



**TULSA PUBLIC
SCHOOLS**

6th Grade

4/20/20-5/1/20

Distance Learning Activities



Dear families,

These learning packets are filled with grade level activities to keep students engaged in learning at home. We are following the learning routines with language of instruction that students would be engaged in within the classroom setting. We have an amazing diverse language community with over 65 different languages represented across our students and families.

If you need assistance in understanding the learning activities or instructions, we recommend using these phone and computer apps listed below.



Google Translate

- Free language translation app for Android and iPhone
- Supports text translations in 103 languages and speech translation (or conversation translations) in 32 languages
- Capable of doing camera translation in 38 languages and photo/image translations in 50 languages
- Performs translations across apps



Microsoft Translator

- Free language translation app for iPhone and Android
- Supports text translations in 64 languages and speech translation in 21 languages
- Supports camera and image translation
- Allows translation sharing between apps

DESTINATION EXCELLENCE

3027 SOUTH NEW HAVEN AVENUE | TULSA, OKLAHOMA 74114

918.746.6800 | www.tulsaschools.org



Queridas familias:

Estos paquetes de aprendizaje tienen actividades a nivel de grado para mantener a los estudiantes comprometidos con la educación en casa. Estamos siguiendo las rutinas de aprendizaje con las palabras que se utilizan en el salón de clases.

Tenemos una increíble y diversa comunidad de idiomas con más de 65 idiomas diferentes representados en nuestros estudiantes y familias.

Si necesita ayuda para entender las actividades o instrucciones de aprendizaje, le recomendamos que utilice estas aplicaciones de teléfono y computadora que se enlistan a continuación:



Google Translate

- Aplicación de traducción de idiomas para Android y iPhone (gratis)
- Traducciones de texto en 103 idiomas y traducción de voz (o traducciones de conversación) en 32 idiomas
- Traducción a través de cámara en 38 idiomas y traducciones de fotos / imágenes en 50 idiomas
- Realiza traducciones entre aplicaciones



Microsoft Translator

- Aplicación de traducción para iPhone y Android (gratis)
- Traducciones de texto en 64 idiomas y traducción de voz en 21 idiomas
- Traducción a través de la cámara y traducción de imágenes
- Permite compartir la traducción entre aplicaciones

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Grade 6 ELA

Week of April 20

Choose one text of the two below.

Read, annotate, and answer questions as directed in the document.

Option 1	excerpt from "Prometheus"
Option 2	"Chiron, the Wisest Centaur"

After you've read one of the pieces above, imagine a class discussion about the text. Think about how you would answer the following questions and what evidence you would use from the text to support your answers.

- a. Think about how the gods in these stories help or don't help humans and the consequences that result. Explain whether you think it's better for gods to provide assistance and use text evidence to support your ideas.
- b. How does this text help you explore the idea of resilience?

Week of April 27

Choose one text of the two below.

Read, annotate, and answer questions as directed in the document.

Option 1	"The Cyclops"
Option 2	"Theseus and the Minotaur"

After you've read one of the pieces above, imagine a class discussion about the text. Think about how you would answer the following questions and what evidence you would use from the text to support your answers.

- a. Think about how the gods in these stories help or don't help humans. What are some of the reasons why humans would write stories in which the gods provide assistance?
- b. How does this text help you explore the idea of resilience?

Heroes, Gods and Monsters of the Greek Myths

PROMETHEUS

1 Prometheus was a young Titan, no great admirer
of Zeus. Although he knew the great lord of the
sky hated explicit questions, he did not hesitate
to beard him when there was something he
wanted to know.

2 One morning he came to Zeus, and said, "O
Thunderer, I do not understand your design. You
have caused the race of man to appear on earth, but
you keep him in ignorance and darkness."

3 "Perhaps you had better leave the race of man
to me," said Zeus. "What you call ignorance is
innocence. What you call darkness is the shadow
of my decree. Man is happy now. And he is so
framed that he will remain happy unless someone
persuades him that he is unhappy. Let us not speak
of this again."

4 But Prometheus said, "Look at him. Look
below. He crouches in caves. He is at the mercy
of beast and weather. He eats his meat raw. If you
mean something by this, enlighten me with your
wisdom. Tell me why you refuse to give man the
gift of fire."

5 Zeus answered, "Do you not know,
Prometheus, that every gift brings a penalty? This
is the way the Fates weave destiny—by which gods
also must abide. Man does not have fire, true, nor
the crafts which fire teaches. On the other hand,
he does not know disease, warfare, old age, or that
inward pest called worry. He is happy, I say, happy
without fire. And so he shall remain."

6 "Happy as beasts are happy," said
Prometheus. "Of what use to make a separate race
called man and endow him with little fur, some
wit, and a curious charm of unpredictability? If
he must live like this, why separate him from the
beasts at all?"

7 "He has another quality," said Zeus, "the
capacity for worship. An aptitude for admiring our
power, being puzzled by our riddles and amazed by
our caprice. That is why he was made."

8 "Would not fire, and the graces he can put on
with fire, make him more interesting?"

9 "More interesting, perhaps, but infinitely
more dangerous. For there is this in man too: a
vaunting pride that needs little sustenance to
make it swell to giant size. Improve his lot, and he
will forget that which makes him pleasing—his
sense of worship, his humility. He will grow big
and poisoned with pride and fancy himself a god,
and before we know it, we shall see him storming
Olympus. Enough, Prometheus! I have been
patient with you, but do not try me too far. Go now
and trouble me no more with your speculations."

10 Prometheus was not satisfied. All that night
he lay awake making plans. Then he left his
couch at dawn, and standing tiptoe on Olympus,
stretched his arm to the eastern horizon where the
first faint flames of the sun were flickering. In his
hand he held a reed filled with a dry fiber; he thrust
it into the sunrise until a spark smoldered. Then
he put the reed in his tunic and came down from
the mountain.

11 At first men were frightened by the gift. It was
so hot, so quick; it bit sharply when you touched
it, and for pure spite, made the shadows dance.
They thanked Prometheus and asked him to take
it away. But he took the haunch of a newly killed
deer and held it over the fire. And when the meat
began to sear and sputter, filling the cave with its
rich smells, the people felt themselves melting
with hunger and flung themselves on the meat and
devoured it greedily, burning their tongues.

12 "This that I have brought you is called 'fire,'" Prometheus said. "It is an ill-natured spirit, a little brother of the sun, but if you handle it carefully, it can change your whole life. It is very greedy; you must feed it twigs, but only until it becomes a proper size. Then you must stop, or it will eat everything in sight—and you too. If it escapes, use this magic: water. It fears the water spirit, and if you touch it with water, it will fly away until you need it again."

13 He left the fire burning in the first cave, with children staring at it wide-eyed, and then went to every cave in the land.

14 Then one day Zeus looked down from the mountain and was amazed. Everything had changed. Man had come out of his cave. Zeus saw woodmen's huts, farm houses, villages, walled towns, even a castle or two. He saw men cooking their food, carrying torches to light their way at night. He saw forges blazing, men beating out ploughs, keels, swords, spears. They were making ships and raising white wings of sails and daring to use the fury of the winds for their journeys. They were wearing helmets, riding out in chariots to do battle, like the gods themselves.

15 Zeus was full of rage. He seized his largest thunderbolt. "So they want fire," he said to

himself. "I'll give them fire—more than they can use. I'll turn their miserable little ball of earth into a cinder." But then another thought came to him, and he lowered his arm. "No," he said to himself, "I shall have vengeance—and entertainment too. Let them destroy themselves with their new skills. This will make a long twisted game, interesting to watch. I'll attend to them later. My first business is with Prometheus."

16 He called his giant guards and had them seize Prometheus, drag him off to the Caucasus, and there bind him to a mountain peak with great chains specially forged by Hephaestus—chains which even a Titan in agony could not break. And when the friend of man was bound to the mountain, Zeus sent two vultures to hover about him forever, tearing at his belly and eating his liver.

17 Men knew a terrible thing was happening on the mountain, but they did not know what. But the wind shrieked like a giant in torment and sometimes like fierce birds.

18 Many centuries he lay there—until another hero was born brave enough to defy the gods. He climbed to the peak in the Caucasus and struck the shackles from Prometheus and killed the vultures. His name was Heracles.

Name: _____ Class: _____

Chiron, the Wisest Centaur

By Meredith Engel
2018

Centaurs are creatures that have the upper body of a human and the lower body of a horse and appear in various works of fiction and Greek mythology. One of the most well-known centaurs in Greek mythology is Chiron. In this fictional interview with Hermes, the Messenger of the Gods, Chiron discusses his life and his accomplishments. As you read, take notes on how the author describes Chiron's character.

- [1] **HERMES:** This is Hermes, Messenger of the Gods, reporting for the Greek Mythology News Network, live from Mount Pelion.¹ We're lucky today to be joined by Chiron the Centaur — the extremely talented mentor who trained many of the heroes we feature regularly on our show. Chiron, I've heard you had a challenging childhood — what happened and how did you get through it?



"Golden porch : a book of Greek fairy tales" by Hutchinson, W. M. L. (Winifred Margaret Lambart), b. 1868 has no known restrictions on copyright.

CHIRON: It is true, my early years were not easy. As a baby, I was abandoned by my parents, Cronus² and Philyra. My mother was disgusted by my half-human, half-horse appearance. Luckily, the god Apollo and his sister Artemis discovered me, and they found it in their hearts to take me in and raise me as their own. From Apollo, I learned about music and medicine. From Artemis, I learned about archery³ and hunting. With their guidance I have been able to master all of these skills and more.

HERMES: Fascinating! And thank the stars⁴ for Apollo and Artemis. What else do you think separates you from other typical centaurs?

CHIRON: Well, as you can see, my two front legs are not horse legs but human legs — this is a significant difference. Additionally, I enjoy wearing human clothing from time to time, something my centaur brothers and sisters never try. I embrace⁵ civilization, that's why I've been able to develop friendships with gods, goddesses, and humans alike.

- [5] **HERMES:** Speaking of which, the hero Peleus speaks very highly of you. How long have you known him and how did you make such a strong impression on him?

1. Chiron's homeland
 2. Cronus overthrew his father to be leader of the Titans, until he was later overthrown by Zeus.
 3. the skill of shooting arrows with a bow
 4. a phrase expressing extreme gratitude for the way something is
 5. **Embrace (verb):** to support or accept something enthusiastically

CHIRON: I've known Peleus for many years. As a young man, he was left stranded in the wilderness by the traitor Acastus. Fortunately, I came across Peleus and was able to restore him to his full strength and even give him some advice as to how to win over the woman of his dreams, Thetis the ocean nymph!⁶ Eventually, Peleus returned to me and asked me to train his son, Achilles. Now Achilles is one of the greatest archers in the world! Possibly even better than me...

HERMES: Oh, wow! I didn't know you trained Achilles! Do you have any other stories about students of yours whom our viewers may have heard of?

CHIRON: Well, Ajax, who fought alongside Achilles in the Trojan War, was also brought to me as a young boy for training. And of course, Apollo, my adoptive father, brought his son Asclepius to me, as well. Asclepius was particularly adept⁷ at the healing arts,⁸ and I'm honored to have had a hand in sculpting the great god of medicine. Actually, one of my favorite stories isn't about my years as a teacher but rather as a healer. You see, tragically, Phoenix — another one of Achilles' mentors — was blinded during a fight with his father, Amyntor. Using my knowledge of herbal medicine, I was able to restore Phoenix's sight. This is certainly one of my proudest accomplishments.

HERMES: Just incredible. We really are blessed to have such a talented centaur in our midst.⁹ Well, Chiron, I know your time is short, just one last question though. Seeing as you are an oracle¹⁰ — on top of all your other abilities — do you have any predictions about what, if anything, may ultimately cause your death?

[10] **CHIRON:** I don't pretend to know anything for certain, and I try to shy away¹¹ from looking into my own future. However, my gifted daughter Melanippe has foretold my death. Though she was disturbed by the vision and is not willing to speak openly about it, she did mention it involved Heracles and an arrow... My only wish is that my death is not in vain,¹² that someone or something else benefits from my passing.

HERMES: Oh my! For the sake of the world, I certainly hope Melanippe is wrong! Well, you heard it all here first folks! Tune in after the break for *Cooking with Hestia*.¹³

"Chiron, the Wisest Centaur" by Meredith Engel. Copyright © 2018 by CommonLit, Inc. This text is licensed under CC BY-NC-SA 2.0.

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6. a mythological spirit of nature
 7. **Adept (adjective):** very skilled at something
 8. the arts and sciences involved in healing or treating mental or physical illness
 9. a phrase meaning "among us"
 10. a person with great wisdom who makes predictions about the future, usually aided by the gods
 11. to avoid something you dislike or fear
 12. to be useless because it did not achieve something
 13. the goddess of domestic activities

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which sentence describes the main idea of the interview?
 - A. Chiron is a special centaur who stands apart from the others by helping gods and humans.
 - B. Despite the challenges of Chiron's childhood, he has been able to find happiness and peace with his daughter.
 - C. Chiron has lived an unhappy life, as he was rejected by his parents and his fellow centaurs.
 - D. Chiron has been unable to focus on mentoring young heroes because of the prophecies around his death.

2. PART B: Which detail from the text best supports the answer to Part A?
 - A. "It is true, my early years were not easy. As a baby, I was abandoned by my parents, Cronus and Philyra." (Paragraph 2)
 - B. "And thank the stars for Apollo and Artemis. What else do you think separates you from other typical centaurs?" (Paragraph 3)
 - C. "Eventually, Peleus returned to me and asked me to train his son, Achilles. Now Achilles is one of the greatest archers in the world!" (Paragraph 6)
 - D. "I don't pretend to know anything for certain, and I try to shy away from looking into my own future. However, my gifted daughter Melanippe has foretold my death." (Paragraph 10)

3. PART A: Which of the following describes how Hermes feels about Chiron?
 - A. Hermes is jealous of all of the important gods and humans Chiron has worked with.
 - B. Hermes feels somewhat uncomfortable by Chiron's unusual appearance as a centaur.
 - C. Hermes feels excited for Chiron to mentor him and improve his own skills.
 - D. Hermes is impressed by all that Chiron has overcome and accomplished.

4. PART B: Which quote from the text best supports the answer to Part A?
 - A. "And thank the stars for Apollo and Artemis. What else do you think separates you from other typical centaurs?" (Paragraph 3)
 - B. "Speaking of which, the hero Peleus speaks very highly of you. How long have you known him and how did you make such a strong impression on him?" (Paragraph 5)
 - C. "Just incredible. We really are blessed to have such a talented centaur in our midst." (Paragraph 9)
 - D. "do you have any predictions about what, if anything, may ultimately cause your death?" (Paragraph 9)

5. What is the relationship between Chiron and other important figures in Greek mythology?

Unit 6D, Sub-Unit 1: Prometheus

LESSON 1 Working with the Text

Reference *Heroes, Gods and Monsters* “Prometheus” Entire Text.

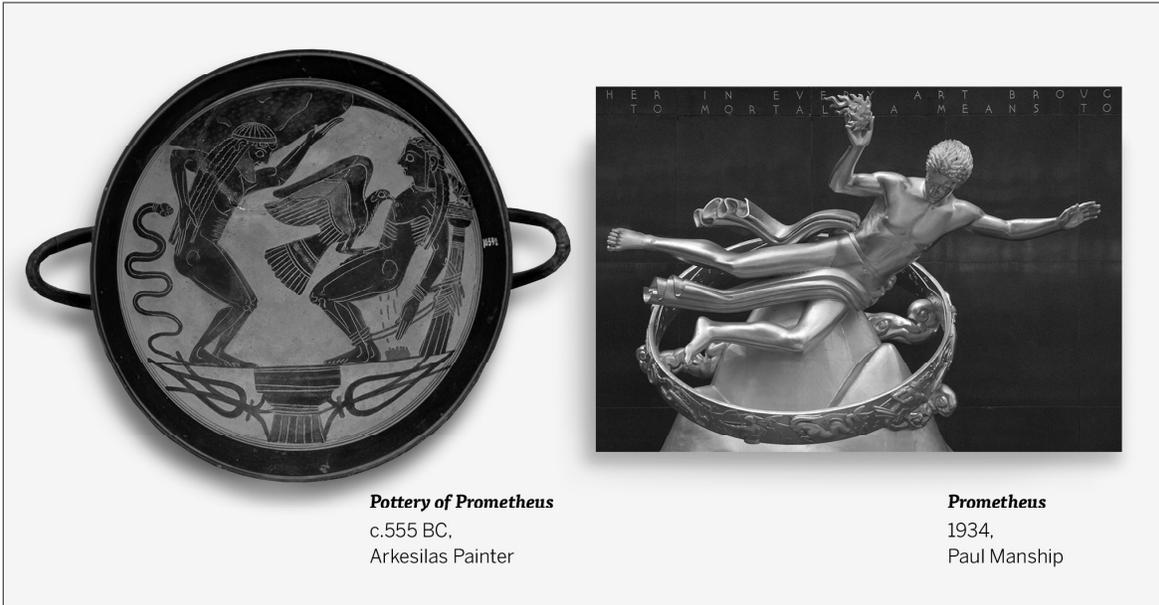
1. In paragraph 3, Zeus says “man is happy now.” What reasons does he give for this statement?
- *2. Complete the Close Read **Claims and Evidence**. Then answer the following questions:
 - a. Why does Zeus believe that humans will be “more dangerous” (9) with fire? Find a sentence from his conversation with Prometheus that shows you why he thinks this. Copy it here and explain how it connects to Zeus’s claim.
 - b. Why does Prometheus believe that humans will be more interesting with fire? Find a sentence from his conversation with Zeus that shows you why he thinks this. Copy it here and explain how it connects to Prometheus’s claim.
3. Why does Zeus think humans were created?
4. Prometheus does not tell Zeus directly what he thinks; instead, he asks a lot of questions. What does the fact that he asks a lot of questions—even though he knows that Zeus does not like them—tell you about his character?

* = **Suggested Writing Prompt**

Unit 6D, Sub-Unit 1: Prometheus

LESSON 1 Close Read

Look at the following 2 images of Prometheus. These images were created by different artists who lived many centuries apart. Study the images carefully and try to notice ways that the images of Prometheus differ. Write those differences in the space provided below the images.



Write your observations about the 2 images of Prometheus here.

Unit 6D, Sub-Unit 1: Prometheus

LESSON 1 Close Read

Claims and Evidence

Use this table to record the reasons that each character gives in the myth for his claim about what fire will do to humans.

(Prometheus) Make humans more interesting	(Zeus) Make humans more dangerous

Unit 6D, Sub-Unit 1: Prometheus

LESSON 2 Working with the Text

Reference *Heroes, Gods and Monsters* “Prometheus” Entire Text.

1. Name some of the things about humans' lives that Prometheus wants to be changed by fire. Write down the words and phrases in the text that make you think Prometheus believes fire will change these things.
2. Look back over the different qualities of fire that Prometheus and Zeus name. Using those qualities as a starting point, make a list of as many characteristics of fire as you can.
3. Reread the scene in which Zeus discovers that humans have been given fire. Find an action or behavior of the humans that stands out to you. Write it down, then add a sentence that explains what character traits this reveals in humans.
- *4. Based on the scene in which Zeus discovers that humans have been given fire, are the humans acting more as Zeus predicted or more as Prometheus predicted? Give at least 2 details from the passage that explain your answer.

* = **Suggested Writing Prompt**

Unit 6D, Sub-Unit 1: Prometheus

LESSON 2 Close Read

Fire's Characteristics

The table below shows some arguments made by Zeus and Prometheus about fire for humans. Using the myth as your guide, fill out the table. In each "Human's Action" cell, add a detail from the myth that shows humans acting as Zeus has predicted. Then think about how each action could indicate what fire represents to humans and fill out the final column.

The Gods' Arguments	Human's Action	What Fire Represents
Humans are in darkness without fire		
Humans are in ignorance without fire		
Humans are happy without fire		
Humans without fire are like animals		
Humans with fire will think they are like gods		

Unit 6D, Sub-Unit 1: Prometheus

LESSON 3 Working with the Text

Reference *Heroes, Gods and Monsters* “Prometheus” Entire text.

1. Act out the scene (or watch the other groups act their scenes out) in which Zeus watches humans live with fire. Based on the behaviors the actors in each group exhibit, how would you describe the characteristics of these humans? Give at least 2 details from the scene to support your answer.
2. Early in the myth, Zeus tells Prometheus that “man is happy” (3). Based on the changes that occur after humans get fire, do you think they are happier with fire or without it? Give at least 2 details from the text to support your answer.
3. The myth calls Prometheus “the friend of man” (16). Based on his actions and their consequences, do you think Prometheus was really a “friend” to humans? Give at least 2 details from the text to support your answer.
4. Name some of the character traits Zeus shows in this myth. Copy down the words and phrases in the text that make you think Zeus has those traits.

LESSON 3 Writing Warm-Up

Put a check mark next to the sentence if...

- you think Zeus was incorrect because humans are happier with fire.
- you think Zeus was incorrect because humans do not seem to swell with pride once they acquire fire.
- you think Zeus was correct because humans are doing things that indicate they are not as happy with one another as before fire.
- you think Zeus was correct because humans are acting in ways that show they consider themselves more like the Gods with fire.

LESSON 3 Writing Prompt

Given the way humans behave when they get fire in this myth, is Zeus correct that humans should not have fire?

Make sure to use textual evidence to help support your answer.

Unit 6D, Sub-Unit 1: Prometheus

LESSON 4 Working with the Text

Reference *Heroes, Gods and Monsters* “Prometheus” Entire Text.

1. Zeus decides to punish Prometheus before he deals with the humans. What does this decision tell you about Zeus’s character? Give 1–2 details from the text that help explain your answer.
2. When Zeus sees people with fire he threatens destruction, but then changes his mind. The people are frightened of fire at first, but change their minds and learn to use it well. But Prometheus does not change his mind; he thinks the same thing over and over. How could the fact that Prometheus does not change his mind relate to his punishment in which the birds eat his liver over and over?
3. Reread the scene in which Zeus punishes Prometheus. Why does Zeus send someone else to actually carry out the punishment? What might this choice reveal about Zeus’s character?

LESSON 4 Writing Warm-Up

Put a check mark next to the sentence if...

- you think Prometheus knows that Zeus did not want humans to have fire, but gave it to them anyway.
- you think that Zeus’s misgiving was correct that humans with fire might do and build things that could bring them unhappiness.
- you think that Prometheus has noble reasons for disobeying Zeus.
- you think that—no matter what someone did—Prometheus’s punishment does not fit the crime.

LESSON 4 Writing Prompt

Is Zeus’s punishment of Prometheus fair or unfair? Use at least 3 details from the text to support your claim.

Unit 6D, Sub-Unit 1: Prometheus

LESSON 5 Working with the Text

Reference *Heroes, Gods and Monsters* “Prometheus” Entire Text.

1. Zeus tells Prometheus that “every gift brings a penalty” (5). Based on what you have read in “Prometheus,” what penalty does fire bring to humans?
2. Prometheus tells humans that fire “is an ill-natured spirit, a little brother of the sun” (12). What does he mean by this?
3. At the end of the myth, the hero Heracles comes along and frees Prometheus from the rock. Although the myth never directly refers to Prometheus himself as a hero, what have both Prometheus and Heracles done, according to the text, that makes them equally heroic?
4. What elements of the Prometheus myth would you change if you were writing your own version? How would those changes affect the traits your characters show?

LESSON 5 Writing Warm-Up

Put a check mark next to the sentence if...

- you can imagine how a human given fire by Prometheus might tell this story.
- you can imagine what thoughts might be going through Prometheus’s head as he is having his early conversation with Zeus.
- you can imagine Zeus, looking back years later on his punishment of Prometheus and how humans turned out long after the time of this myth.

LESSON 5 Writing Prompt

Write your own one-page version of the Prometheus myth. Choose a way to make your version different from Evslin’s: write in the first person, have Prometheus give humans something other than fire, or start the story with Prometheus’s punishment. If you finish with time to spare, add 2 more details to your characters to show how they look, how they behave, or what they say. (If you want to challenge yourself, think about the attitude you want each character to show. Add two more details to every character to help show that attitude.)

Name: _____ Class: _____

Theseus and the Minotaur

By E2BN.org
2006

In ancient Greece, people told myths to explain the ways of the world. Myths often portrayed brave heroes and vicious monsters. The ancient Greeks also believed in powerful gods who watched over Earth and intervened when they saw fit. In this particular myth, a prince from Greece's capital city of Athens travels by sea to another city, Crete, in order to fight a monster. As you read, take notes on how Theseus' actions and characteristics help drive the plot.

- [1] King Minos of Crete was a powerful man, feared by the rulers of the lands around him. When he demanded goods or men for his great armies, they felt they had to agree. When he demanded they send tributes¹ to honour him, they sent them without question. It was the only way they could stop him going to war with them. But his demands on Athens became too much for them to bear.



"Antoine-Louis Barye's 'Theseus Slaying The Minotaur'" by Timothy Vogel is licensed under CC BY-NC 2.0

King Minos had a great palace built for himself. Inside this palace, Minos had built a giant maze, a labyrinth, and, at the centre of the maze, he kept a terrifying creature – the Minotaur. Now this was no ordinary animal; it was a monster, half man and half bull.

It was powerful and savage,² and it loved to eat the flesh of the humans who had been shut into the labyrinth by King Minos. They would wander through the maze, completely lost, until at last they came face to face with the Minotaur. Not a great way to die, really.

As for Athens, Minos demanded that every year King Aegeus of Athens send him seven young men and seven young women.

- [5] "Why do we send these young people to Crete every year?" Theseus, the King's son, asked his father. "And why is it that none of them ever return?"

"Because if we did not send them, Minos would wage war on us and it is a war that we would not win," said King Aegeus. "And they do not return because they do not go to Crete as slaves. They go as food for the Minotaur."

"Father, this is terrible," shouted Theseus, "we cannot let this go on. We cannot sacrifice any more of our young citizens to this tyrant. When it is time to send the next tribute, I will go as one of them and I vow that it is the last time the Minotaur will be fed with the flesh of any of our people."

1. In this context, a tribute is a payment made by one state or ruler to another, especially as the price of peace, security, protection or to recognize authority
 2. **Savage (adjective):** fierce, violent, or uncontrolled

Try as he might, his father could not persuade him to change his mind. Aegeus reminded him that every year, other young men had sworn to slay this terrible beast and they had never been seen again.

Theseus insisted that he understood the dangers but would succeed. "I will return to you, father," cried Theseus, as the ship left the harbour³ wall, "and you will be proud of your son."

- [10] "Then I wish you good luck, my son," cried his father, "I shall keep watch for you every day. If you are successful, take down these black sails and replace them with white ones. That way I will know you are coming home safe to me."

As the ship docked in Crete, King Minos himself came down to inspect the prisoners from Athens. He enjoyed the chance to taunt the Athenians and to humiliate⁴ them even further.

"Is this all your king has to offer this year?" he jeered. "Such puny⁵ creatures. Hardly even a snack for the mighty creature within the labyrinth. Anyway, let's get on with it. I am not a hard-hearted man, so I will let you choose which one goes first into the Minotaur's den. Who is it to be?"

Theseus stepped forward.

"I will go first. I am Theseus, Prince of Athens and I do not fear what is within the walls of your maze."

- [15] "Those are brave words for one so young and so feeble.⁶ But the Minotaur will soon have you between its horns. Guards, open the labyrinth and send him in."

Standing behind the king, listening, was his daughter, Ariadne. From the moment she set eyes on Theseus, Ariadne fell in love with him. As she listened to her father goading⁷ and taunting the young prince, she decided that she would help him. As he entered the labyrinth and the guards walked away, she called softly to him.

"Theseus, take this," she whispered. "Even if you kill the Minotaur, you will never find your way out again."

She threw him a great ball of string and he tied one end of it to the entrance. He smiled at her, turned and began to make his way into the maze, the string playing out behind him as he went.

Theseus walked carefully through the dark, foul-smelling passages of the labyrinth, expecting at any moment to come face-to-face with the creature. He did not have long to wait. Turning a corner, with his hands held out in front of him feeling his way, he suddenly touched what felt like a huge bony horn.

- [20] In an instant his world turned upside-down, quite literally. He was picked up between the Minotaur's horns and tossed high into the air. When he landed on the hard cold stone, he felt the animal's huge hooves come down on his chest. Every last breath seemed to be knocked out of him and he struggled to stay alive in the darkness.

3. A harbour is a place on the coast where ships may find shelter

4. **Humiliate (verb):** to make someone feel ashamed or foolish

5. **Puny (adjective):** small and weak

6. **Feeble (adjective):** lacking physical strength, especially due to age or illness

7. **Goad (verb):** to provoke or annoy in order to create a reaction

But Theseus was no ordinary man. He was the son of the King, he was brave and he was stubborn. As the Minotaur bellowed⁸ in his ear and grabbed at him with its hairy arms, Theseus found a strength which he did not know he possessed.

He grabbed the animal's huge horns, and kept on twisting the great head from side to side. As the animal grew weak, Theseus gave one almighty tug on the head, turning it almost right around. The creature's neck snapped, it gurgled its last breath and fell to the floor with an enormous thud.

It was over, he had done it. The Minotaur was dead. All he had to do was make his way out of... and then he realised the awful truth. In the struggle, he had let go of the string, his lifeline. Theseus felt all over the floor in the pitch darkness and kept thinking he had found it, only to realise that all he had was a long wiry hair from the Minotaur.

Despair⁹ set in and Theseus wondered if this was where his life would end, down in the dark, all alone, next to the stinking body. Then, his hand brushed a piece of string and, with a whoop of delight, he knew he had found the thread which would lead him back out. As he neared the entrance of the labyrinth, the darkness began to fade and he made out the figure of Ariadne, waiting for his return.

[25] "You must take me back to Athens with you," she cried, "My father will kill me when he finds out that I have helped you."

"But of course you must come with us," said Theseus, "it would be cruel to leave you here." Quickly and quietly, they unfurled¹⁰ the great black sails of their ship and headed for home.

"I cannot believe how my life has changed," said Ariadne, as they sailed across the calm seas towards Athens. "To think that I am free of my cruel father and that I will soon be married to a great prince."

"Married?" said Theseus, "Oh, yes, that will be... er... wonderful." But in truth, Theseus did not really find her attractive.

So, when their ship docked at an island on their way home, to collect fresh water, Theseus sent Ariadne off to find bread and fruit. The moment she was gone, he set sail and left her on the island. Now, you might think that this was a bad way to reward someone who had helped him and had saved him from certain death.

[30] The Gods clearly thought the same thing, for they had a further horror in store for him, as a punishment for his ungrateful treatment of the young girl.

In his haste¹¹ to get away, Theseus forgot to change his sails to white. King Aegeus, waiting on the headland, saw the ship approaching with its black sails flying in the wind.

"My son has failed and he is dead," he cried. And in despair, he flung himself from the cliff into the raging waters below. From that day on, the sea was named in memory of Theseus' father, and to this day, it is known as the Aegean Sea.

8. **Bellow (verb):** to shout in a loud or deep voice

9. **Despair (noun):** a feeling that everything is wrong and nothing will get better

10. to open something, like a flag, so that it is spread out

11. **Haste (noun):** speed or hurry, often made with urgency

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. How does the author characterize Theseus in the story? Cite evidence from the text in your response.

2. PART A: How does the interaction between Theseus and King Minos in paragraphs 12-15 contribute to the plot as a whole?
- A. It establishes King Minos as Theseus' central challenge in the labyrinth, setting up the king's battle with Theseus.
 - B. It creates an atmosphere of fear which remains with Theseus as he travels the labyrinth.
 - C. It helps the reader to fully visualize the new setting of Crete through the eyes of Theseus.
 - D. It further contrasts King Minos' villainous ways with Theseus' bravery, setting Theseus up as the hero.
3. PART B: Which later quote from the story confirms your answer to Part A?
- A. "Theseus walked carefully through the dark, foul-smelling passages of the labyrinth, expecting at any moment to come face-to-face with the creature." (Paragraph 19)
 - B. "He was picked up between the Minotaur's horns and tossed high into the air. When he landed on the hard cold stone, he felt the animal's huge hooves come down on his chest." (Paragraph 20)
 - C. "As the Minotaur bellowed in his ear and grabbed at him with its hairy arms, Theseus found a strength which he did not know he possessed." (Paragraph 21)
 - D. "Theseus felt all over the floor in the pitch darkness and kept thinking he had found it, only to realize that all he had was a long wiry hair from the Minotaur." (Paragraph 23)
4. PART A: What does the word "tyrant" most closely mean as it is used in paragraph 7?
- A. A person who runs a country
 - B. A leader who torments people
 - C. A soldier who is ready to fight
 - D. An innocent young citizen

5. PART B: Which quote from later in the story best supports your answer to Part A?
- A. "As the ship docked in Crete, King Minos himself came down to inspect the prisoners from Athens." (Paragraph 11)
 - B. "He enjoyed the chance to taunt the Athenians and to humiliate them even further." (Paragraph 11)
 - C. "Those are brave words for one so young and so feeble." (Paragraph 15)
 - D. "Standing behind the king, listening, was his daughter, Ariadne." (Paragraph 16)

6. How do the actions of Ariadne help further the plot? Cite evidence from the text in your response.

Discussion Questions

Directions: *Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.*

1. If it weren't for Ariadne, do you think Theseus would have been able to get out of the maze? Use details about the maze and Theseus' character to support your ideas.
2. How does the ending of the story change your opinion of Theseus' character? Do you think the gods should punish him? Why or why not?
3. The Ancient Greeks often told myths to explain how things came to be and to teach a lesson. What do we, as readers, learn from this myth about power? How can power corrupt people? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.
4. In the context of this myth, what makes a hero? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.

Unit 6D, Sub-Unit 2: Odysseus

LESSON 1

Read *Odyssey*, “The Cyclops,” paragraphs 21–27.

Find the description of the Cyclops that best describes his attitude toward Odysseus and the crew, and explain your choice.

Find the action performed by the Cyclops that best shows what kind of person he is, and explain your choice.

LESSON 1

1. When the giant returns to the cave and throws down the wood he is carrying, Odysseus and his men
 - a. advance to meet him.
 - b. hide in the back of the cave.
 - c. help him start a fire for supper.
 - d. try to sneak out of the cave and escape.
2. Why does the giant only bring some of the animals into the cave?
 - a. He only wants some of them to cook for dinner.
 - b. He thinks it will be crowded with the men there.
 - c. He plans to milk them, so he only needs the females.
3. Once the giant and the animals are inside the cave, what is the first thing the giant does?
 - a. He milks the animals and makes cheese.
 - b. He closes the entrance with a huge stone.
 - c. He begins to prepare his own supper.
 - d. He starts a fire and discovers the men.
4. When the giant asks if the men are on a “trading venture” or “cruising the main on chance, like roving pirates” (22) he wants to know
 - a. if they are on a business voyage, or sailing around looking for chances to steal.
 - b. if they are soldiers on a mission to hunt for giants, or just regular people.
5. In paragraph 24, the giant tells them he
 - a. will obey the gods and has already seen where the men moored their ship.
 - b. won't give them hospitality but won't hurt them either.
 - c. is from a race stronger than the gods and is curious where they left their ship.
 - d. just wants to be left alone by them and by the gods.
6. In paragraph 25, when Odysseus says “I answered with plausible words” he means
 - a. he lied to the giant but in a way he'd probably believe.
 - b. he told the truth but left out some important details.
 - c. he lied to the giant and doesn't care if it's obvious.
 - d. he told the truth and trusts the giant to do the same.
7. Why does Odysseus decide that killing the giant “would seal our own fate as well as his” (27)?
 - a. He believes that revenge would make the gods angry with them.
 - b. He doesn't think he and a few men can hurt such a big giant.
 - c. He knows the men can't move the stone that seals the entrance.
 - d. He is sure the giant will wake up before they can kill him.

6th Grade Mathematics for the week of 20 Apr - 24 Apr

Lesson 6: The Order of Operations



Classwork

Example 1: Expressions with Only Addition, Subtraction, Multiplication, and Division

What operations are evaluated first?

What operations are always evaluated last?

Exercises 1–3

1. $4 + 2 \times 7$

2. $36 \div 3 \times 4$

3. $20 - 5 \times 2$

Example 2: Expressions with Four Operations and Exponents

$$4 + 9^2 \div 3 \times 2 - 2$$

What operation is evaluated first?

What operations are evaluated next?

What operations are always evaluated last?

What is the final answer?

Exercises 4–5

4. $90 - 5^2 \times 3$

5. $4^3 + 2 \times 8$

Example 3: Expressions with Parentheses

Consider a family of 4 that goes to a soccer game. Tickets are \$5.00 each. The mom also buys a soft drink for \$2.00. How would you write this expression?

How much will this outing cost?

Consider a different scenario: The same family goes to the game as before, but each of the family members wants a drink. How would you write this expression?

Why would you add the 5 and 2 first?

How much will this outing cost?

How many groups are there?

What does each group comprise?

Exercises 6–7

6. $2 + (9^2 - 4)$

7. $2 \cdot (13 + 5 - 14 \div (3 + 4))$

Example 4: Expressions with Parentheses and Exponents

$$2 \times (3 + 4^2)$$

Which value will we evaluate first within the parentheses? Evaluate.

Evaluate the rest of the expression.

What do you think will happen when the exponent in this expression is outside of the parentheses?

$$2 \times (3 + 4)^2$$

Will the answer be the same?

Which should we evaluate first? Evaluate.

What happens differently here than in our last example?

What should our next step be?

Evaluate to find the final answer.

What do you notice about the two answers?

What was different between the two expressions?

What conclusions can you draw about evaluating expressions with parentheses and exponents?

Exercises 8–9

8. $7 + (12 - 3^2)$

9. $7 + (12 - 3)^2$

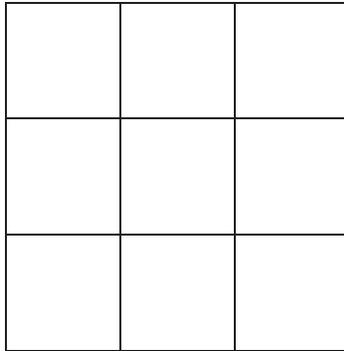


Lesson 7: Replacing Letters with Numbers



Classwork

Example 1



What is the length of one side of this square?

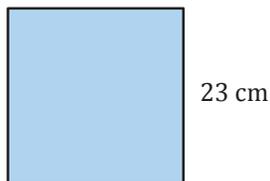
What is the formula for the area of a square?

What is the square's area as a multiplication expression?

What is the square's area?

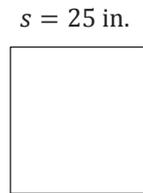
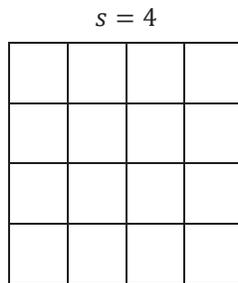
We can count the units. However, look at this other square. Its side length is 23 cm. That is just too many tiny units to draw. What expression can we build to find this square's area?

What is the area of the square? Use a calculator if you need to.

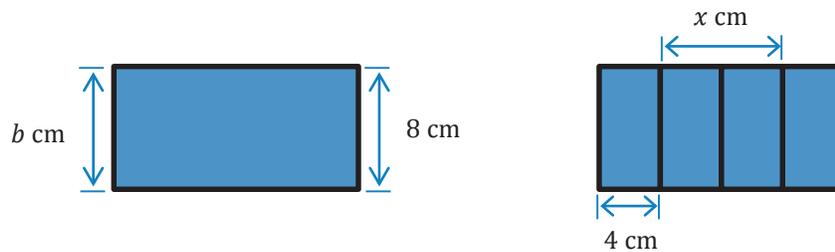


Exercise 1

Complete the table below for both squares. Note: These drawings are not to scale.



Length of One Side of the Square	Square's Area Written as an Expression	Square's Area Written as a Number

Example 2

What does the letter b represent in this blue rectangle?

With a partner, answer the following question: Given that the second rectangle is divided into four *equal* parts, what number does the x represent?

How did you arrive at this answer?

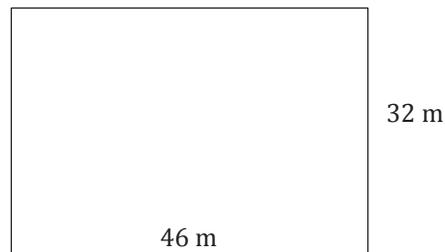
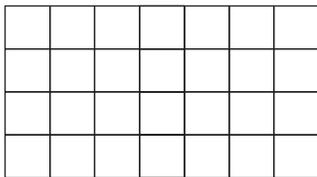
What is the total length of the second rectangle? Tell a partner how you know.

If the two large rectangles have equal lengths and widths, find the area of each rectangle.

Discuss with your partner how the formulas for the area of squares and rectangles can be used to evaluate area for a particular figure.

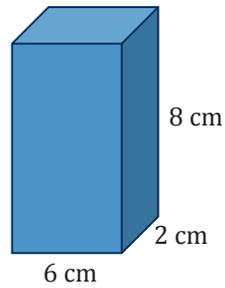
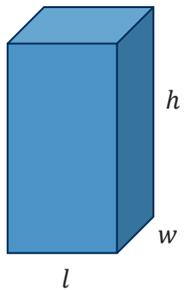
Exercise 2

Complete the table below for both rectangles. Note: These drawings are not to scale. Using a calculator is appropriate.



Length of Rectangle	Width of Rectangle	Rectangle's Area Written as an Expression	Rectangle's Area Written as a Number

Example 3



What does the l represent in the first diagram?

What does the w represent in the first diagram?

What does the h represent in the first diagram?

Since we know the formula to find the volume is $V = l \times w \times h$, what number can we substitute for the l in the formula? Why?

What other number can we substitute for the l ?

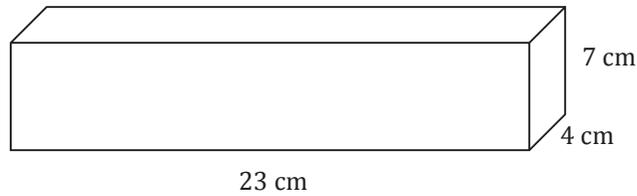
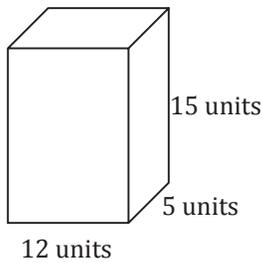
What number can we substitute for the w in the formula? Why?

What number can we substitute for the h in the formula?

Determine the volume of the second right rectangular prism by replacing the letters in the formula with their appropriate numbers.

Exercise 3

Complete the table for both figures. Using a calculator is appropriate.



Length of Rectangular Prism	Width of Rectangular Prism	Height of Rectangular Prism	Rectangular Prism's Volume Written as an Expression	Rectangular Prism's Volume Written as a Number



12. Think about it. What could you do to help preserve biodiversity in ecosystems to preserve ecosystem services? Explain how this would help.

WEEK 2: APRIL 20-24 AND PART OF WEEK 3: APRIL 27-29

PROJECT:

Your task is to evaluate two different strategies for protecting biodiversity to sustain ecosystem resources. You will examine solutions to an invasive species known as the Emerald Ash Borer.

Emerald Ash Borer



Emerald Ash Borer (adult)



Emerald Ash Borer (larvae)



Ecosystem containing ash trees

The Emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, is an exotic beetle that was discovered in southeastern Michigan near Detroit in the summer of 2002. The adult beetles nibble on ash tree foliage but cause little damage. The larvae (the immature stage) feed on the inner bark of ash trees, disrupting the tree's ability to transport water and nutrients. Emerald

ash borers probably arrived in the United States on solid wood packing material carried in cargo ships or airplanes originating in its native Asia. As of October 2018, the EAB was found in 35 states, and the Canadian provinces of Ontario, Quebec, New Brunswick, Nova Scotia and Manitoba. The EAB is now found in much of the eastern and central United States including northeastern Oklahoma. EAB is considered the most destructive forest pest ever seen in North America.

Since its discovery, EAB has:

- Killed hundreds of millions of ash trees in North America.
- Caused regulatory agencies and the USDA to enforce quarantines and fines to prevent potentially infested ash trees, logs or hardwood firewood from moving out of areas where EAB occurs.
- Cost municipalities, property owners, nursery operators and forest products industries hundreds of millions of dollars.



The Oklahoma Forestry Service has provided strategies for preventing the infestation of the EAB. You will evaluate the effectiveness of two of these strategies.

Strategy 1:

Since the discovery of the emerald ash borer in 2002, eradication efforts have been implemented in an attempt to eliminate or contain the spread of this invasive beetle. The eradication protocol called for the removal of every ash tree within a 0.8 km radius around an infested tree. Reducing the number of ash trees available to the insect reduces the number of opportunities for the developing EAB population, and might even play a role in causing a growing population to be steered away from moving in a certain direction.

Strategy 2:

If your tree is in the infested area, a professional arborist can evaluate the tree for potential insecticide treatment. The efficacy of a specific insecticide depends on factors such as tree health, tree age, pest population, site conditions, and frequency of application. Insecticide applications must be performed by a certified pesticide applicator holding an active commercial license with the Agency of Agriculture.

Instructions for this project:

To evaluate these two different strategies for protecting biodiversity to sustain ecosystem resources you will construct a paper, speech, media file, etc. to:

1. Explain what problem (involving biodiversity and/or ecosystem services) is being solved by the given design solutions, including information about why biodiversity and/or ecosystem services are necessary to maintaining a healthy ecosystem
2. Identify and describe the additional evidence (in the form of data, information, or other appropriate forms) that is relevant to the problem, design solutions, and evaluation of the solutions, including:
 - a. The variety of species (biodiversity) found in the given ecosystem.
 - b. Factors that affect the stability of the biodiversity of the given ecosystem.
 - c. Ecosystem services that affect the stability of the system.
3. Examine constraints including scientific, economic, and social considerations

This project is due no later than Wednesday, April 29.

Reflection:

Review the learning objectives at the beginning of this lesson. What level of understanding do you feel you have of the standard?

Standard MS-LS2-5	Level of Understanding (Mastery-proficient- progressing-rudimentary)	Reason for Level Chosen, be specific about the things you know well and what you struggle with.
You will evaluate designs for maintaining biodiversity and ecosystem services.		

END OF MODULE 1! GOOD WORK!



PART OF WEEK 4 & WEEK 5: MAY 6-MAY 13

PROJECT! Due May 13

Examining Polar Bear Habitats



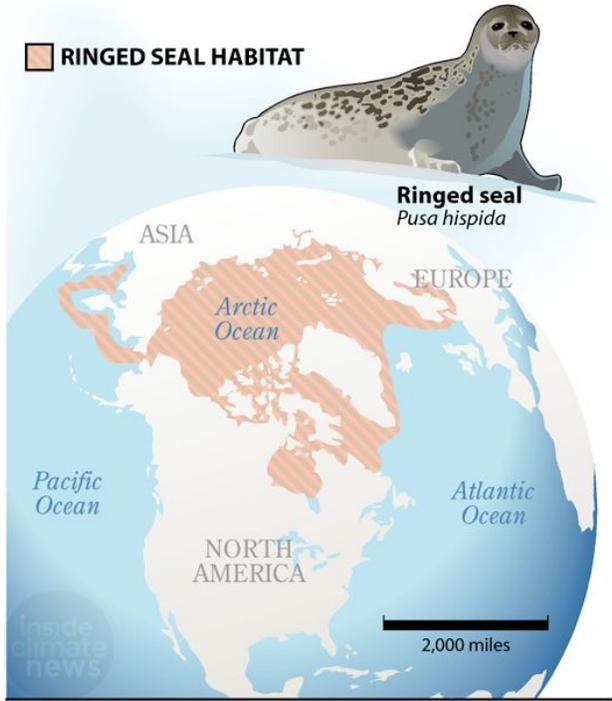
Humans have significantly impacted the environment around us. Evidence shows that Arctic sea ice has decreased dramatically in the last few years. Arctic sea ice plays a critical role in the life of polar bears. Polar bears' main food source, seals, live on sea ice.

Task:

PolarTREK, an Arctic education organization has received a grant to fund a plan to help save the Arctic sea ice. Your task is to design a solution to stop the polar bear's habitat from disappearing. You must use technology to monitor the situation and consider the needs of society and monetary constraints.

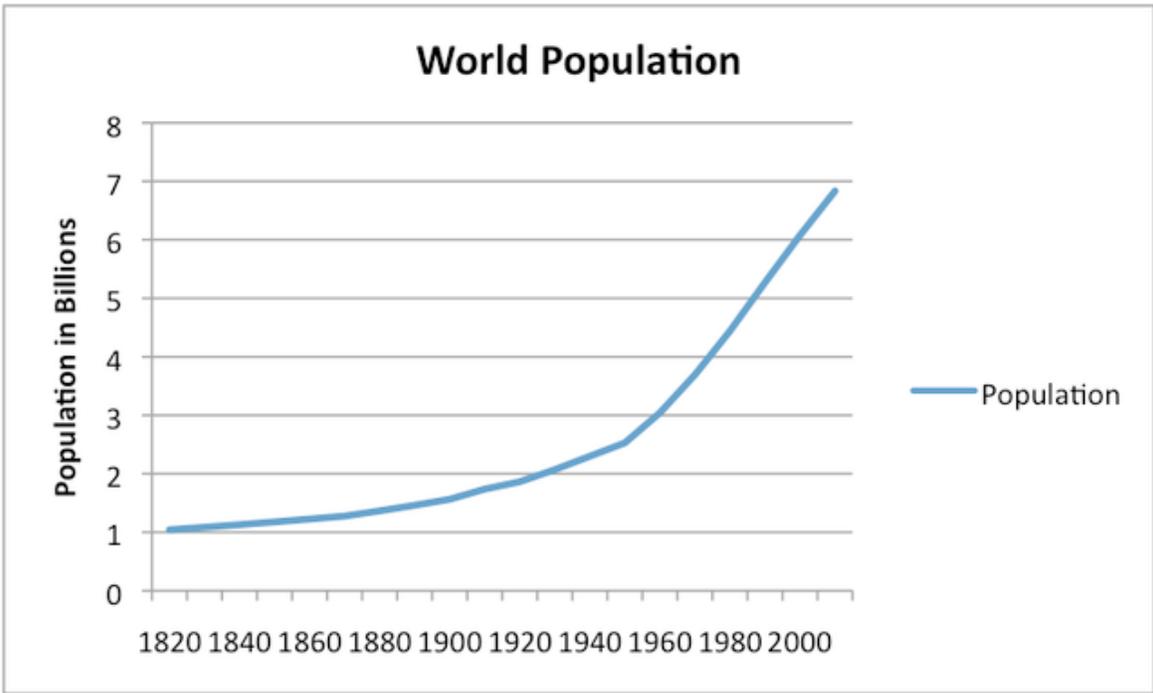
Scientists have collected the following models and data that will help you in this task.

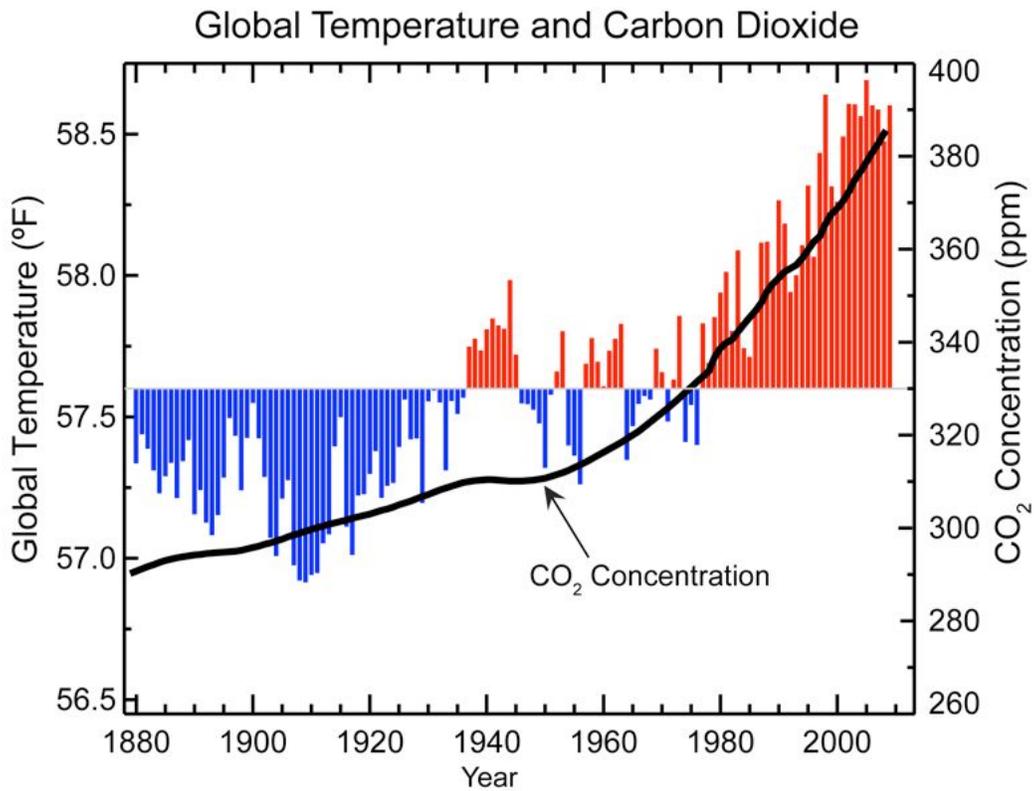
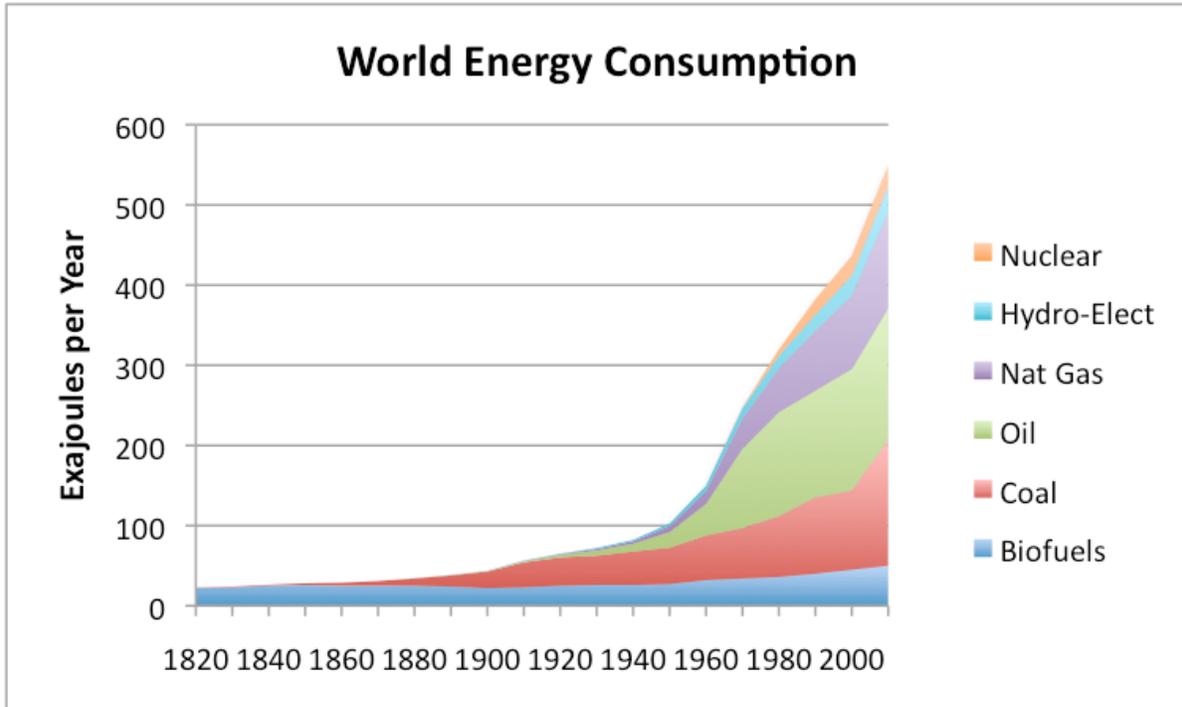




SOURCE: NOAA

PAUL HORN / InsideClimate News

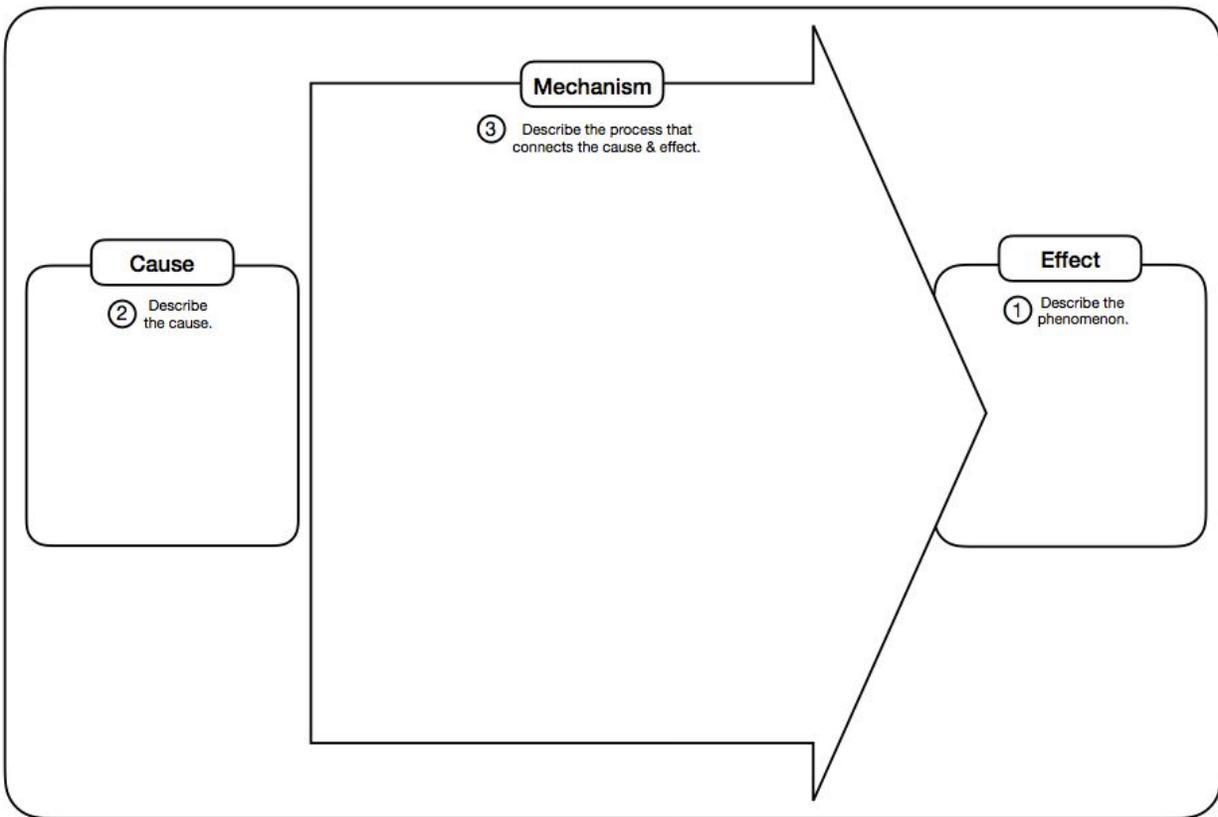




Use what you know about human activities and the environment to answer the following prompts in the graphic organizer:

1. Effect: Describe the phenomena of Arctic Ice Sea melt (what is it?).
2. Cause: Describe the cause: Which human activity has contributed to Arctic Ice melt?
3. Mechanism: Explain the causal relationship between the human activity and Arctic habitats.

Cause and Effect



thewonderofscience.com

Adapted from: Amy & Jeremy Peacock

YOUR JOB: Due May 13

Design a possible solution that can monitor and minimize the melting of sea ice caused by one of the human activities listed in this module.

Step 1: What human activity will you focus on? What type of device/solution will you design?

Step 2: What materials and technology will you need to implement your plan?

Step 3: Draw a model of your solution.

Step 4: What data would you need to collect?

Step 5: Describe the criteria and constraints of your design solution.

- a. Include one societal need or desire concerning this phenomena.
- b. Include an economic constraint that has to be addressed.

Why does society need this?	Economic constraints (How cost-effective is this?)
-----------------------------	--

Step 6: Evaluate your potential design solution.

- a. How well does your solution meet societies' needs?
- b. How well does your solution meet the economic constraints?
- c. Does your solution minimize human impacts on the phenomena?
- d. What limitations may occur with the monitoring technology of the design solution?

reflection:

Review the learning objectives at the beginning of this lesson. What level of understanding do you feel you have of the standard?

Standard MS-ESS3-3:	Level of Understanding (Mastery-proficient- progressing-rudimentary)	Reason for Level Chosen, be specific about the things you know well and what you struggle with.
Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.		

**You have completed all your work for Grade 6 Science!
Congratulations!
Have a fun summer and BE SAFE!**



6th Grade Western Geography

Week 3 - Dealing with Extreme Weather: Hurricanes in the Caribbean

Essential Question: What causes extreme weather, and how do people deal with it?

Summary of Activities:

- **Activity 1: Preview/ Geotermis**

Overview: Draw an outline map of the Caribbean. Read the Introduction and Section 1: The Geographic Setting in the text and complete the geotermis activity in the Interactive Student Notebook.

- **Activities 2-7: Read Text and Complete Interactive Notebook**

Overview: Read Sections 2-7 and answer the questions in the Interactive Student Notebook that align with each section.

- **Activity 8: Processing**

Overview: Create a pamphlet for Jamaica's Office of Disaster Preparedness and Emergency Management. The pamphlet will help teach people about hurricanes. Directions for the pamphlet are found in the Interactive Student Notebook.



Dealing with Extreme Weather: Hurricanes in the Caribbean

What causes extreme weather, and how do people deal with it?

Preview

Draw on the outline map of the Caribbean below.

- Label any physical features and countries you know.
- Use symbols and colors to show things you know about the Caribbean.
- Create a legend that identifies your symbols and colors.
- Title your map, and add a compass rose.



Section 1 - The Geographic Setting

Read the Introduction and Section 1. Then, create an illustrated dictionary of the Geoterms by completing these tasks:

- Create a symbol or an illustration to represent each term.
- Write a definition of each term in your own words.
- Write a sentence that includes the term.

Geoterm and Symbol	Definition	Sentence
El Niño		
extreme weather		
meteorology		
natural disaster		
tropical cyclone		

As you read each of Sections 2 to 7, complete the notebook for that section.

Section 2 - Understanding the Weather Machine

Based on what you learned in the reading, describe what you see on this graphic organizer.



Section 3 - Extreme Weather: A Hurricane Is Born

Write a summary of how a hurricane is formed. Include these terms in your summary: *Africa, Atlantic Ocean, warm and moist air, thunderstorms, tropical disturbance, Coriolis effect, tropical cyclone.*

Section 4 - Inside a Monster Storm

Draw a simple diagram of the inside of a hurricane. Include and label these parts: *eye, eye wall, rainbands.*

Section 5 - Tracking and Preparing for a Hurricane

Write a summary of how people track and prepare for a hurricane. Include these terms in your summary: *meteorologist, hurricane watch, hurricane warning, Saffir-Simpson scale.*

Section 6 - Landfall: A Natural Disaster Begins

Write a summary of what happens when a hurricane makes landfall. Include these terms in your summary: *wind, rain, storm surge, Caribbean.*

Section 7 - Cleaning Up After a Natural Disaster

Write a summary of what happens after a hurricane. Include these terms in your summary: *rebuilding, relief agencies, cleaning up, Caribbean.*

Processing

Create a pamphlet for Jamaica's Office of Disaster Preparedness and Emergency Management. The pamphlet will help teach people about hurricanes. Plan your pamphlet here.

Fold a sheet of paper in half to make your pamphlet. Your pamphlet should have

- a front cover with a catchy title and a colorful visual.
- a section on what causes hurricanes and how they gain strength. Include a title and an illustration.
- a section on how people can prepare for hurricanes. Include a title, at least five tips or important pieces of information, and a helpful illustration.
- a back cover with interesting facts about hurricanes in the Caribbean. You might include details about past storms, such as the amount of destruction caused by hurricanes.
- creative touches to make your pamphlet stand out.
- writing that uses correct grammar and spelling.

Dealing with Extreme Weather: Hurricanes in the Caribbean

Introduction



Hurricane Ivan carried this boat from the water and left it stranded on land.

In the early 2000s, Hurricane Ivan slammed into the Caribbean island of Grenada. “It was absolutely terrifying,” one resident said. “The winds were gusting over 145 miles per hour and just tearing off roofs.” Ivan damaged just about every home on the island and destroyed almost half of them, and more than 30 people lost their lives in the storm. One woman whose roof was torn off spent the storm huddled under a mattress with her family. “I stared death in the face,” she said. “What could be more scary than that?”

Hurricanes such as Ivan are an example of **extreme weather**, a term that refers to severe or unusual weather conditions. In addition to hurricanes, extreme weather includes **tornadoes**, blizzards, and even severe heat waves or cold spells.

Since extreme weather is often destructive, people may try to make preparations for these natural events. However, such preparations are not always possible, because extreme weather can be difficult to predict or guard against. When great damage or loss of life occurs, an extreme weather event is called a **natural disaster**. Hurricanes often produce natural disasters.

In this lesson, you will learn about the hurricanes that strike the Caribbean

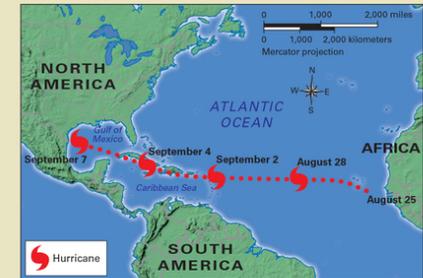
region. You will examine the causes and effects of hurricanes, and you will discover the ways in which people in the region deal with this form of extreme weather.

Essential Question

What causes extreme weather, and how do people deal with it?

This map shows the course of a hurricane from the coast of Africa to the Caribbean Sea. Notice that the storm passes through several locations on its journey. At each location, people must deal with the hurricane as a dangerous form of extreme weather. Keep this map in mind as you try to answer the Essential Question.

Graphic Organizer



1. The Geographic Setting

The Caribbean islands stretch in a gentle arc that extends from the tip of Florida to the northern coast of South America. Also known as the West Indies, these islands divide the Atlantic Ocean from the Caribbean Sea and the Gulf of Mexico. Thousands of islands make up this chain, with many being so tiny that only a few people live on them. However, some islands, such as Cuba and Hispaniola, are large enough to be inhabited by millions of people.



A Sun-Drenched Beach on the Island of Trinidad

Tourism is a key industry in the Caribbean. Tourists are attracted to the region by sunny beaches like this one in Trinidad. Tourist areas have sprung up to meet their needs, providing fine hotels, restaurants, and shops. Outside these areas, however, many people still live in poverty.

Islands in the Sun The Caribbean islands lie within one of Earth's **tropical zones**. They have a warm to hot **climate** year-round, but regular sea breezes cool the islands and make the days pleasant.

These islands were first settled by small groups of hunter-gathers. The word *hurricane* comes from the language of one of these groups, the Taino, who believed that a storm god called Huracan controlled extreme weather events.

During the 1600s, European countries claimed the islands as colonies. The colonists set up **plantations**, or large farms, where they planted warm-weather crops such as tobacco and sugar. The planters tried to make native peoples work on their land, but in a short time the native peoples died out. Most of them were killed by diseases that were brought by Europeans to the Caribbean. After that, the European colonists brought large numbers of Africans to the Caribbean islands to work on their farms as slaves.

During the 1800s, almost all the Caribbean islands gained their independence, and slavery was ended. However, independence brought new challenges, including the creation of stable governments and dealing with widespread poverty.

Today many Caribbean islands still base their economies on agriculture. Sugar remains a major **cash crop**, and bananas, coffee, and spices are also important. In recent years, **tourism** has also become a key industry on many islands, and tourists flock to the Caribbean to enjoy the region's warm weather, beautiful beaches, and clear blue waters.

Extreme Weather Is a Part of Island Life Despite its pleasant climate, the Caribbean does get hit by extreme weather. Severe thunderstorms sometimes strike the islands, and heat waves and dry spells also occur.

The most extreme form of weather in the region is the **tropical cyclone**. In the Caribbean, tropical cyclones are called hurricanes. This is a powerful storm that generates winds of 74 miles per hour or more. From above, the storm looks like a giant pinwheel as it forms over warm water, and it produces heavy rain and high waves as it grows.

Our knowledge of tropical cyclones comes from **meteorology**, which is the scientific study of climate and weather. Meteorologists are scientists who study Earth's **atmosphere** and climate in an effort to understand weather patterns and the forces that cause them. The size and power of tropical cyclones make studying these storms especially challenging for meteorologists, who have nevertheless made progress in understanding these severe storms. Through their work, meteorologists are acquiring knowledge that can help to limit the damage and loss of life inflicted by these extreme weather events.

►Geotermis

[El Niño a warm ocean current that flows off the west coast of South America every few years. An El Niño event changes weather patterns around the world. It may also cause extreme weather in some regions.](#)

[extreme weather severe or unusual weather conditions, such as hurricanes, tornadoes, and blizzards](#)

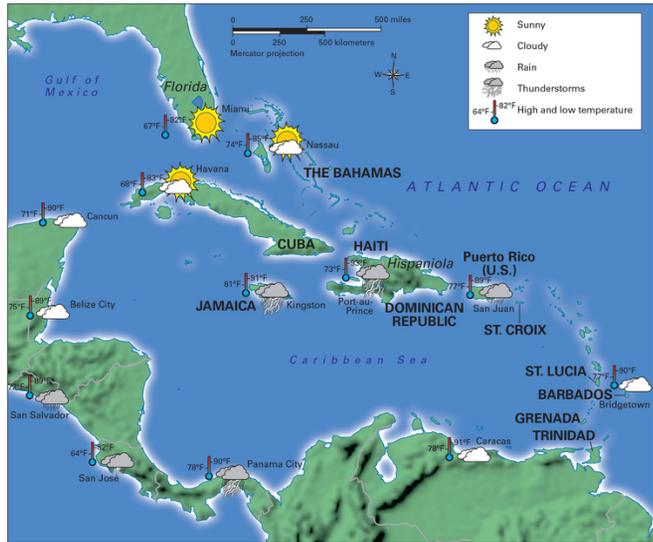
[meteorology the scientific study of climate and weather patterns](#)

[natural disaster great destruction or loss of life caused by natural forces rather than by human actions](#)

[tropical cyclone a severe storm with high winds that spiral around a calm center. Depending on where they form, tropical cyclones are called hurricanes, typhoons.](#)

or cyclones.

Sample Weather Map



One Day's Weather This map shows weather conditions in the Caribbean and surrounding areas on a specific day. Weather maps are important tools in meteorology. Scientists use them to analyze weather patterns. With this information, they can predict the weather for the next few hours or days.

2. Understanding the Weather Machine

Weather doesn't just happen by itself. Instead, it is the product of natural forces working together like a machine. This "weather machine" takes energy from the sun, Earth, and the atmosphere and transforms it into rain, wind, and other types of weather.

Weather affects us every day, in large and small ways—and extreme weather,

such as hurricanes, can have extreme effects. Storms with powerful winds can pick things up and drop them miles away. In 1997, toads rained down on the town of Villa Angel Flores in Mexico. A whirlwind had picked up the amphibians from a nearby body of water and then dropped them over the town.

The Sun Starts It All Weather is caused by interactions among heat, air, and water, with the sun acting as the "engine" that drives the weather machine. Recall that the sun warms Earth's surface unevenly. Its rays fall most directly between the Tropic of Cancer and the Tropic of Capricorn, whereas higher latitudes receive less direct sunlight. That is why temperatures are generally warmer near the equator and cooler near the poles.

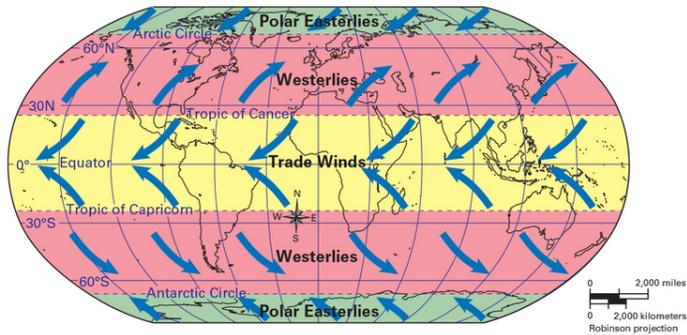
The sun's heat is distributed around Earth through a process known as **convection**, or heat transfer. This transfer of heat occurs in both gases and liquids, such as air and water. Warm air and warm water are less dense than cool air and cool water, and as a consequence, warm air has a tendency to rise in the atmosphere while warm water rises in the oceans.

When warm air or water rises out of an area, cool air or water flows in to take its place. The steady movement of air or water due to convection is called a **current**.

Air and Water Move in Predictable Patterns The movement of air and water around the globe occurs in regular patterns. In general, warm air and water currents flow from the equator toward the poles. At the same time, cool air and water currents flow from the poles toward the equator.

This predictable weather pattern creates **prevailing winds**, which are winds that predominantly blow in one direction for most of the year. If Earth didn't rotate, the prevailing winds would move in straight lines between the equator and the poles. Instead, Earth's rotation causes the wind currents to move in a curving pattern that is known as the **Coriolis effect**. You can examine the curvature of the paths of the prevailing winds on the map in this section. You can also see the names given to prevailing winds, depending on their locations.

Prevailing Winds Around the World



- Prevailing winds
- Lower latitudes
- Middle latitudes
- Higher latitudes

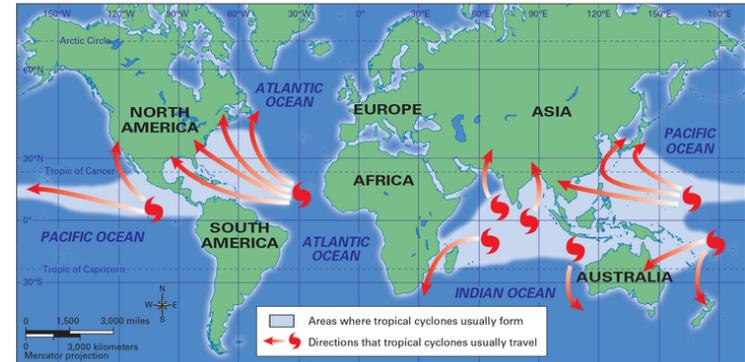
Winds and Trade

This map shows the main prevailing winds around the globe. Notice the winds blowing toward the equator from higher latitudes to the north and south. They are known as *trade winds*, which were named for their ability to move sail-powered ships carrying trade goods across the seas.

Small Changes Can Cause Extreme Weather Wind and ocean currents have an important influence on weather because they distribute heat and cold throughout the world. Even relatively minor changes in prevailing winds or ocean currents can result in significant changes in the weather.

A good example of this effect is the impact of an **El Niño**, which is a warm ocean current that sometimes flows along the west coast of South America. This warm current does not appear every year, but when it does develop, it usually shows up during the Christmas season. That is why the current is called El Niño, which is a nickname for “the Christ child” in Spanish.

Cyclones Around the World



Tropical Cyclones

The word *cyclone* comes from a Greek word that means “moving in a circle.” Tropical cyclones form over three oceans at different times of the year. In the Atlantic Ocean and the eastern Pacific, the season runs from June through November. In the western Pacific, the season lasts from April to December. In the Indian Ocean, the season is from December to April.

In an El Niño year, the weather on the Pacific coast of North and South America gets warmer, resulting in increased rainfall and frequent flooding. At the same time, weather on the other side of the Pacific becomes drier. During these dry spells, severe forest fires sometimes occur in Southeast Asia and Australia. The effects of an El Niño’s appearance can be felt as far away as India and Africa.

Tropical Cyclones: The Most Violent Weather Events Throughout the tropics, the weather machine can be extremely powerful because in these regions there is more energy from the sun to warm the air and water. This solar energy produces tropical cyclones, which are the most violent storms on Earth.

Tropical cyclones occur only in areas where the ocean temperature reaches at least 80°F. A large amount of warm, moist air is needed to start these storms, which is why tropical cyclones usually occur during the warmer months of the year.

Tropical cyclones form in three oceans. In the Atlantic Ocean and the eastern Pacific, they are called *hurricanes*. In the western Pacific, they are usually called

typhoons. In the Indian Ocean, these storms are called *cyclones*.

3. Extreme Weather: A Hurricane Is Born

Have you ever witnessed a thunderstorm approaching? The wind picks up and the temperature drops. As clouds roll in and the sky grows dark, a bolt of lightning pierces the sky, followed by a crack of thunder. Suddenly it's pouring rain. In some regions of the world, such a storm might be the first stage of a hurricane.

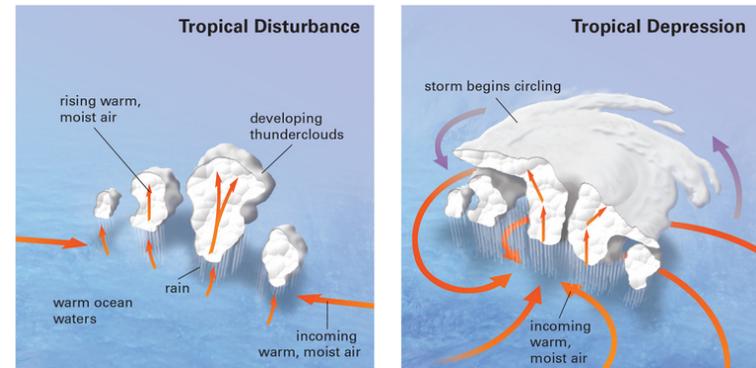
Tropical Thunderstorms Begin the Process Hurricanes in the Atlantic Ocean usually start out off the coast of Africa, where water temperatures rise to 80°F or more in the summer. The ocean releases warm, moist air into the atmosphere, and as the warm air rises, the moisture **condenses** to form clouds and rain. The result is a tropical thunderstorm.

Sometimes several thunderstorms come together to create a **tropical disturbance**. This is a cluster of thunderstorms that move together with the prevailing winds.

From a Tropical Disturbance to a Hurricane As a tropical disturbance grows, more warm, moist air rises from the ocean. In the Northern Hemisphere, this rising air begins to circle in a counterclockwise direction as a consequence of the Coriolis effect, which you read about earlier. When wind starts circling inside a tropical disturbance, the storm becomes a **tropical depression**.

When the weather conditions are right, a tropical depression will suck up even more warm air and moisture. When the wind speeds inside the storm reach 39 miles per hour, a tropical depression becomes known as a **tropical storm**.

Most tropical storms die out in time, but a few storms will continue to grow in size and wind speed. When the wind speeds reach 74 miles per hour, the storm becomes a tropical cyclone. A hurricane is born!



Birth of a Hurricane

A hurricane develops in four main stages. First, various storms come together to form a tropical disturbance. Second, the disturbance grows into a tropical depression. Third, the depression becomes a tropical storm. Finally, the storm becomes a tropical cyclone, or hurricane. In each stage, wind speeds increase as the storm sucks in more air and moisture.

4. Inside a Monster Storm

A hurricane is a massive, whirling storm, and it packs an extremely powerful punch. In just a single day, a hurricane releases more energy than 500,000 atomic bombs. If you could transform that amount of energy into electricity, it would be sufficient to satisfy the electrical needs of the United States for six months.

The Parts of a Hurricane A hurricane is made up of three key parts. The first part is the **eye**, which is a calm spot at the center of the storm. The winds of the hurricane swirl around the calm eye, which might be 20 to 40 miles across.

The second part of a hurricane is known as the **eye wall**, which is made up of thunderstorms that surround the eye. The eye wall, which can be anywhere from 5 to 30 miles thick, looks like a huge curtain of clouds when it is viewed from the center of the storm.

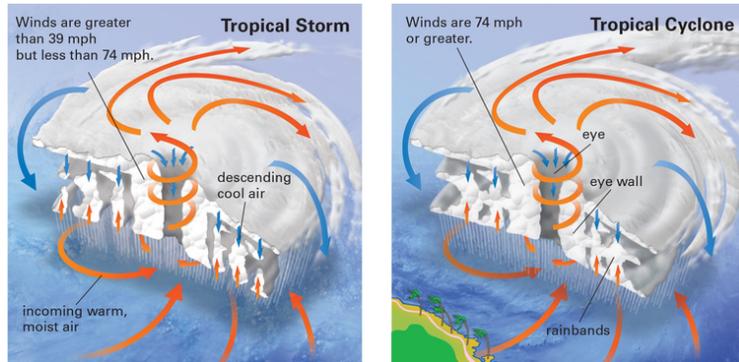
The third key part of a hurricane consists of **rainbands**, which are bands of dense

DEALING WITH EXTREME...

clouds that swirl around the eye wall. Spiraling toward the center of the hurricane, the rainbands drop large amounts of rain as the storm travels across the ocean.

The Path of Hurricanes As you read, Atlantic hurricanes are born off the coast of Africa. When a monster storm develops, trade winds blow it from east to west across the Atlantic. The hurricane spins rapidly as it moves, like a giant top.

The exact track, or path, of a hurricane is unpredictable. A hurricane may change course with a shift in wind direction, and it may also speed up, slow down, or even stop for a while and build up strength. As long as a hurricane stays over warm water, it can continue to generate both greater size and power. Severe storms can swell to 1,000 miles across in size while registering wind speeds of up to 200 miles per hour.



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Getting Ready for a Hurricane

These people are preparing for a hurricane. People in this region know how to prepare for big storms. Hurricane survival kits typically include these things:

- Water: 1 gallon a day per person for 3 to 7 days
- Food: enough to feed people and pets for 3 to 7 days
- First aid kit and medicines
- Blankets and clothes
- Flashlight and batteries
- Battery-powered radio
- Tools for repairing storm damage

5. Tracking and Preparing for a Hurricane

“Hold on,” the pilot says to his crew. “We’re going in!” The plane shakes violently as it enters the storm’s eye wall, which the pilot compares to going through a car wash while gorillas jump on the roof of the car. But suddenly the shaking stops because the plane has reached the calm eye of the hurricane.

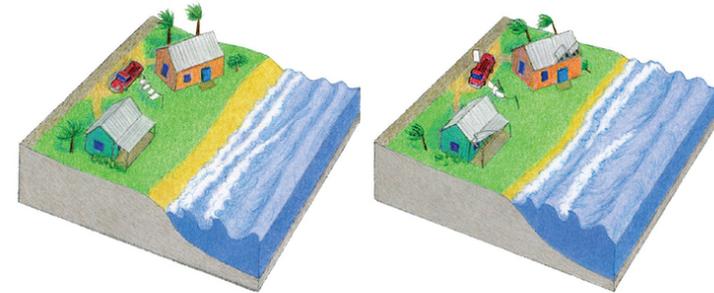
This plane and its crew are part of a special Air Force unit called the Hurricane Hunters. The Hurricane Hunters fly into tropical storms to record weather data, such as wind speed, wind direction, pressure, and temperature. The work is dangerous, but the crews believe that what they learn is worth the risks. “The bottom line for all of us,” says a pilot, “is that we do save lives.”

Meteorologists Track and Name Hurricanes The Hurricane Hunters work with meteorologists to track the paths of tropical storms. The meteorologists use satellite images and data collected by the flight crews to decide when a storm has become a hurricane. At that point, they give the hurricane a name.

Meteorologists have alphabetical lists of male and female names to use in naming hurricanes. The name of the year’s first hurricane always begins with the letter A. When an especially destructive hurricane hits land, its name is retired and never used again. Since 1954, at least 70 hurricane names have been retired.

Preparing for a Hurricane Once meteorologists have determined the track of a storm, they warn people in its path. When a storm might hit land within 24 to 36 hours, they issue a *hurricane watch*. When the storm is less than 24 hours away, they issue a *hurricane warning*. These predictions are not always perfect, but they do give people a chance to prepare for the storm.

Meteorologists use the **Saffir-Simpson scale** to rate the strength of a hurricane. This scale rates hurricanes from 1 to 5. The higher the number, the more damage the storm can potentially cause. This information helps people decide whether to board up their windows and stay home or to seek a safer shelter away from the coast. Storms often change ratings as they travel. In 2003, Hurricane Isabel stayed at level 5 for over 30 hours, making it one of the longest-lasting Category 5 storms that was ever recorded.



Category 1 hurricane

Category 2 hurricane

The Saffir-Simpson Scale

Scientists rate hurricanes using the Saffir-Simpson scale. Category 5 storms are the most dangerous, but less powerful storms can also be deadly.



Storm Surge

A storm surge is a hurricane’s most deadly feature. When this wall of water hits land, it causes massive floods.

6. Landfall: A Natural Disaster Begins

When a hurricane hits land, its power is truly awesome. “The wind is at a ferocious roar and coming in powerful bursts,” wrote a reporter who witnessed Hurricane Ivan’s landfall in Jamaica in 2004. “Even stepping outside for a minute

would mean serious injury or worse. Hurricane Ivan has arrived in all its fury and it's terrible indeed."

The Power of Wind and Rain When a hurricane strikes, it lashes everything in its path with wind and rain. The most powerful hurricanes carry winds with speeds as great as 200 miles per hour. Such fierce winds can uproot trees or snap them in half. The winds are also powerful enough to shatter windows, blow off roofs, flip over cars, and hurl boats through the air.

Heavy hurricane rains often cause terrible flooding. They can also loosen rocks and soil on hillsides, sometimes resulting in deadly mudslides that crush everything in their path. In 1998, a Category 5 hurricane called Mitch dropped more than 75 inches of rain on Honduras, a small Central American country bordering the Caribbean Sea. The rain caused devastating floods and mudslides that killed about 11,000 people.

Storm Surge: The Most Dangerous Force of All The most destructive feature of a hurricane is the **storm surge**, which is a wall of water that is pushed ashore by a storm. A storm surge can rise as much as 33 feet above sea level, which is as high as a three-story building. When this wall of water hits land, it is capable of destroying everything in its path. Storm surges cause about 9 out of every 10 deaths that result from hurricanes.

The more powerful the hurricane, the higher the storm surge is likely to be. In 1999, a Category 4 storm named Lenny hit several Caribbean islands. In St. Croix, Lenny's 15-foot storm surge knocked over power poles, threw boats up on shore, and destroyed a ballpark. On the island of St. Lucia, dozens of people were left homeless when their homes were washed away. A Category 5 storm named Katrina tore through the Caribbean region in 2005. Katrina's storm surge flattened levees that protected the U.S. city of New Orleans from flooding. When the storm ended, much of New Orleans was under water. The storm damage was so widespread and serious that Katrina became the costliest Atlantic hurricane of all time.



7. Cleaning Up After a Natural Disaster

A hurricane can have a very powerful impact, but the problems do not end when the storm moves on. Although the hurricane itself may be over, the effects of the natural disaster continue.



Rescuing Survivors of Jeanne

These people are waiting for assistance in Haiti after Hurricane Jeanne in 2004. About 3,000 people died as a result of flooding and mudslides. Many Haitians have never fully recover from this disaster.

Hurricanes Lose Strength over Land Fortunately, hurricanes do not last forever. Hurricane John, which was the world's longest-running storm, lasted nearly a month and crossed approximately 5,000 miles of ocean. However, most hurricanes die out sooner than that, mainly as a result of encountering land.

Hurricanes die when they lose their primary source of energy. Remember that these storms need warm ocean water to keep them going. When the storms hit land or cross over cool water, they begin to weaken. In the Caribbean region, hurricanes can cross an island and then pick up force on the other side. However, they lose steam when they encounter a large **landmass** such as the United States or Mexico, usually dying out within a few days.

Rebuilding After a Natural Disaster After a hurricane has passed, the people living in its path face the task of rebuilding, which is often an enormous challenge. A hurricane may destroy many of the homes on a hard-hit island. It may damage schools, hospitals, roads, bridges, and power lines. Many people may be left homeless, and hunger and disease may become serious problems.

The first task after a storm passes is to rescue the people who were caught in the wreckage. Relief agencies are set up to find and treat the injured, and relief workers supply food, water, shelter, and clothing to people in need.

The next task is cleaning up after the storm. The floodwaters have to be drained from the low-lying areas. The water and **sewage** lines have to be repaired in order to provide clean water and **sanitation**. The roads need to be cleared, electrical power has to be restored, and damaged buildings must be knocked down. All of this work requires time and money, and it can take months or even years for a Caribbean island to fully recover from a severe hurricane.

Summary

In this lesson, you learned about extreme weather in the Caribbean region. You learned how tropical cyclones get started and how they develop into deadly storms. You read about the methods meteorologists use to analyze and track tropical cyclones. You also learned how natural disasters caused by these storms affect people and communities throughout the Caribbean.

Few Places Escape Extreme Weather Tropical cyclones are tremendously destructive, but they are not the only example of extreme weather. Tornadoes, blizzards, and heavy rains can all do great harm as well.

Most parts of the world experience some form of extreme weather. In the United States, primarily in the midwestern and southern states, tornadoes rip through towns and destroy property every spring. During the winter months, blizzards can block roads, knock out power lines, and interrupt air travel.

The story is much the same on other continents. For instance, heavy rains, called **monsoons**, often cause flooding in South Asia. Sandstorms in parts of Africa can destroy crops, fill wells with sand, and force people from their homes.

El Niño's Impact on Weather El Niño plays a key role in extreme weather. As you have learned, El Niño is a warm ocean current that flows from time to time along the Pacific coast of South America. When an El Niño occurs, it can trigger extreme weather in the Pacific region and in other parts of the world.

A major El Niño appeared off the coast of South America in 1997 and 1998. This warming of the ocean caused heavy rains and flooding in South America and

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produced tornadoes in Florida. At the same time, it caused dry spells that led to wildfires in Southeast Asia, Australia, and Central America.

Scientists are still trying to understand the role El Niño plays in extreme weather, but the effects are clear. You will look at El Niño’s impact around the world in the next section.

Five Destructive Hurricanes in the Caribbean, 1998–2018

Hurricane	Year	Major Areas Affected	Estimated Deaths	Estimated Damage
Sandy	2012	Jamaica, eastern Cuba, Bahamas, New Jersey, New York, Connecticut	159	\$65 billion
Ike	2008	Turks and Caicos, Bahamas, Haiti, Dominican Republic, Cuba, Florida Keys, Mississippi, Louisiana, Texas, Mississippi Valley, Ohio Valley, Great Lakes region	195	\$28 billion
Katrina	2005	Bahamas, South Florida, Cuba, Mississippi, Alabama, Louisiana (especially Greater New Orleans), Florida	1,836	\$81 billion
Jeanne	2004	U.S. Virgin Islands, Puerto Rico, Dominican Republic, Haiti, Bahamas, Florida	3,005	\$7 billion
Ivan	2004	Grenada, Jamaica, Grand Cayman, Cuba, Alabama, Florida, Texas, Louisiana	92	\$18 billion

Counting the Costs

This table shows effects of five recent hurricanes in the Caribbean. These estimates are rough. It is difficult to gather accurate information about the loss of lives and property caused by extreme weather events.

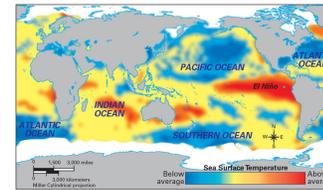
Global Connections

The small map shows the warmer-than-usual ocean currents that develop during an El Niño year. Notice that the warmest ocean area is located off the west coast of South America. The large map shows how different areas of the world are affected during a major El Niño year. The table includes data on some extreme weather events that occurred in the United States between 2006 and 2016.

What parts of the world are most affected by an El Niño? As you might expect, the lands that are bordering the Pacific Ocean show the greatest effects from an El Niño. The west coasts of North and South America experience weather that is wetter than usual, while the areas on the other side of the Pacific suffer from extremely dry weather.

DEALING WITH EXTREME...

Sea Surface Temperatures in an El Niño Year



What relationship do you see between an El Niño and extreme weather?

An El Niño can affect weather in ways that you might not expect. Many of these years were considered to be El Niño years. As shown in the table of extreme weather events, there were fewer hurricanes in the Atlantic region during those years. Meanwhile, there were also fewer extreme temperature events in the United States than in an average year.

How can understanding an El Niño’s effects help meteorologists to predict extreme weather?

Just how an El Niño shapes climate is not yet fully understood. But the more meteorologists learn about the factors that shape our climate, the better they will become at accurately predicting extreme weather. This improvement in weather prediction, in turn, could help people to better prepare for natural disasters that are caused by weather.

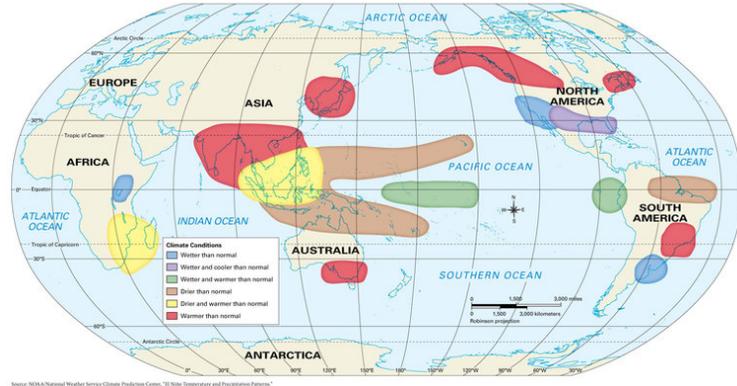
Extreme Weather Events in the United States, 2006–2016

El Niño Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Atlantic Hurricanes	5	6	8	3	12	7	10	2	6	4	7
Violent Tornadoes	32	32	59	23	45	85	28	28	27	36	18
Extreme Hail Events	80	89	65	50	50	50	110	65	80	75	135
Extreme Temperature Events	560	590	490	510	570	520	620	580	670	710	730

Sources: National Oceanic and Atmospheric Administration, Insurance Information Institute.

DEALING WITH EXTREME...

El Niño's Effects Around the World



The Impact of Natural Disasters in the United States

Extreme weather also occurs in the United States. Like in the Caribbean, some places in the United States experience hurricanes. Read this case study of a natural disaster in the United States and find out how it impacts the people who live there. Then, think about natural disasters where you live. How do natural disaster events impact people in your area?

Hurricane Katrina

The city of New Orleans sits on very low ground near two large lakes. Years ago, levees, or walls, were built to keep the lakes' water from flooding the city. However, in 2005, a Hurricane Katrina struck a large area in southeast United

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States, including New Orleans. The storm's volatile winds and heavy rains broke many of New Orleans' levees. Water poured into the streets, destroying homes, flooding streets, and taking lives.

This natural disaster changed the population in New Orleans. At the time, about 500,000 people lived there. However, because so many homes were flooded or destroyed, they had to find new places to stay.

Many people went to the Superdome, New Orleans's football stadium. Beds, food, and water were set up for those who needed them. But there wasn't enough room for everyone.

Houston, Texas, opened its arms to those who needed shelter. Many people stayed at a football stadium there, the Astrodome. Some went to other cities in Louisiana, while others moved to states like Georgia and Mississippi.

After the damage from the hurricane was cleared, some returned to New Orleans. But many stayed in the cities they moved to. A year after the storm, only about 200,000 people lived in New Orleans.

After Hurricane Katrina, there were fewer businesses and people in New Orleans. Still, many stayed to rebuild their city. People in each community worked together to rebuild their part of the city. They faced challenges. Rebuilding the city was hard and costly. But after some work, businesses started reopening, and neighborhoods slowly recovered.

Katrina affected New Orleans greatly, but after many years, it is on its way to recovery. People gather in New Orleans for celebrations like Mardi Gras and to cheer for sport teams. Tourists visit to experience New Orleans's music, food, and culture. There is still much to celebrate about the city.

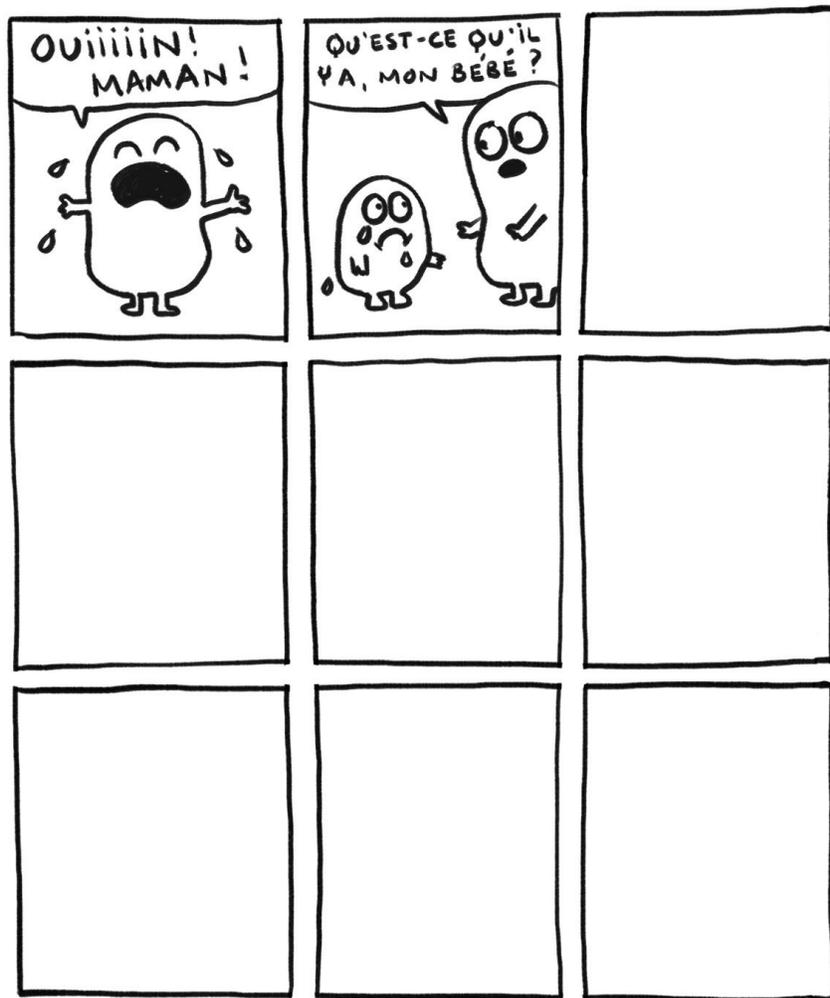
DEALING WITH EXTREME...



World Languages - At Home Activities

- Teach 8 words from the language you are studying to someone you live with. They must be connected to each other...like 8 adjectives, or foods, or people words.
- Research a legend from a country where the language you are studying is spoken. Draw a picture or build a sculpture of the legendary creature. In the language you are studying, retell a summary of the legend and share your thoughts about it.
- Choose a country that speaks the language you are studying, and prepare a mini-poster of info about the country. Include at least 10 interesting factoids. Make your mini-poster attractive and eye-catching.
- Complete the cartoon below. (If French is not the language that you are studying, change the 2 speech bubbles to say: "Waaah! Mom!" "What's wrong, my baby?" in your language.)

☆ CONTINUE CETTE BÉDÉ ☆



At Home Activities and Resources for Families (English Language Development)

Greetings dear parent/guardian. Thank you for supporting your child's learning at home. The resources provided in this packet will provide your child with additional opportunities to practice English language development skills through different vocabulary, grammar, and reading skills.

Each packet has stories to read in English with questions and vocabulary activities. You do not need to print any activities as responses can be written on a separate sheet of paper.

Thank you again for your enthusiasm and willingness to do activities with your child at home.

Actividades en el hogar y recursos para familias (Desarrollo del idioma inglés)

Saludos querido padre/tutor. Gracias por apoyar el aprendizaje de su hijo en casa. Los recursos en este paquete le brindarán a su hijo oportunidades para practicar su desarrollo del inglés a través de diferentes actividades de vocabulario, gramática y lectura.

Cada paquete tiene historias para leer en inglés con preguntas y actividades de vocabulario. No necesita imprimir ninguna actividad, ya que las respuestas pueden escribirse en una hoja de papel por separado.

Gracias nuevamente por su entusiasmo en completar las actividades con su hijo en casa.

The World of Waste

**by Marybeth
Lorbiecki**

Science Vocabulary

Key Words

plastic
pollution
recycle
reduce
renewable
reuse

Key Words

Look at these photos. Use **Key Words** and other words to talk about **plastic** bottles and **pollution**.

Plastic is made of oil. Oil is not a **renewable** resource.



Why shouldn't bottles be made of **plastic**?



How does this cause **pollution**?



How can you **reduce** trash?



How can you **reuse** or **recycle** bottles?

Talk Together

Why is garbage an important topic? Use **Language Frames** from page 458 and **Key Words** to persuade a partner about your ideas.

Part 1

Thinking Map



Author's Viewpoint

Your viewpoint is your opinion. You usually give examples, or evidence, to support your viewpoint. Authors have viewpoints, too. Identifying the **author's viewpoint** helps you think about what you see, hear, and read.

Look at these pictures of Yannick in his town.



Map and Talk

You can use a chart to show an **author's viewpoint** and the evidence that supports it. Here's how to make one.

Author's Viewpoint Chart

Viewpoint	Evidence	Action Needed
There is too much garbage in town. We have to recycle.	Millbrook is much cleaner because they reduce, reuse, and recycle.	We need to start reducing, reusing, and recycling garbage.

Write the **author's viewpoint** here.

Write the evidence that supports the viewpoint here.

Write the action that is needed here.

Talk Together

With a partner, discuss whether students should stay in from recess if their class does not recycle. Use an author's viewpoint chart to show your ideas.

More Key Words

Use these words to talk about “The World of Waste” and “Message in a Bottle.”

argument
(ar-gyū-tū-mūnt) *noun*



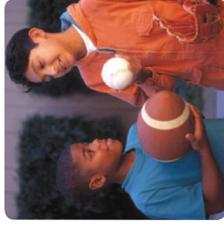
An **argument** is a reason for a viewpoint. There are **arguments** for keeping our streets safe and clean.

balance
(ba-lūnts) *noun*



You create **balance** by giving the right amount of importance to different things.

debate
(dī-bāt) *verb*



When you **debate** an idea, you talk about it with someone who has a different opinion.

evidence
(e-vū-dūnts) *noun*



You use **evidence** to prove an idea. The ball was **evidence** of how the window was broken.

solution
(sū-lū-shūn) *noun*



A **solution** is something that solves a problem. Reading is a good **solution** for boredom.

Talk Together

Make a Word Map for each **Key Word**. Then compare your maps with a partner’s.

Definition: end to a problem	Characteristics: gives an answer	solution	Non-example: worrying about a test
Example: studying with a friend			

Add words to My Vocabulary Notebook.
NGTeach.com

Read a Persuasive Article

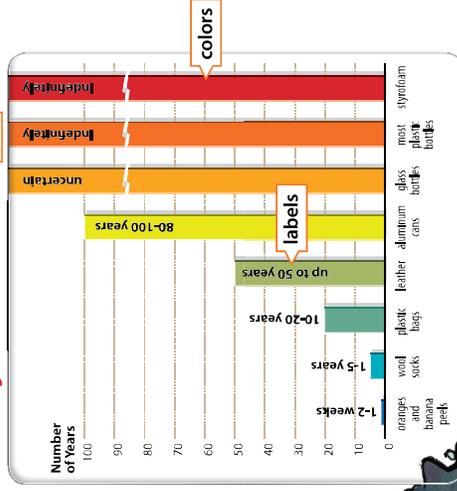
Genre

In a **persuasive article**, a writer states an opinion, or viewpoint, about an issue and gives evidence to support it. The writer’s evidence may come in the form of graphs and other visuals. He or she may also use comparisons.

Text Feature

Bar graphs help you visualize information and make comparisons. The length of the bars shows different numbers or amounts. Look at the title, labels, and bars to help you understand the graph.

How Long Does Litter Last?



► **Set a Purpose**
Find out about the complex world of garbage and recycling.

Garbage, Garbage Everywhere

Doesn't it seem like almost everything we do makes garbage? Food scraps, cans, bottles, packages, and wrappings are left after we eat. Paper piles up after we get the mail or do homework. There are broken games and toys, clothes we've outgrown, and books we no longer read.

People living in the United States throw away about 770 kilograms (1,700 pounds) of solid **waste** per person, every year. How much do you weigh? Can you figure out how many times your own weight you create in garbage each year?



In Other Words
waste trash; garbage

466

The World of Waste

by Marybeth Lorbiecki
illustrated by Chris MacNeil



Comprehension Coach

From sea to shining sea, and even under the sea, garbage is piling up. Trash is dumped into **landfills**, down drains, and into the ocean. If we want to keep our planet from turning into one big garbage **heap**, we need to start rethinking what we buy and what we throw away.

Can you believe that there's even trash in space? Parts of spacecrafts, chips of paint, and even tools have been left behind on the moon. Scientists think there are over 19,000 pieces of garbage larger than the size of a teacup **orbiting** Earth. But the real problem is the millions of pieces that are smaller than the size of a teacup. Because they are so small, these pieces cannot be tracked. If a spaceship hits just one of these small, floating pieces of trash, it can be seriously damaged. Trash is dangerous, even in space!



In Other Words

landfills huge garbage dumps
heap pile

orbiting circling

► **Before You Move On**

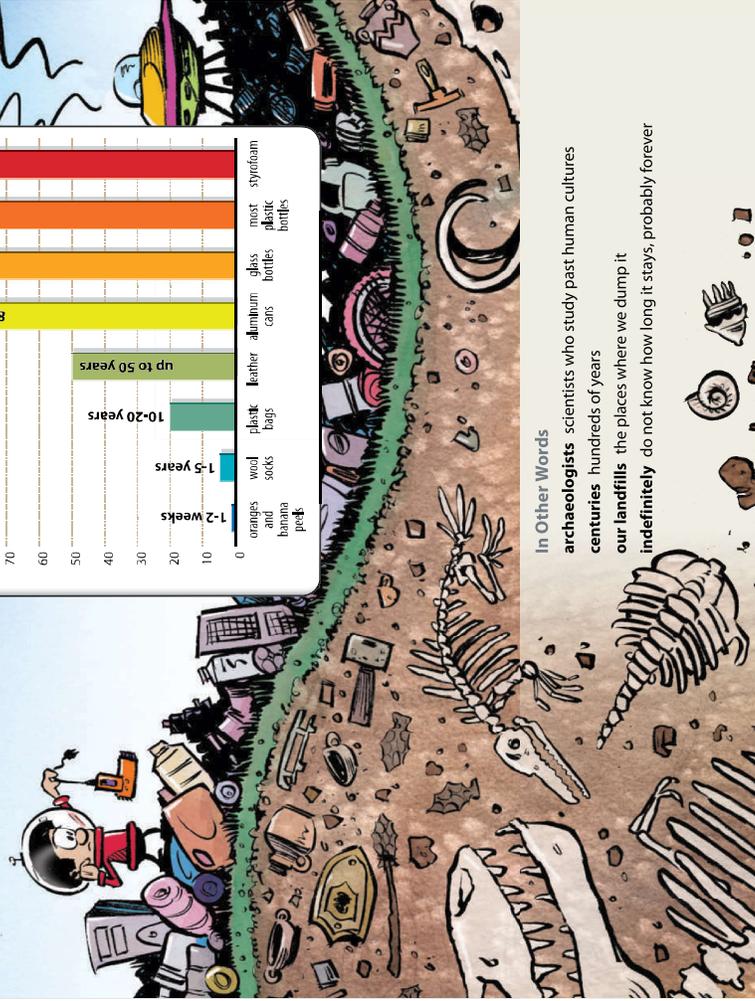
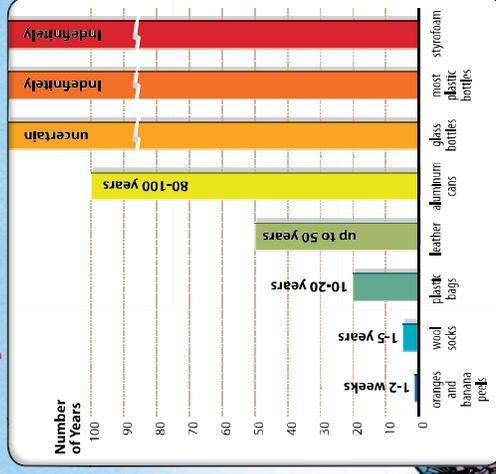
- 1. Generalize** What statement can you make about the amount of trash in the world?
- 2. Author's Viewpoint** What does the author want you to believe about trash? How do you know?

Garbage Archaeology

What will **archaeologists** dig up **centuries** from now to learn about us? Probably they'll dig up trash from **our landfills**. There, garbage gets smashed so tightly that even things that are biodegradable, or able to rot and break down, don't have enough oxygen or water to do so quickly.

How Long Does Litter Last?

This bar graph shows how long certain types of trash take to biodegrade, even if they do have plenty of oxygen and water.



In Other Words

archaeologists scientists who study past human cultures
centuries hundreds of years
our landfills the places where we dump it
indefinitely do not know how long it stays, probably forever



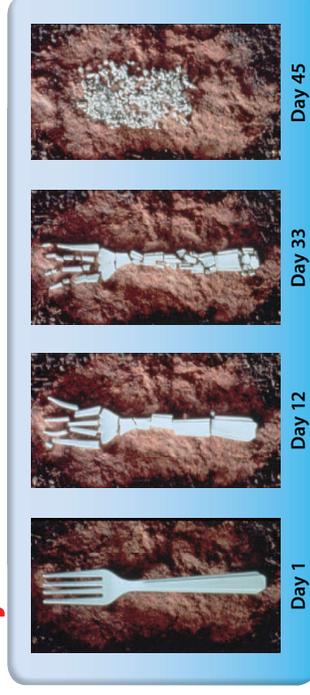
Why Plastic Lasts

When trash **biodegrades**, it is digested by decomposers, such as bacteria and fungi. Decomposers don't eat everything, however. Many types of **plastic**, for example, are completely **inedible**.

Instead of being digested by bacteria and fungi, most plastics break into smaller and smaller pieces over time. Sometimes it takes hundreds of years before the pieces disappear from sight. However, they may never completely go away.

The good news is that some plastics are being developed that won't last as long. Many new **environmentally friendly plastics** are even made of biodegradable materials.

Biodegradable Plastics: The Break Down



Day 1

Day 12

Day 33

Day 45

- ▲ Some plastics may require hundreds of years to break down, and they may never completely go away. In contrast, biodegradable plastics break down quickly, and can be digested by organisms in the soil.

In Other Words

biodegrades breaks down into small parts unable to be eaten
environmentally friendly plastics **plastics** that won't harm the environment

► Before You Move On

1. **Problem/Solution** What problem and **solution** are described on this page?
2. **Use Text Features** Which item would biodegrade slowest: a leather jacket, a bottle of water, or a banana?

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Trash Around the World

Americans win first prize! We produce more garbage than any other country in the world. Look at the graphic at the right. It shows about how much trash each person produces in one day, in different countries. Compared with people in the United States, people in other countries produce less trash. How is this possible? They buy fewer things, and **reuse** and **recycle** more of them.

Some countries even **encourage** people to recycle. In Switzerland, for example, people have to pay for every bag of garbage they want taken away, but recyclable garbage is taken away for free. Now that's a good reason to recycle!

Trash Per Person Per Day



470

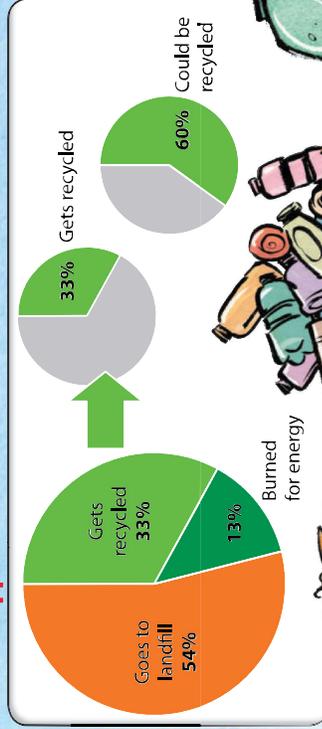
In Other Words

encourage try to persuade

Room for Improvement

People living in the United States are now recycling almost double what they did in 1990. Still, we could do better. Of all the trash we **generate**, about 60 percent of it could be recycled or **composted**. Only about 33 percent of it actually is! Another 13 percent is burned for energy, which leaves about 54 percent for the landfills.

What Happens to Our Trash?



In Other Words

generate make
composted returned to the soil as nutrients

► Before You Move On

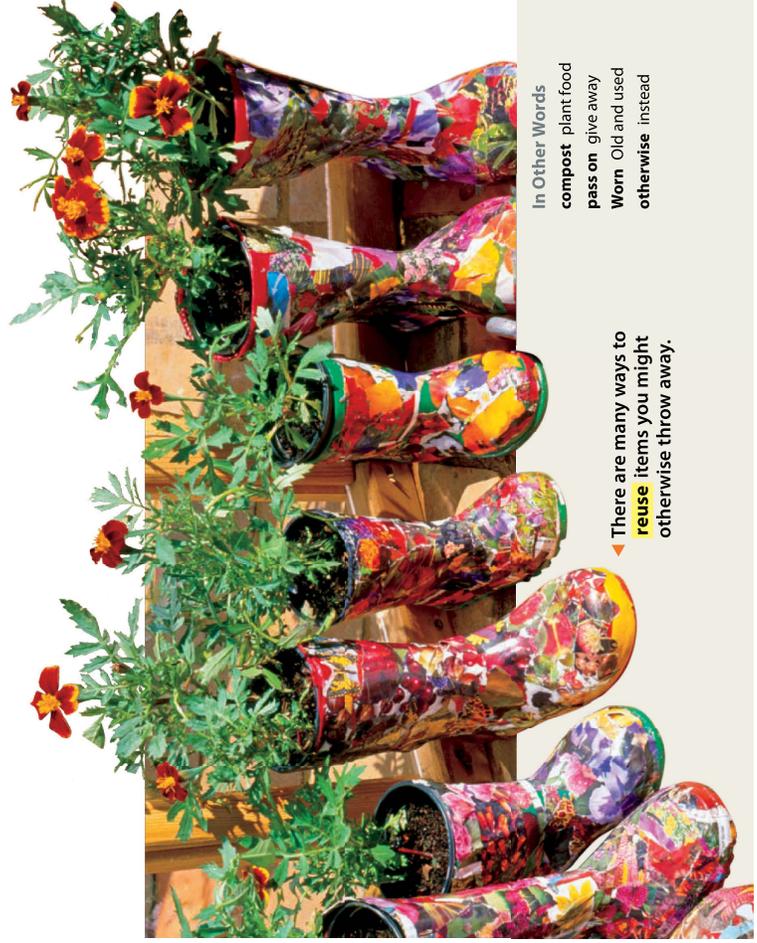
- Author's Viewpoint** What comparisons does the author make to support her view about the amount of garbage in the U.S.?
- Use Text Features** How do the circle graphs help you better understand the facts stated in the text?

Garbage, the Great Resource

Did you know that much of the garbage we throw away can be reused? Some leftover food and lawn waste can be turned into **compost** for the garden. You can clean and **pass on** old clothes, or turn them into scarves or rags. Empty bottles and jars can be cleaned and refilled. **Worn** tires can be made into garden containers. You can decorate a cake or a gift with old toy figures. Plastic containers can be used for planting or for sorting and storing things.



- ▲ This bag was made by reusing a cardboard box, some newspaper, and a little string.



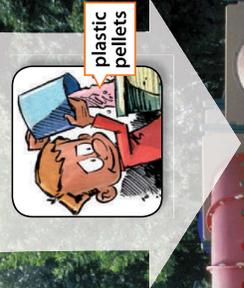
In Other Words

compost plant food
pass on give away
Worn Old and used
otherwise instead

- ▼ There are many ways to **reuse** items you might otherwise throw away.

If something can't be fixed or reused, it can probably be recycled and **transformed** into a new object. Factories melt glass bottles and jars into new glass containers, marbles, decorative tiles, and even **surfboards**! Metal objects are melted down and **molded** into car and bike parts, cookware, and yes, new cans. Plastic bottles are used in everything from park benches and playground equipment to ski jackets. Used paper and cardboard can be remixed into new paper and cardboard. As you can see, garbage is a great resource!

▶ Used plastic bottles were melted and shaped into plastic pellets, which were then melted and molded to create this play set.



In Other Words

transformed changed
surfboard boards people use to ride waves
molded reshaped

▶ **Before You Move On**

1. **Generalize** What generalization can you make about the reuse of trash?
2. **Make Connections** What are some other things that we **reuse** or **recycle**?

Kids Make a Difference

To earn money, kids around North America collect used bottles, cans, printer ink **cartridges**, and cell phones. They sell these items to recycling companies. This helps the environment and makes money for the kids' groups and schools. Everybody wins!

Some kids don't do it for the money. Jacob Komar started a **nonprofit**, Computers for Communities, when he was nine years old. It all began when his school decided to get rid of a **bunch of** old computers. Jacob had always been good at **programming**, so he decided to update all of the computers so they worked again. One by one, he fixed them and gave them away to local families who needed them.



computer circuit board

In Other Words

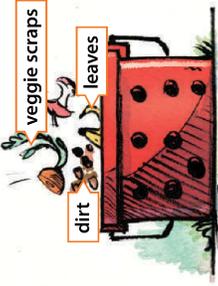
cartridges containers
nonprofit business to help people
a bunch of many
programming writing programs for computers

Composting: How to Make a Soil Factory

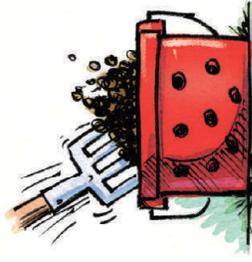
Landfills get filled quickly with leaves, grass clippings, and food scraps. Why not turn this waste into soil? All you need is space for a compost pile or **bin**. Try this experiment to see how composting works outdoors.



1. Find an old plastic container to use as your compost bin. Ask an adult to make holes in it for you.



2. Place the bin in a shady spot outdoors. Add "green" material, such as food scraps, "brown" material, such as dried leaves, and some soil.



3. Add water and stir. Add more yard waste and veggie scraps as you collect them. Keep everything moist. Wait a few months.



4. Your compost is ready when it is dark and soil-like. Spread it around your plants. It will help them grow larger and healthier.

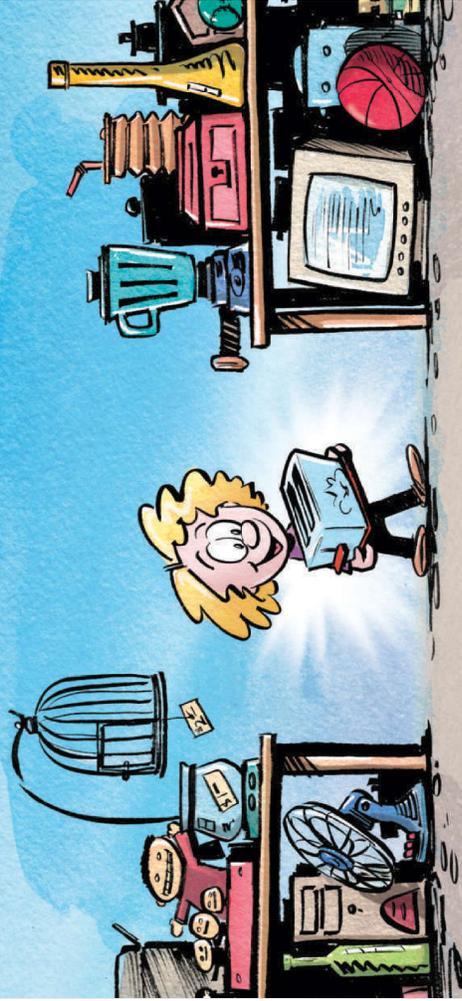
In Other Words

bin container

veggie scraps unused parts of vegetables and fruits

► Before You Move On

1. **Author's Viewpoint** What is the author's view about people who try to make money from recycling? Explain.
2. **Problem/Solution** What waste problem does composting solve?



Smart Shopping

The best way to cut down on garbage and **pollution** is to be careful what you buy. Here are some tips. First, buy only the things you need or really want. If you have a temporary need for something, try borrowing it from someone. You will save yourself money and save the planet from too much stuff. Just remember the borrower's **motto**: Always return something in better **shape** than you received it!

Second, save money and packaging by buying **next-to-new** items. **Garage sales** and thrift shops are good places to go to find such items. And when you're done with them, you can return them, or just pass them on to someone else!

In Other Words

motto saying

shape condition

next-to-new slightly used

Garage sales Sales outside people's homes



Third, consider the packaging. Every month, Americans throw away their weight in packaging! Choose products that come in refillable or reusable containers. Some stores sell milk or soda in bottles that can be returned for **cash**. Next best are products in recyclable containers, such as glass bottles, recyclable plastics, and cans.

Finally, look for the products that are made in a safe and Earth-friendly way, using recycled materials, nontoxic (not poisonous) and **animal-friendly ingredients**. If you can't recycle the packaging, at least make sure that its contents are Earth-friendly!

Juice Container Comparisons



▲ Each example represents the same amount of juice.

In Other Words

cash money
animal-friendly ingredients ingredients not tested on animals

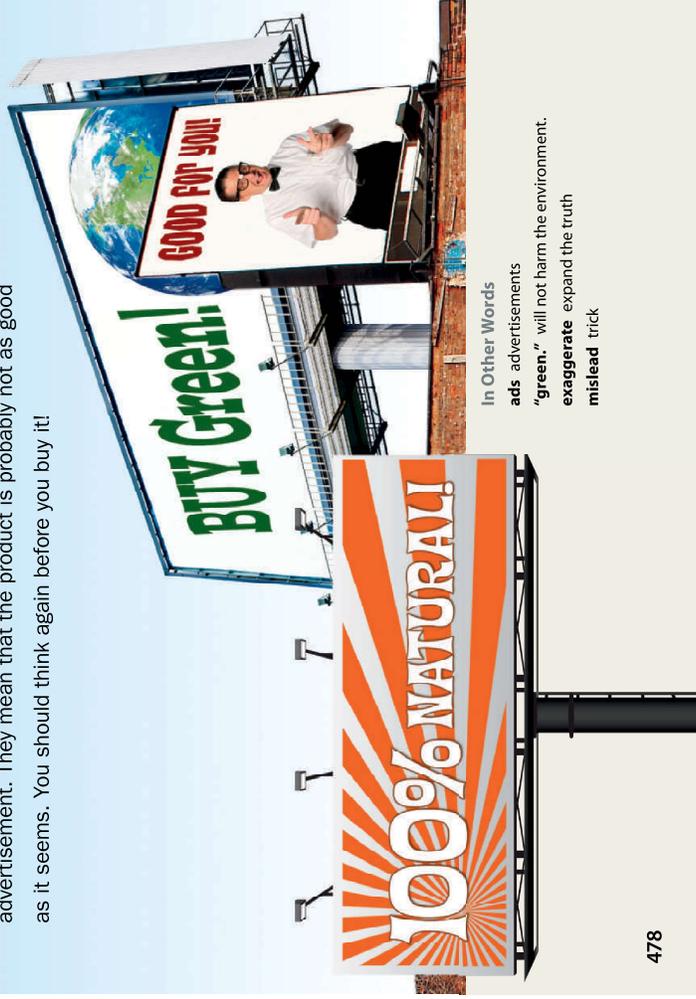
► Before You Move On

- Analyze** How does buying items that are made to last help **reduce** waste?
- Use Text Features** Compare the graphics on this page. Which containers use the most packaging?

Do You Need It or Do You Want It?

Commercials and **ads** are designed to make you think a product will make you better looking, more respected, happier, and healthier. But don't let yourself get tricked! Ask yourself: Do I need it? Or do I just want it?

Ads may also try to make you feel better about buying something by making you think it is Earth-friendly and "**green**." They may **exaggerate**, saying their product is better for the environment than it could possibly be. They may try to **mislead** you by suggesting something that isn't true. They may make contradictory statements, or give opposing information, about how the product affects the environment. Watch out for these tricks whenever you see an advertisement. They mean that the product is probably not as good as it seems. You should think again before you buy it!



In Other Words

ads advertisements
"green," will not harm the environment.
exaggerate expand the truth
mislead trick

The ads below are for similar cleaning products. The second ad has many problems, including exaggeration, misleading statements, and contradictory statements. Which of these two products would you buy?

Ad #1

Clean Green wipes

Buy Clean Green Wipes! Each 3-pack of **durable** wipes comes with a bottle of non-toxic cleaning **solution**. Best of all, Clean Green Wipes are reusable. Made of 50 percent recycled plastic, they will last for more than 80 machine washes.

Clean Green Wipes are perfect for the environmentally **conscious!**

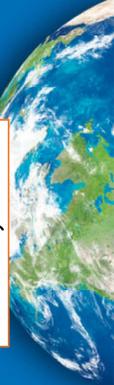


Ad #2

All-Natural wipes

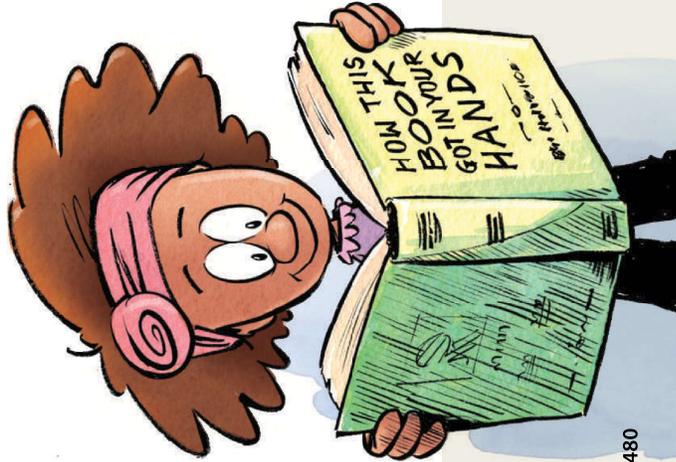
Buy All Natural Wipes! These handmade, cotton cloths will last forever. They contain a non-toxic cleaning gel that smells like sunshine. When you're done with a Clean Green Wipe, just toss it in the trash. Clean Green Wipes are made from plastic, so they're good for the environment!

contradictory statement



Trash Is Treasure

Creating trash requires a lot of energy. Look at the book you are reading right now. How did all that paper get into your hands? First, trees were cut down to make **paper pulp**. Machines were used to turn the pulp into paper. Trucks brought the paper to a **printer**, where the book was put together. Finally, trucks were used to bring the paper to you. All of these steps required energy and special materials.



1. Trees are cut down for pulp.



2. Machines turn the pulp into paper.



3. Trucks deliver the paper to a printer, where the paper is made into a book.



4. Trucks bring the book to a store, where you can buy it.

In Other Words

durable long-lasting
solution liquid
conscious aware

► Before You Move On

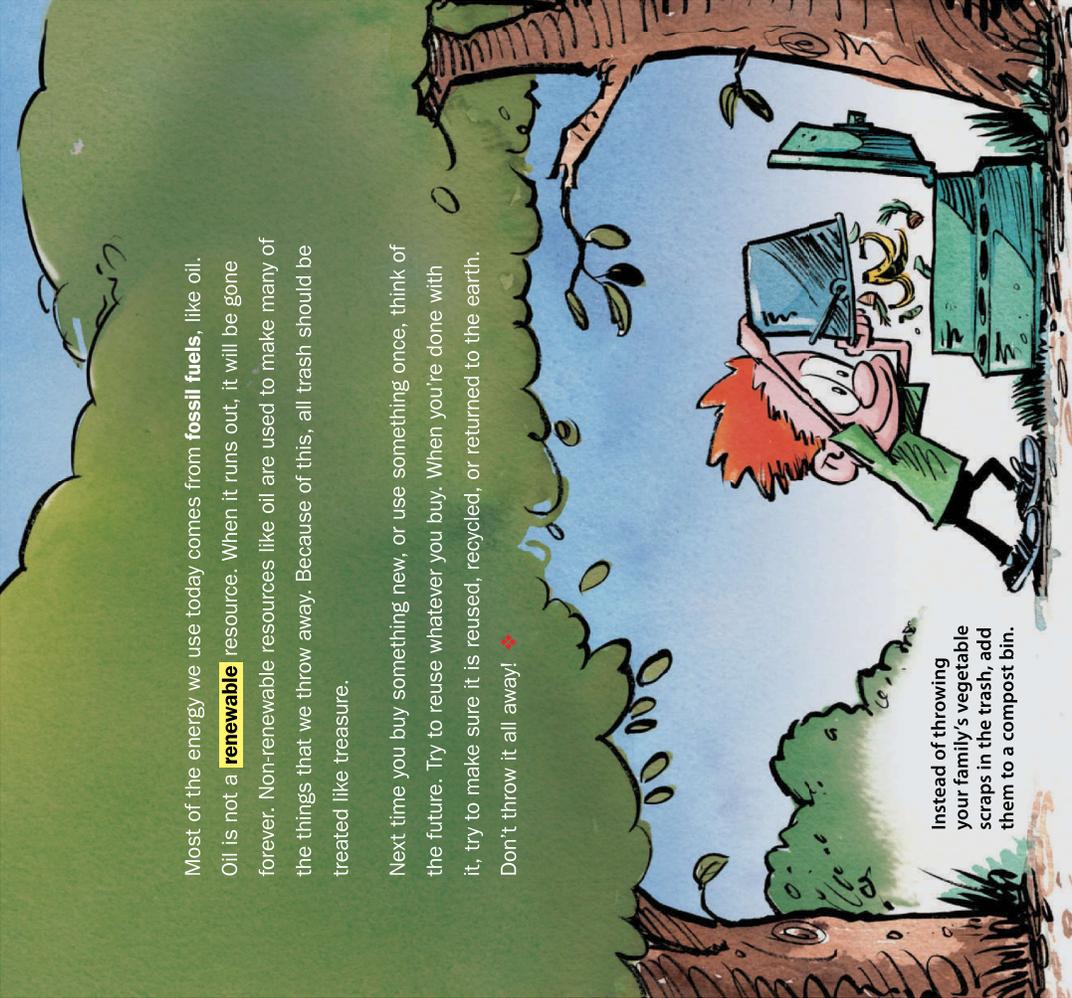
- Summarize** How do ads try to make you want to buy their products?
- Make Judgments** Can you find another misleading statement in Ad #2? And another contradictory statement?

In Other Words

paper pulp a thick mixture of water and small wood particles
printer business that prints books

Most of the energy we use today comes from **fossil fuels**, like oil. Oil is not a **renewable** resource. When it runs out, it will be gone forever. Non-renewable resources like oil are used to make many of the things that we throw away. Because of this, all trash should be treated like treasure.

Next time you buy something new, or use something once, think of the future. Try to reuse whatever you buy. When you're done with it, try to make sure it is reused, recycled, or returned to the earth. Don't throw it all away! ♦



Instead of throwing your family's vegetable scraps in the trash, add them to a compost bin.

In Other Words

fossil fuels fuels that were made over millions of years

► Before You Move On

1. **Paraphrase** In your own words, explain the paper making process from start to finish.
2. **Make Inferences** If we don't follow the author's advice, what can happen?

Key Words

argument

recycle

balance

reduce

debate

renewable

evidence

reuse

plastic

solution

pollution

Talk About It

1. What makes this a **persuasive article**? Give two examples.
2. Imagine that you must **debate** that garbage is a problem with students who don't think garbage is a problem. You must persuade them to **recycle** more of what they throw away. Practice with a partner. Use evidence from the text to support your argument.
3. Imagine that you are an archaeologist, digging in a landfill 100 years from now. What **evidence** of life today might you find there? What could this evidence tell you about the way people live today?

Learn test-taking strategies.

 [NGReach.com](https://www.ngreach.com)

Write About It

Write an ad for a "green" product, for example, a **reusable** shopping bag. Tell how it **reduces** waste and **pollution**. Be persuasive, but don't exaggerate! Use **Key Words** and give details about how the product reduces waste and pollution.

Get _____ today.
It will _____.
You can _____, too.
We must _____!



Author's Viewpoint

Make an author's viewpoint chart about "The World of Waste."



Author's Viewpoint Chart

Viewpoint	Evidence	Action Needed
Garbage can be good.		

Write the viewpoint here.

Write the evidence here.

Write the action needed here.

Retell the selection to a partner. Use the chart to tell the author's viewpoint and the evidence that supports it. Use **Key Words** and other words. Record your retelling.

The author's viewpoint is _____. He believes this because _____. He thinks we must _____.

Fluency Comprehension Coach

Use the Comprehension Coach to practice reading with intonation. Rate your reading.

Talk Together

Why does the author try to persuade us to care about trash? Make a poster to persuade classmates to reuse, reduce, and recycle trash. Include **Key Words** in your poster.

Name _____

Date _____

Reread and Retell: Author's Viewpoint Chart

The World of Waste

Viewpoint	Evidence	Action Needed
Garbage can be good.		

 Use your chart to retell the author's viewpoint and evidence to a partner. Work with your partner to find additional kinds of evidence the author uses to support her viewpoint. Add them to the evidence column.

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