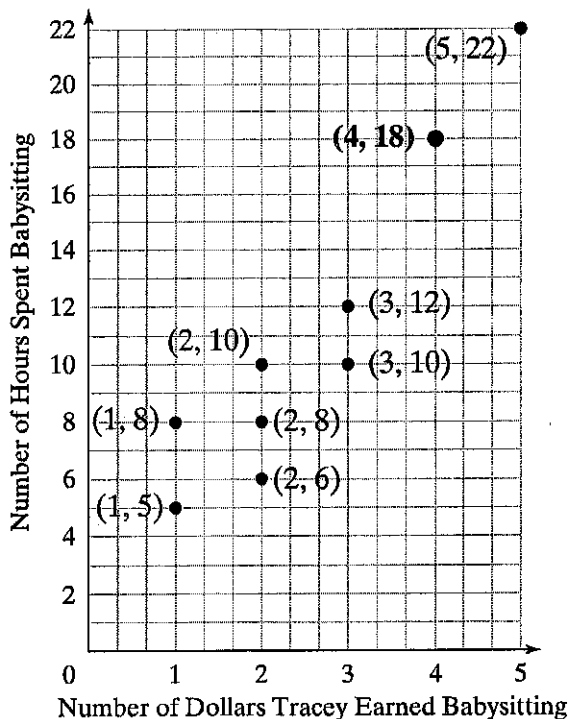
number of dollars earned

3. What does the highlighted point represent?

Tracey earned \$18 for babysitting for 4 hours.

4. How many hours did she have to babysit to earn \$22?

5 hours



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Reteaching 10-2

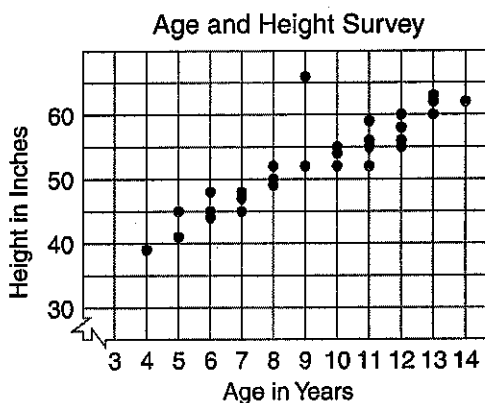
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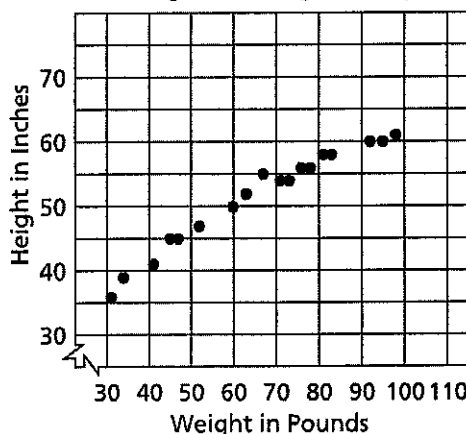


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Height (in.)	56	52	55	47	58	60	50	39	58	45	54	61	45	36	60	54	56	41

1. Draw the scatter plot.
2. Does the data appear to be linear? Explain.
Yes, a line can be drawn near most of the data.
3. Do you identify outliers in the data? Explain.
No, all of the data points are clustered.
4. Does the data show a positive, negative, or no correlation?
positive
5. What does the graph indicate about the data?
Sample answer: As height increases, weight increases.

Weight and Height Survey



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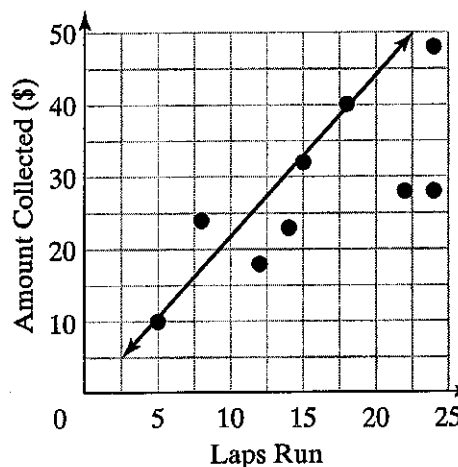
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Plot the data and label the graph.

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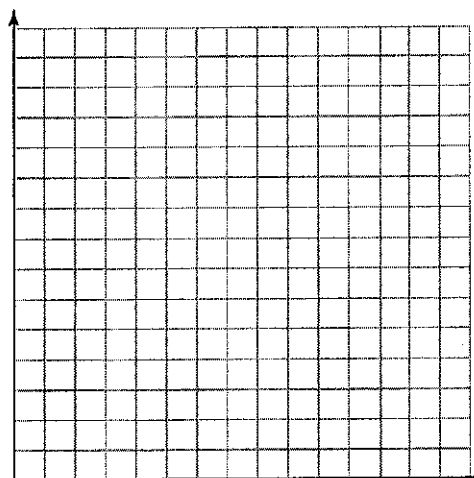
1. Draw a trend line to represent the data.

2. Find the slope of the trend line.

3. Estimate the y-intercept of the trend line.

4. Write an equation to describe the trend line.

5. Use the equation to predict the seedling height on day 45.



Check that students' answers represent the data. Keep in mind that equations may differ slightly.

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Reteaching 10-4

Two-Way Tables

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	Ridden a Roller Coaster	Never Ridden a Roller Coaster
Ridden a Ferris wheel	18	8
Never ridden a Ferris wheel	24	15
Total	42	23

- About what percent of the students surveyed have never ridden a roller coaster or a Ferris wheel?

$$\frac{15}{65} \approx 23\%$$

- About what percent of the students surveyed have ridden both a roller coaster and a Ferris wheel?

$$\frac{18}{65} \approx 28\%$$

- About what percent of the students surveyed have ridden either a roller coaster or a Ferris wheel, but not both?

$$\frac{32}{65} \approx 49\%$$