

Rising 5th Grade
Scholars
Summer Packets





Reading Practice Pages



Lesson 1

Finding Main Ideas and Details



Learning Target



Figuring out the main ideas of a text and the key details supporting them is necessary for understanding that text.

- **Read** A **topic** is what a passage is about. A **main idea** is an important idea about that topic. Short passages usually develop just one main idea. Long passages often have two or more main ideas.

A passage's **details** are the facts, examples, and other information stated in the text. The details that help explain a main idea are called **key details**. We sometimes say that key details **support** main ideas.

Read the passage below. Underline what you think is the main idea. Then look for key details that help explain it.

At some point in your life you've probably looked up, gazed at the moon, and studied it in wonder. Throughout time, the moon has inspired many people. In 1801, Ludwig van Beethoven composed a piano piece called "Moonlight Sonata." Later, in 1889, Vincent van Gogh painted *The Starry Night*. In this painting, swirls of white and yellow create a halo around the moon. In 2011, Marilyn Singer wrote a book called *A Full Moon Is Rising* about how people all over the world celebrate the moon. The next time you gaze upon the moon, maybe you'll be inspired by it, too!



- **Think** Consider what you have read about main ideas and key details. In the *main idea organizer* below, write down one sentence from the passage you think states the main idea. Then write down two key details that develop the main idea.

Main Idea		
Key Detail Beethoven's "Moonlight Sonata" was composed in 1801.	Key Detail	Key Detail

- **Talk** Share your organizer with a partner.
- Did you both choose the same sentence for your main idea?
 - Why do you think the sentence you chose, and not some other sentence, is the main idea?
 - Do all three key details support the sentence you believe is the main idea? How do you know?

**Academic Talk**

Use these words and phrases to talk about the text.

- | | | |
|--------------|-----------|---------|
| • main idea | • detail | • topic |
| • key detail | • support | |

Identifying Constellations

by Allen James

1 For thousands of years, people have come up with ways of identifying and keeping track of the stars in the night sky. One way that ancient cultures made sense of the stars was by grouping them into recognizable shapes. Sometimes these shapes were based on elements of everyday life—animals such as birds or bears, people such as hunters, and so on. Other times, the shapes took the forms of mythic heroes and monsters. These shapes, called *constellations*, helped ancient people make sense of the sky. They also gave rise to some amazing stories.



Ursa Major



Orion

- 2 One constellation that most people can identify is the Big Dipper. The Big Dipper is a constellation of seven stars that looks like a long-handled cup, or dipper, for water. Three stars form the handle and connect to the four stars that form the cup. The Big Dipper is part of the larger constellation called Ursa Major, or the Great Bear. The Big Dipper also points to Polaris, the North Star.
- 3 Another easy constellation to spot is Orion, the Hunter. To see Orion, look for three stars that are close together in a slightly diagonal line. That's Orion's belt. Other stars above and below the belt form Orion's upper and lower body.

Close Reader Habits

When you reread the science text, **underline** the sentence that states the main idea of paragraph 1 only. Then **circle** key details that support that main idea.

Explore

What is the main idea of paragraph 1? What key details support that main idea?

Think

- 1 Complete this main idea organizer for paragraph 1 only.

Main Idea		
Key Detail	Key Detail	Key Detail



The main idea of a paragraph isn't always the first sentence. Sometimes the main idea appears later in the paragraph.

Talk

- 2 Share your organizers. Do you agree about the main idea of paragraph 1? What did you write for your key details? If necessary, revise your organizers.

Write

- 3 **Short Response** What is the main idea of paragraph 1? How do the key details support that main idea? Use the space provided on page 16 to write your answer.

HINT Include the name of the passage, and remember that you're writing only about paragraph 1.

How Pluto Stopped Being a Planet

by Tyrone Nielson



- 1 For decades, people believed our solar system had nine planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto. But in 2006, a group of astronomers decided that Pluto was not a true planet but something else: a dwarf planet.
- 2 The term “dwarf planet” might make you think that Pluto was kicked out of the planet club solely because of its size. And it’s true that Pluto is small compared with the planets. If Earth were the size of a basketball, Pluto would be the size of a golf ball. But Pluto’s size isn’t why most astronomers now call it a dwarf planet. So why the change to Pluto’s status?
- 3 Here’s why. In August 2006, astronomers came up with a new definition of *planet*. To be a planet, they said, an object has to meet three conditions.
 - It has to orbit the Sun directly. It can’t be a moon orbiting a planet.
 - It has to be massive enough for its own gravity to pull it into the shape of a ball.
 - It has to have cleared its neighborhood of smaller objects around its orbit. In other words, during its trips around the Sun, a planet must draw smaller objects into itself, or pull them into its orbit, or fling them off into space.
- 4 Pluto does not meet the third condition. It hasn’t cleared its neighborhood the way the planets have. It moves within a field of rock-and-ice objects that it cannot clear away. That’s why most astronomers now call Pluto a dwarf planet.
- 5 Not all astronomers accept the change to Pluto’s status. Among other reasons, they feel that “clearing the neighborhood” isn’t a well-defined concept. But most astronomers (and museums and textbooks and teachers) feel the new definition is clear enough to be useful. So long, Pluto—at least you’re still with us as a dwarf planet.

Close Reader Habits

How does the article explain why astronomers reclassified Pluto? Reread the text. **Underline** key details explaining why the astronomers changed Pluto’s status.

Think Use what you learned from reading the science article to respond to the following questions.

- 1** This question has two parts. Answer Part A. Then answer Part B.

Part A


What is the main idea of the science article by Tyrone Nielson?

- A A group of astronomers decided that Pluto is a dwarf planet.
- B Pluto is large enough to be a moon but too small to be a planet.
- C Many astronomers are pleased that Pluto is not a planet anymore.
- D Some astronomers still believe Pluto should be called a planet.

Part B

Which statement from the text **best** supports the answer to Part A?

- A "For decades, people believed our solar system had nine planets. . . ."
- B "And it's true that Pluto is small compared with the planets."
- C "In August 2006, astronomers came up with a new definition of *planet*."
- D "It has to be massive enough for its own gravity to pull it into the shape of a ball."



Many science articles are about new discoveries or changes to old ideas. Like any informational text, a science article has one or more main ideas supported by key details.

- 2** Which of these is **most clearly** a key detail of the passage?

- A "And it's true that Pluto is small compared with the planets."
- B "If Earth were the size of a basketball, Pluto would be the size of a golf ball."
- C "It hasn't cleared its neighborhood the way the planets have."
- D "Not all astronomers accept the change to Pluto's status."

Talk

- 3** What is the main idea of paragraph 3? What key details support it? Use the organizer on page 17 to organize your information.

Write

- 4 Short Response** Use the information in your organizer to explain how the key details you identified support the main idea of paragraph 3. Use the space provided on page 17 to write your answer.

HINT Don't just identify the key details. Also say how they support the main idea.



Write Use the space below to write your answer to the question on page 13.

Identifying Constellations

HINT Include the name of the passage, and remember that you're writing only about paragraph 1.

- 3 Short Response** What is the main idea of paragraph 1? How do the key details support that main idea?



Don't forget to check your writing.

Check Your Writing

- ☐ Did you read the prompt carefully?
- ☐ Did you put the prompt in your own words?
- ☐ Did you use the best evidence from the text to support your ideas?
- ☐ Are your ideas clearly organized?
- ☐ Did you write in clear and complete sentences?
- ☐ Did you check your spelling and punctuation?

How **Pluto** Stopped Being a Planet

3 Use the main idea organizer below to organize your information.

Main Idea		
Key Detail	Key Detail	Key Detail



Write Use the space below to write your answer to the question on page 15.

4 Short Response Use the information in your organizer to explain how the key details you identified support the main idea of paragraph 3.

HINT Don't just identify the key details. Also say how they support the main idea.

WORDS TO KNOW


As you read, look inside, around, and beyond these words to figure out what they mean.

- observe
- inward
- reactions

from When Stars **EXPLODE**

by Ken Croswell, PhD, *Highlights*

- 1 [A supernova is] the spectacular death of a star. The last time people saw a supernova in our galaxy was 1604. That was before astronomers were using telescopes. However, every year astronomers see supernovae exploding in other galaxies. Astronomers can often observe such supernovae for months before they fade from view.
- 2 Most supernovae—that's the plural of supernova and pronounced SOO-per-NOO-vee—come from massive stars. Antares is a massive star. Such a star is born with more than eight times the mass of the Sun.
- 3 When a massive star is young, it is hot, bright, and blue. Its center makes energy the same way the Sun does: by changing hydrogen, the lightest element, into helium, the second-lightest element. This nuclear reaction creates energy that heats the star and makes it shine.



The exploding star that people saw in 1604 produced a glowing cloud of gas and dust called a **nebula**. The nebula at the left is all that remains of that star.

- 4 The outflow of huge amounts of energy—much of it light—pushes outward from the star's center. This is good, because the force of gravity pulls inward and tries to make the star collapse. But as long as the star can make energy, it can fight the force of gravity and survive.
- 5 However, a massive star must make lots of energy to fight the gravity of its own mass. So the star shines very brightly. As a result, we can easily see the star across hundreds of light-years of space. This is a huge distance, because one light-year is the distance that light speeds through in a year: nearly 6 trillion (6,000,000,000,000) miles.
- 6 But because the star shines so brightly, it uses up its hydrogen fuel within millions of years—much less time than the billions of years the Sun will take to use up its fuel. Soon the star's center runs out of hydrogen. Then the star expands and cools, turning into a big red star like Antares. Astronomers call such a star a red supergiant.
- 7 The red supergiant makes energy by changing helium and other elements into still heavier elements. But these nuclear reactions do not make as much energy as hydrogen did. Within a few million years, the star has no fuel left.

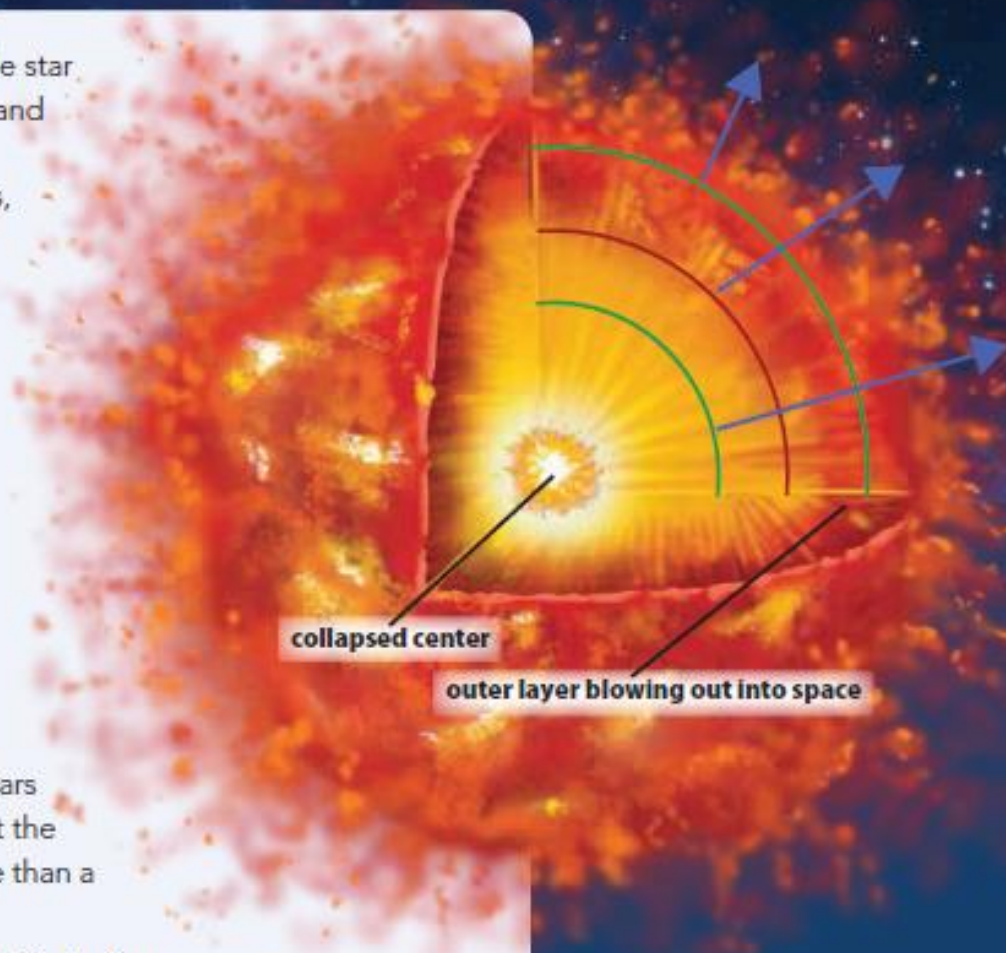
In a star, two opposing forces are always at work. Gravity pulls the star's mass toward its center. If no force worked against gravity, the star would collapse. But energy, in the form of heat and light, pushes out from the center and works against gravity. So long as the star can make energy to fight gravity, it stays alive.



- 8 Now the star is in big trouble. The star can't make energy to hold itself up, and gravity is still trying to pull the star inward. So the star's center collapses, scrunching itself into a small, dense object. Meanwhile, the star's outer layer shoots into space at millions of miles per hour. The star has exploded!

Our Sun Won't Blow Up

- 9 Supernovae are violent, but we do not have to worry. The Sun will never explode. If a supernova occurred within a few dozen light-years of Earth, we would be in trouble. But the nearest star that will explode is more than a hundred light-years away.
- 10 Believe it or not, supernovae help life. In fact, without them, Earth would not exist. Neither would we.
- 11 Here's why. When the universe began, it had only the three lightest elements: hydrogen, helium, and a little lithium. But life needs heavier elements, such as oxygen, which we breathe, and iron, which is in our blood. And Earth is made mostly of oxygen, silicon, and iron. Almost all oxygen came from massive stars, like Antares. During their lives, massive stars cause helium nuclei to join together to make oxygen. Then, when the stars explode, they cast this oxygen into space. And the explosions themselves make iron. In fact, scientists think supernova explosions made most of the iron in the universe. . . .



A star needs fuel to make the energy that fights the pull of gravity. Once the star uses up its fuel, gravity wins the fight. The star's center collapses, and its outer layer blasts out into space. The star becomes a supernova.

Think Use what you learned from reading the science article to respond to the following questions.

- 1** This question has two parts. First, answer Part A. Then answer Part B.

Part A

What are **two** main ideas of the article by Ken Croswell?

- A Supernovae are violent explosions of stars.
- B Astronomers did not always use telescopes.
- C Astronomers can see supernovae for months.
- D Stars make energy through nuclear reactions.
- E Stars produce light that travels across the universe.
- F Supernovae are interesting for astronomers to study.

Part B

Which **two** sentences from the article **best** support the answer to Part A?

- A "The last time people saw a supernova in our galaxy was 1604."
- B "That was before astronomers were using telescopes."
- C "Such a star is born with more than eight times the mass of the Sun."
- D "Its center makes energy the same way the Sun does: by changing hydrogen, the lightest element, into helium, the second-lightest element."
- E "As a result, we can easily see the star across hundreds of light-years of space."
- F "If a supernova occurred within a few dozen light-years of Earth, we would be in trouble."

- 2** Read the following sentence from the text.

But as long as the star can make energy, it can fight the force of gravity and survive.

Which dictionary entry **best** defines energy?

- A physical strength
- B hydrogen and helium gas
- C heavy metals that increase weight
- D power that comes from heat

- 3** In the chart below, only **two** sentences are actually main ideas of the article. Identify those main ideas. Copy them in the rows titled "Main Idea 1" and "Main Idea 2" in the charts at the bottom of the page.

Possible Main Ideas	
In 1604, a supernova exploded.	Antares is a massive star.
Supernovae make important elements.	Only some stars will become supernovae.
Astronomers did not always use telescopes.	Hydrogen is the lightest element.

Now study this chart. It contains supporting details from the article. Choose **one** detail that **best** supports **each** main idea you chose. In the charts at the bottom of the page, write each detail below the main idea it supports.

Possible Supporting Details	
"The last time people saw a supernova in our galaxy was 1604."	"And the explosions themselves produce iron."
"However, every year astronomers see supernovae exploding in other galaxies."	"The outflow of huge amounts of energy—much of it light—pushes outward from the star's center."
"The Sun will never explode."	"This nuclear reaction creates energy that heats the star and makes it shine."

Main Idea 1	
Supporting Detail	

Main Idea 2	
Supporting Detail	

**Write**

- 4 Short Response** Reread paragraphs 6, 7, and 8. What is the author's main idea in these paragraphs? Use key details from these paragraphs to support your answer.

**Learning Target**

In this lesson, you determined the main ideas of texts and explained how key details supported them. Describe how these skills will help you understand other informational texts.

Lesson 2

Summarizing Informational Texts



Learning Target



Identifying the main idea and key details in a text will help you summarize it. Summarizing a text helps you better understand it.

- **Read** When you tell your friends about a soccer game, you don't want to bore them with every detail. Instead, you tell only the most important events, leaving out the parts that aren't necessary for understanding what happened.

Similarly, when you **summarize** a text, you should use your own words to tell a short but complete version of that text. Include only the **main idea** (the big idea) and the **key details** that say more about the main idea.

Read the passage below. Identify what the passage is about.

LET'S PLAY FUTEBOL!

The most popular sport in Brazil is futebol, also known as soccer. As of 2015, the Brazilian national team has won the World Cup more times than any other country. Brazil is known for its many champion soccer players, including Pelé, often called the best soccer player ever. Most Brazilian cities, towns, schools, and neighborhoods have local soccer teams. In Brazil, children quickly turn any open space or patch of dirt into a soccer field.



- **Think** Consider what you've learned so far about summarizing a text. In the *main idea organizer* below, add two key details from the passage "Let's Play Futebol!" Then use the organizer to complete the summary of the passage.

Main Idea		
Soccer is the most popular sport in Brazil.		
First Key Detail	Second Key Detail	Third Key Detail
The Brazilian national soccer team is a world champion.		

Summary: Soccer is the most popular sport in Brazil. _____

- **Talk** Share your main idea organizer and summary with a partner.

- What relationships do you see between your organizers and summaries?
- Do your second and third key details develop the main idea? How do you know?
- Could any key details in the organizer be stated differently?



Academic Talk

Use these words and phrases to talk about the text.

• main idea

• key detail

• summarize

A Portrait of FRIDA KAHLO

by Gene Erskine

- 1 In September 1925, a bus in Mexico City was in a terrible accident. One passenger, an 18-year-old woman, was hurt so badly that she had to stay in bed for three months. Looking for a task to occupy her mind, she decided to paint pictures. This is how Frida Kahlo, one of the most famous Mexican artists of the 20th century, began her career.
- 2 Kahlo produced more than 150 paintings during her life. Of those, 55 were self-portraits, for which she is best known. In the paintings, Kahlo has brown skin, black hair, thick eyebrows, and a faint mustache. She often wears brightly colored traditional Mexican blouses and skirts. She usually gazes confidently at the viewer. Kahlo explained, "I paint myself because I am so often alone and because I am the subject I know best."
- 3 For Kahlo, a self-portrait was a way to communicate ideas. For example, Kahlo's injuries from the bus accident left her in pain all her life. So, some of her self-portraits express this discomfort. Others depict events in her life. For instance, in the early 1930s, Kahlo lived in the United States. She was homesick, so she painted herself standing between Mexican flowers and buildings on one side and American factories and skyscrapers on the other. The painting showed how she felt: torn between where she was living and where she wanted to be. Not all of Kahlo's self-portraits have such a clear message. Some are like painted dreams, with Kahlo before tropical plants and surrounded by spider monkeys, parrots, and cats. For Kahlo, a self-portrait could express whatever she wanted.
- 4 Frida Kahlo died in 1954. During her life, she had traveled the world, impressed famous artists, and taught painting to college students in Mexico. As she told her students, "To paint is the most terrific thing that there is, but to do it well is very difficult." Lovers of her art believe that Frida Kahlo painted very well, indeed.



Close Reader Habits

When you reread the biography, **underline** key details that develop the main idea about Kahlo and her art.

Explore

What is most important to know about Frida Kahlo and her art?



Some texts state a main idea directly. Other texts let the reader figure it out from the details.

Think

- 1 Complete the main idea organizer below. Include three key details that you underlined in the passage.

Main Idea		
First Key Detail	Second Key Detail	Third Key Detail

Talk

- 2 Share your organizers. Do you agree about the main idea of the passage? What about the key details? Make any changes to your organizers that will help you write an accurate and complete summary.

Write

- 3 **Short Response** Summarize what you learned about Frida Kahlo and her art. Include key details from the text in your summary. Use the space provided on page 30 to write your answer.

HINT Link key details to the main idea by using phrases such as “for example” and “for instance.”

CESAR CHAVEZ

by José Hernandez

- 1 Cesar Estrada Chavez was an important labor leader. He fought for the rights of migrant farm workers in the United States. Chavez knew firsthand of the many hardships farm workers faced. When Chavez was a young boy, his family lost their farm during the Great Depression. The Chavez family became migrant workers, toiling side by side for long hours in the fields. At night, they slept in a tent or outside. Like other migrant workers, they moved from farm to farm, following the harvest seasons of the vineyards and fruit orchards in California.
- 2 In 1962, Chavez and co-founder Dolores Huerta created the National Farm Workers Association (NFWA) to fight for *La Causa*—the cause. By organizing farm workers into a union, Chavez hoped to increase their wages. He also hoped to improve working conditions and safety for farm workers. Chavez strongly believed that this cause could be achieved. In fact, his motto was “Yes, it can be done!”
- 3 Chavez believed in bringing about change in nonviolent ways. He fasted, or went without eating, to bring attention to the poor treatment of farm workers. He organized strikes and marches. He also organized boycotts, which urged people to stop buying certain products. Two of Chavez’s most effective boycotts were against grapes and lettuce. When people stopped buying grapes and lettuce, the boycotts put economic pressure on the growers. These boycotts also brought attention to the plight of migrant farm workers. Because of Chavez’s dedicated efforts, migrant farm workers received better pay and working conditions.



Close Reader Habits

What did Chavez do to improve conditions for migrant workers? Reread the biography. **Underline** key details that show what he did.

Think Use what you learned from reading the biography to respond to the following questions.

- 1** Which statement is **most** important to include in a summary of the passage “Cesar Chavez”?
- A Like other migrant workers, Chavez moved from farm to farm.
 - B The Chavez family often slept in a tent or outdoors at night.
 - C “Yes, it can be done!” was Chavez’s motto.
 - D Chavez brought about change in nonviolent ways.
- 2** Select the **two** sentences that should be included in a summary of paragraph 1.
- A Chavez was an important labor leader.
 - B Chavez had a difficult childhood.
 - C As a boy, Chavez often slept in a tent or outside.
 - D The Chavez family followed the harvest seasons in California.
 - E Chavez fought for the rights of farm workers.
 - F Chavez worked hard after his family lost their farm.
- 3** Which is **most** important to put in a summary of how Chavez helped others?
- A “... his family lost their farm. ...”
 - B “... they moved from farm to farm. ...”
 - C “... strongly believed that this cause could be achieved.”
 - D “... migrant farm workers received better pay. ...”



A summary of a biography includes only key details of a person’s life. To decide which details to use, choose the ones that develop the main idea of the biography.

Talk

- 4** What is the main idea of the passage? What key details develop that main idea? Use the organizer on page 31 to gather your information.

Write

- 5 Short Response** Summarize the passage. Include key details from your organizer in your summary. Use the space provided on page 31 to write your answer.

HINT Make sure you have figured out the main idea of the *whole* passage.



Write Use the space below to write your answer to the question on page 27.

A Portrait of FRIDA KAHLO

- 3 Short Response** Summarize what you learned about Frida Kahlo and her art. Include key details from the text in your summary.

HINT Link key details to the main idea by using phrases such as “for example” and “for instance.”



Don't forget to check your writing.

Check Your Writing

- ☐ Did you read the prompt carefully?
- ☐ Did you put the prompt in your own words?
- ☐ Did you use the best evidence from the text to support your ideas?
- ☐ Are your ideas clearly organized?
- ☐ Did you write in clear and complete sentences?
- ☐ Did you check your spelling and punctuation?

CESAR CHAVEZ

4 Use the main idea organizer below to organize your ideas and evidence.

Main Idea		
First Key Detail	Second Key Detail	Third Key Detail



Write Use the space below to write your answer to the question on page 29.

5 Short Response Summarize the passage. Include key details from your organizer in your summary.

HINT Make sure you have figured out the main idea of the whole passage.

WORDS TO KNOW

As you read, look inside, around, and beyond these words to figure out what they mean.

- inspire
- migrant
- pressure



from

HE INSPIRED OTHERS

An Interview with Cesar's Grandson

by Diane L. Brooks, *Appleseeds*

1 **Q** Why should young people know about Cesar E. Chavez?

A *Fernando Chavez, a 13-year-old grandson of Cesar E. Chavez, responded, "Children should know what my grandfather did so they will be inspired to help others. My Tata (grandfather) helped lots of families. Just as others gave food to help his family, my grandfather gave away food and clothing to help others. He talked to people about what to do so they could help themselves. I hope that I, too, can help those in need. When I see families living in campers and trucks, I feel so sad. I hope that migrant families can live a normal life, in a normal house."*

2 Q What do you remember about your grandfather?

A "I had a birthday, then just three days after, Grandfather died. Many, many people came to pray and give final thanks for all that he had done for them. My dad reminds me that on that day, I took my sandwich and went to eat it by his graveside; my last moments with Tata. My family and I really miss him, especially at Christmastime. Tata loved being with his (33) grandchildren. My grandfather also loved his dogs. He had two German shepherds, guard dogs, called Huelga (the Spanish word for "strike") and Boycott, and later, another named Oso. They are buried near him."

3 Q What stories do you remember about Cesar E. Chavez?

A "I remember stories about my grandfather's courage and bravery. He gave a lot of speeches, and he helped a lot of people. There were stories about hard work in the fields, and terrible things like farmers with guns, people trying to tear the Union apart, and racism—people yelling names. I'm grateful that I don't have to go through that. These stories make me want to stand up and do something when I am older and braver. I will stand up! But I have also learned from my grandfather that the best way to solve a problem is to talk it out. These stories mean a lot to me, and I'm inspired to help those who go through tough times. And there are still problems—people with no place to live, boycotts, and problems with contracts between farmers and workers."



Cesar Chavez and Coretta Scott King (the wife of Martin Luther King, Jr.) lead a march in New York City in 1973.

- 4 **Q** What is it like to be the grandson of a famous person, and the son of a father who continues to work for “the cause”?

A “It feels good, and I’m proud that my grandfather is in history books. But it puts a lot of pressure on me—I can’t put a bad name on my grandfather or my family. I know that I need to stay under control.”

About Fernando Chavez

Fernando Chavez turned 13 years old in 2001. With his two brothers and one sister, he lives with his family in La Paz, a small community near Bakersfield, California. His father, Paul F. Chavez, was the sixth of the eight children of Cesar and Helen Chavez.

The author of this interview thinks that “staying under control” is good advice for anyone. She also learned that Fernando has many traits of his courageous grandfather—respect, responsibility, and caring.

This sculpture, titled *Cesar Marching to Sacramento*, is in Cesar Chavez Park in Sacramento, California.



Think Use what you learned from reading the interview to respond to the following questions.

- 1** Which sentence is the **best** summary of why Fernando Chavez thinks young people should know about Cesar Chavez?
- A** Young people should know about Cesar Chavez because he was Fernando's grandfather.
 - B** Young people should know about Cesar Chavez so that they can be inspired to help others like he did.
 - C** Young people should know about Cesar Chavez because he organized a union for farm workers.
 - D** Young people should know about Cesar Chavez because it makes Fernando sad to see migrant families without homes.
- 2** Select the **two** sentences that should be included in a summary of Fernando's answer to the second interview question.
- A** Fernando's grandfather named his dogs Strike and Boycott.
 - B** When Fernando's grandfather died, many people came to give thanks for all that he had done for them.
 - C** Fernando and his family miss Tata, especially at Christmas.
 - D** Fernando's grandfather had two guard dogs that are buried near his grave.
 - E** Tata had thirty-three grandchildren, and he loved all of them.
 - F** Tata died just three days after Fernando's birthday.
- 3** Which statement **best** summarizes Fernando's answer to the third interview question?
- A** Chavez was brave.
 - B** Chavez gave speeches.
 - C** Chavez worked in the fields.
 - D** Chavez held boycotts.

- 4 This question has two parts. First, answer Part A. Then answer Part B.

Part A

Which statement **best** summarizes the main idea of the interview?

- A Fernando is the grandson of Cesar Chavez, a famous leader in the labor movement.
- B Fernando remembers his last moments with his Tata at the side of his grave.
- C Fernando feels very sad because many migrant workers do not live in regular houses but in campers and trucks.
- D Fernando wants to help others when he grows up because stories about his grandfather have inspired him.

Part B

Which detail from the text **best** supports your answer to Part A?

- A "I'm grateful that I don't have to go through that."
- B "These stories make me want to stand up and do something when I am older and braver."
- C "When I see families living in campers and trucks, I feel so sad."
- D "My family and I really miss him, especially at Christmastime."

- 5 Read the sentence from paragraph 3.

And there are still problems—people with no place to live, boycotts, and problems with contracts between farmers and workers.

What does the prefix *con-* in the word contracts mean?

- A not
- B together
- C before
- D into

**Write**

- 6 Short Response** Summarize Fernando's message about his grandfather, Cesar E. Chavez. Use details from the text to support your summary.

**Learning Target**

In this lesson, you summarized texts by identifying their main ideas and key details. Explain how summarizing is a skill you can use to better understand other informational texts you read.

Lesson 2

Writing to Inform: Article

W.5.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

W.5.7: Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

Sharing Information

Rico's neighbor, Mrs. Swenka, wants to buy a car, but it's hard to choose among so many kinds. She knows Rico loves cars. "What kind do you think I should get, Rico?" she asks. "I just need something to get around town in."

Rico thinks for a moment and then says, "An electric car is what you need. It never needs gas. You just plug it in every night to charge it!"

Mrs. Swenka says that sounds interesting, but she wants to learn more about the car. Rico decides to do some research and write about what he finds. The tablet below shows part of the e-mail he wrote to help Mrs. Swenka decide.

When you produce informational writing, you share what you know about a topic, such as electric cars. With some research, you can share even more.

Electric cars are cleaner and cheaper to run than gas-powered cars. They produce no exhaust, so they don't pollute the air. And it costs less to charge a battery than to fill a tank with gas. Many electric cars have a fuel cost of about \$500 per year, compared with at least \$6,000 for gas-powered cars.

Most electric cars can travel about 80 miles on a single charge. Also, electric cars . . .



What Is Informational Writing?

Informational writing teaches or explains a topic to readers. The writer uses facts, definitions, quotations, and examples—often from research—to develop the topic.

KEY FEATURES Informational Writing

- an introduction that clearly states a topic and prepares readers to learn about the topic
- facts and details that are logically organized in paragraphs
- precise language and domain-specific vocabulary that express ideas concisely and accurately
- linking words, phrases, and clauses that connect one idea to the next
- a conclusion that restates the topic, sums up the important points, and leaves readers with something to think about

Steps for Writing

On the following pages, you'll learn the steps for writing your own article.

Step 1 Study a Mentor Text

Step 2 Unpack Your Assignment

Step 3 Find Text Evidence

Step 4 Organize Your Evidence

Step 5 Draft Your Article

Step 6 Revise: First Read

Step 7 Revise: Second Read

Step 8 Edit for Conventions

The
Research
Path

Step 1 Study a Mentor Text



FOCUS Read as a Writer

Before you write your article, you'll study a model. First, read to understand what it's about. Then reread to understand how it was written.

As you reread the Mentor Text, do the numbered activities. They'll help you understand the key features of an article.

MENTOR TEXT: Article

Turn On the Power

by Sung-Ki Yu

- 1 When you turn on a television or computer, electricity flows into it and makes it work. But where does that electricity come from? Two important sources of electricity are coal power plants and nuclear power plants. Both types of plant provide power that keeps our country running, and both have their benefits and problems.

How It Works: Coal

- 2 The United States has more than 500 coal plants located all over the country. All of them are near a water source such as a river. That's because a coal plant uses water to make electricity. Here's how the process works. After coal comes to the plant, it goes into a huge furnace. As the coal burns, it creates intense heat. The heat boils water into steam. The steam is pumped into a turbine to make the turbine spin. The turbine then spins a metal shaft in a generator. This action makes electricity. The electricity then flows through transmission lines to buildings, computers, and televisions.

How It Works: Nuclear Energy

- 3 There are far fewer nuclear plants than coal plants in the United States. Specifically, there are only 62 nuclear plants located in just 31 states. Just like coal plants, nuclear plants are near water because they need water to make electricity. In contrast to coal plants, nuclear plants do not burn anything. Instead, they split uranium or thorium metal into tiny pieces. When the metal splits, it releases energy that heats water into steam. Then the process is the same as for a coal plant. The steam spins a turbine within a generator, and the generator makes electricity.

1 Introduction Which sentence states the writer's topic? **Draw a dashed line** under it.

2 Headings Explain why the writer includes headings in his article.

3 Linking Words, Phrases & Clauses In paragraph 3, the writer uses three linking words and phrases to compare and contrast coal and nuclear plants. **Draw a box** around each of these words or phrases.

Benefits

- 4 Both coal and nuclear plants have some benefits compared to other power sources. Coal produces power more cheaply than other sources, such as natural gas and oil. Coal plants are also reliable. They provide a steady supply of power even when there's a great need for it, such as during the hot summer months.
- 5 Like coal plants, nuclear plants are reliable. Unlike solar power plants, which depend on the sun, nuclear plants produce a steady supply of energy both night and day. And nuclear plants have an advantage over coal plants. They release steam, not smoke, into the air when they make electricity, and steam doesn't cause pollution.

Problems

- 6 That said, coal and nuclear plants have some major problems. Coal plants spew carbon dioxide into the air, an important cause of climate change. Another problem is that coal is a nonrenewable resource. That means it can never be replaced during our lifetimes. Once we run out of coal, that's it.
- 7 The metals that fuel nuclear power plants are also nonrenewable resources. In addition, nuclear plants produce dangerous waste products that have to be stored carefully. Otherwise they can cause cancer and other health problems in people and animals.

Conclusion

- 8 Although coal and nuclear power plants have bad side effects, people in the United States would struggle to live without them, at least for now. In 2012, coal-powered plants produced 37 percent of America's electricity, and nuclear plants produced 19 percent. Without these power sources, our TVs and computer screens might go dark.

4 Develop the Topic The writer identifies three benefits and three problems with coal and nuclear power in paragraphs 4–7. **Label** the benefits **B-1**, **B-2**, and **B-3**, and the problems **P-1**, **P-2**, and **P-3**.

5 Domain-Specific Vocabulary The writer uses many terms that are specific to science writing. They very clearly name or explain scientific information. In paragraph 6, **draw a box** around three of these terms.

6 Conclusion In paragraph 8, why do you think the writer included the last sentence?

Quick Write Do you think people should learn more about power plants and energy sources? Explain.





Step 2 Unpack Your Assignment

FOCUS Identify Task, Purpose, and Audience

Before you begin writing, read your assignment carefully to identify your task, purpose, and audience. The **purpose** of an informational article is to examine a topic and convey ideas and information clearly. As you read your assignment, look for your topic and the ideas you need to explain. Sometimes your assignment will also provide clues about how you can organize your information.

Modeled Instruction

Sung-Ki Yu, who wrote “Turn On the Power” on pages 34–35, was given the assignment below. He read it carefully and marked up some important details.

Read Sung-Ki’s assignment. Then read the points in his Think Aloud, which tell how he identified his task, purpose, and audience.

SUNG-KI’S Assignment

You are a writer for a popular technology magazine. You have been assigned to write an article explaining how two important power sources, coal and nuclear energy, are used to produce electricity. Your audience likes to read about technology but is not well informed about this topic.

In your article:

- Explain how each power source works.
- Tell some benefits of each power source.
- Tell some problems with each power source.

Think Aloud

- **Audience** I’m writing for a technology magazine, and my readers are interested in technology but don’t know much about it. This means that I’ll need to clearly explain terms and ideas that they might not know.
- **Purpose** I already know that the articles in this magazine are written to inform readers. But I see the word *explaining* in my assignment. This tells me I need to use facts and details to help my readers understand my topic.
- **Task** I have to write an article explaining three ideas about each power source: how it works, what its benefits are, and what its problems are. Maybe I can organize my article around those three ideas, covering them one at a time. I bet I can also make my information clearer by including headings.

Guided Practice

Now it's your turn to write an informational article. Read **Your Assignment** carefully. Then complete the activities, using the **Hints** for help.

Your Assignment

You are a writer for a popular technology website. You have been assigned to write an article explaining how hydroelectric plants and wind-powered turbines produce electricity. You'll be writing for people who enjoy reading about technology, but are not experts on this topic.

To prepare to write your article, you will read the following sources:

- Hydroelectric Power *pages 42–43*
- Capturing the Wind *pages 44–47*

In your article:

- Explain how each power source works.
- Tell some benefits of each power source.
- Tell some problems with each power source.



Hi, I'm Beau, and I'm also going to be doing this assignment.

- 1 Audience** Draw a **box** around two phrases that describe your audience. What is important for you to know about them? Why is it important?

HINT Where will your writing be published? How much does your audience know about the topic?

- 2 Purpose** Draw a **dashed line** under the phrase that tells your purpose for writing.

HINT Is your writing meant to inform, entertain, or give an opinion?

- 3 Task** **Circle** the type of writing you will do. Then **underline** the three ideas you will develop in your writing.

HINT What do you need to explain or tell about each power source?

Independent Practice

Quick Write Why are people so concerned about the use of different kinds of power sources?

Turn and Talk

Discuss how the information in your assignment can help you make a plan for organizing your writing.

The Research Path

Writing from Sources

Join me on the path to gather evidence from sources!



Read as a
Reader

Sources

READ Your Sources

Go to pages 42–47

- Hydroelectric Power
- Capturing the Wind

Find out what these sources are about and what you can learn from them.

Reread as a
Writer

REREAD Your Sources

Return to pages 42–47

Use your mark-up strategy to identify important details in the sources.



REVIEW Your Assignment

Return to page 37
Reread your task to
identify the types
of information you
will need to include
in your article.



Text Evidence

FIND Text Evidence

Go to pages 40–41
Learn how to mark
important details
so you can find
them quickly later on.



THINK It Through

Go to pages 48–49
Complete the activities
to help you connect
the ideas in the sources
to your assignment.



ORGANIZE Your Evidence

Go to pages 50–51
Use a chart to
group your ideas
and evidence so
that you're ready
to write.



**Need More
Information?**

Begin Writing!

Go to pages 52–53



Step 3 Find Text Evidence

FOCUS Gather Information

You've unpacked your assignment and identified three ideas that you will develop in your article. As you reread your source texts, use the following system to label the details that will help you explain to your readers how hydroelectric plants and wind-powered turbines produce electricity.

- **How each power source works.** Underline details about the generation of hydroelectric power in the first source and wind power in the second. Mark them with a **W**, for *works*.
- **Benefits of each power source.** Underline details about the benefits, or pros, of each power source. Mark them with a **B**, for *benefit*.
- **Problems with each power source.** Underline details about the problems caused by each power source. Mark them with a **P**, for *problem*.

Modeled Instruction

To gather information for his article, Beau underlined details and marked up the text as he read his first source, "Hydroelectric Power."

Read the text and Beau's Think Aloud to learn about the reading and mark-up strategies he used.

From "Hydroelectric Power" page 42

So just how do we get electricity from water? Actually, hydroelectric and coal-fired power plants produce electricity in a similar way. In both cases, a power source is used to turn a propeller-like piece called a turbine. The turbine then turns a metal shaft in an electric generator. The generator is the motor that produces electricity. A coal-fired power plant uses steam to turn the turbine blades. A hydroelectric plant uses falling water to turn the turbine. The results are the same.

Think Aloud

- The first sentence tells me this paragraph is about how water is used to make electricity. The next sentence says even more clearly that the paragraph will explain how hydroelectric plants produce electricity. So I'll read closely for details in the paragraph to mark with a W for *work*.
- These sentences tell how the parts of a generator work together to produce electricity. These details will help me explain how hydroelectric power works, so I'll mark them with a W.
- This sentence explains the first step in the process of generating hydroelectric power. I'll label it with a W, too.



Guided Practice

Read the following excerpt from “Capturing the Wind” and note the underlined details. Then complete the activities, using the Hints for help.

From “Capturing the Wind” page 45

... Wind farms produce large quantities of clean energy. What do we **B** mean by “clean” energy? Clean energy doesn’t create pollution or greenhouse gases that can contribute to climate change. In 2013, the clean energy produced by wind power was equal to the effect of taking nearly 17 million cars off the roads. Wind energy is also renewable, which means it can’t be used up. And it doesn’t use water to create electricity.

- 1** Why is the first sentence in the excerpt marked with a B? Explain your answer.

HINT What is helpful about using wind farms to produce electricity?

- 2** Would you mark the second underlined sentence with a W, B, or P? Explain your answer.

HINT What does the sentence explain about clean energy?

- 3** Find another benefit of wind power in the paragraph. **Underline** it and **mark** it with a B. Then explain why this detail describes a benefit.

HINT What does *benefit* mean?

Turn and Talk

How will this system of marking the text help you organize the information in your article?



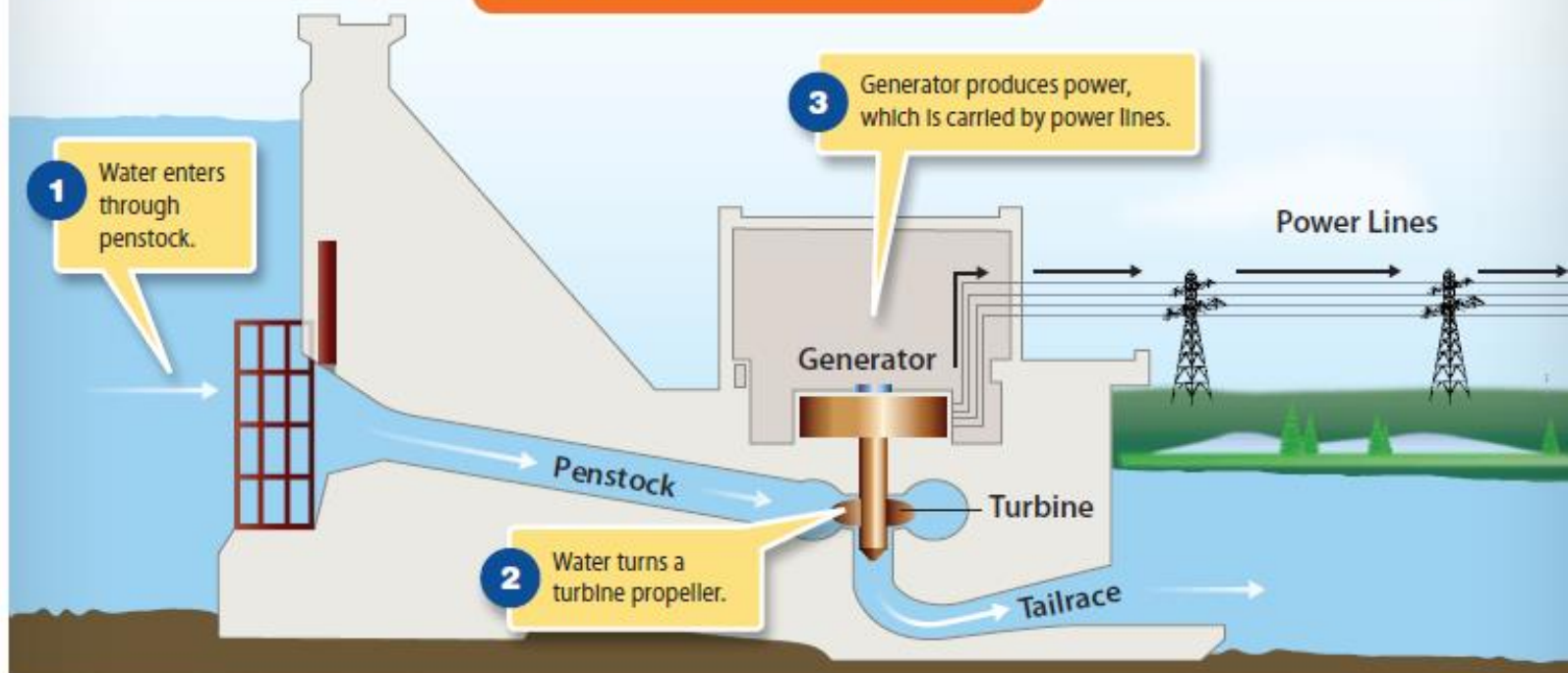
HYDROELECTRIC POWER

FROM THE U.S. GEOLOGICAL SURVEY

Hydroelectric power: How it works

- 1 So just how do we get electricity from water? Actually, hydroelectric and coal-fired power plants produce electricity in a similar way. In both cases, a power source is used to turn a propeller-like piece called a turbine. The turbine then turns a metal shaft in an electric generator. The generator is the motor that produces electricity. A coal-fired power plant uses steam to turn the turbine blades. A hydroelectric plant uses falling water to turn the turbine. The results are the same.

HOW A HYDROELECTRIC DAM WORKS



- 2 A typical hydroelectric dam is built on a big river with a large drop in elevation. The dam stores lots of water behind it in the reservoir. Near the bottom of the dam wall there is the water intake called a penstock. Gravity causes the water to fall through the penstock inside the dam. At the end of the penstock, there is a turbine propeller, which is turned by the moving water. The shaft from the turbine goes up into the generator, which produces the power.¹ Power lines connected to the generator carry electricity to your home and mine. The water continues past the propeller through the tailrace. The water then flows into the river, past the dam. By the way, it is not a good idea to be playing in the water right below a dam when water is released!

Pumped storage: Reusing water for peak electricity demand

- 3 Demand for electricity is not “flat” and constant. Demand goes up and down during the day. Overnight there is less need for electricity in homes, businesses, and other facilities. For example, at 5:00 P.M. on a hot August weekend day, there may be a huge demand for electricity to run millions of air conditioners! But, 12 hours later at 5:00 A.M. . . . not so much. Hydroelectric plants are more efficient at providing for peak power demands during short periods than are fossil fuel and nuclear power plants. One way of doing that is by using “pumped storage,” which uses the same water more than once.
- 4 Pumped storage is a method of keeping water in reserve for peak periods of power demand. Pumps move water that had already flowed through the turbines back up to a storage pool above the power plant. That happens when customer demand for energy is low, such as during the middle of the night. The water is then allowed to flow back through the turbine-generators at times when electricity demand is high.

¹ For the generator to produce electricity, loops of wire must spin rapidly through force fields made by magnets.

HYDROPOWER FAST FACTS

- It's the cheapest way to generate electricity today. Once a dam has been built and the equipment is in place, the source of energy, flowing water, is free.
- Several countries, including Canada, Brazil, New Zealand, and Switzerland, produce the majority of their electricity through hydropower.
- It's a renewable power source. Rain and snow supply the water.
- Power is readily available. A hydroelectric plant can provide electricity on demand.
- Damming rivers can destroy or disrupt animal migration patterns.
- Hydropower plants can cause low levels of oxygen in water, which is harmful to river plants and animals.
- Reservoirs, or bodies of water created by dams, can cover land needed for farming.

Capturing the Wind

by Diane Zahler



- 1 Have you ever seen an old-fashioned windmill? Windmills built long ago often look like fat wooden or stone towers. They have four **blades** or sails that turn in the wind. For more than 1,000 years, people used windmills to capture the energy of the wind. Windmills were first used to grind grain and pump water. Later, they created the energy needed to cut up lumber and process all kinds of products, from spices to paint. In the 1880s, though, engineers realized that windmills could produce electricity—and the wind turbine was born.

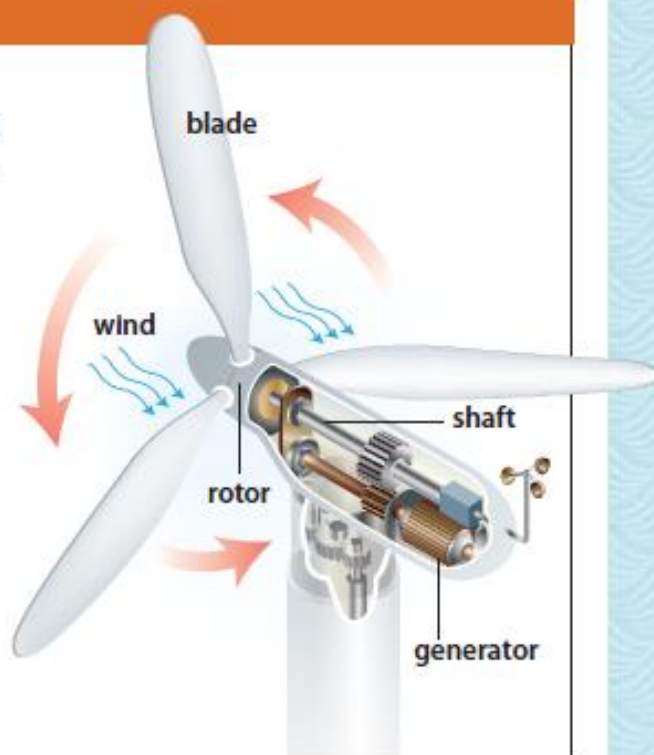
How Do Wind Turbines Produce Power?

- 2 Wind turbines are huge windmills that usually have two or three big blades. The blades can be as long as 200 feet (60 meters)—about two-thirds the length of a football field. Wind turbines are tall—sometimes as tall as a twenty-story building—so they can catch the wind. At that height, the wind moves fast and is more reliable than the wind we feel near the ground.

How a Wind Turbine Works

- Blades are mounted around a turning part called a **rotor**, which is connected to a part called a **shaft**.
- When the blades catch the wind, it turns them. This spins the shaft.
- The shaft is connected to a **generator**, which turns the energy from the movement of the shaft into **current electricity**, or electricity that travels through cables and wires.

Wind turbines, in fact, work exactly the opposite way fans do. A fan uses electricity to create wind. A turbine uses the wind to create electricity.



- 3 Where does the wind that moves the blades come from? Curiously enough, wind power gets its start from solar power, or energy from the sun. As the sun warms the earth, different areas heat up to different temperatures. These differences cause changes in air pressure. Air moves from high-pressure areas to low-pressure areas. This movement of the air—sometimes slow, sometimes fast—is what we call wind.

Wind Farms

- 4 An area of land with a group of energy-producing wind turbines is called a **wind farm**. Wind farms produce large quantities of clean energy. What do we mean by “clean” energy? Clean energy doesn’t create pollution or greenhouse gases that can contribute to climate change. In 2013, the clean energy produced by wind power was equal to the effect of taking nearly 17 million cars off the roads. Wind energy is also renewable, which means it can’t be used up. And it doesn’t use water to create electricity. Electricity plants powered by coal or nuclear energy use water for cooling. Switching to wind power can provide water for more than a million people each year.
- 5 To create energy, a turbine needs winds of at least seven miles per hour. The turbine is most efficient when the winds are around thirty miles per hour. It can be difficult to find the best sites to build wind farms, though. They usually have to be located in rural places with few trees to slow the wind. Hilltops are good locations, and some wind farms in Europe are located offshore, in water. These locations make bringing the electricity to where it is most needed (usually in cities) a challenge. Power lines are required to carry the electricity, and they can be expensive.



KEY WORDS

blade a flat, wide, spinning part used to push air

current electricity a form of electricity that travels through cables and wires

generator a machine that turns energy of motion into electrical energy

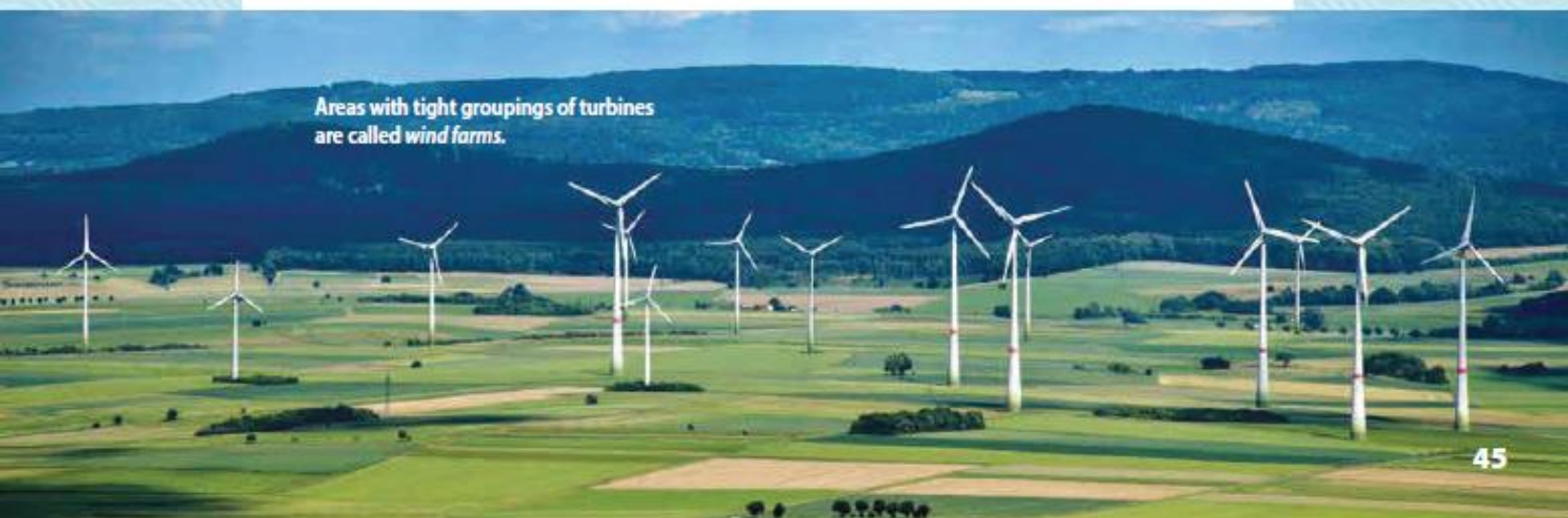
rotor a machine part that rotates, or turns

shaft the long, narrow part of a machine

watt the unit that scientists use to measure power

wind farm an area of land with a group of energy-producing wind turbines

Areas with tight groupings of turbines are called **wind farms**.



A wind turbine designed to provide electricity for a single home



Personal Wind Turbines

- 6 Wind turbines can also create power on a smaller scale. Some wind turbines power only a single home. (Imagine having your own windmill in the backyard or on the roof.) But not every home is right for a personal turbine. Most personal turbines are in areas far from cities or towns. A person who installs a turbine for a home must live in an area with winds of at least nine to ten miles per hour for the turbine to generate enough electricity to be useful. A personal turbine can let homeowners be energy independent or add their own electricity to the electricity they buy. This can result in low electricity costs—or even none at all. For example, one homeowner in Southern California installed a 60-foot turbine and didn't have to pay an electricity bill for the next year.

Some Windy Problems

- 7 Turbines do create one kind of pollution: noise pollution. People who live close to wind farms often complain about the noise the turbines make as they turn. And there are other problems with wind turbines. Wind isn't constant: it doesn't always blow, and sometimes it blows harder than other times. Because of this, wind can't be counted on as our main source of energy.
- 8 Often the areas where turbines would be most efficient could be used in other ways—growing crops, for example. Some critics believe that wind turbines are ugly and ruin the landscape. And turbines have been responsible for the deaths of birds and bats that fly into them. Those who build the turbines have to consider these problems and choose sites carefully. The wind industry has been working with environmental groups to reduce the damaging effect of turbines on wildlife and the environment.
- 9 Once a turbine is built, the energy it produces costs very little. However, building the turbines is costly because the technology is still relatively new. That said, wind energy is a fast-growing business. By 2012, there were more than 46,000 wind turbines in the United States.

The Future of Wind Power

- 10 In 2013, wind power in the United States created enough electricity to power a small city. It would take fourteen nuclear power plants or fifty-two coal plants to make that much electricity.
- 11 In 2009, wind power created less than two percent of the electricity used in the United States, but by 2014 that amount was greater than five percent. Some experts predict that by 2050, one-third of all the world's electricity will come from the wind.
- 12 Wind power has obviously come a long way since the days of grinding grain and pumping water. And while wind turbines can't be the only solution to our world's energy needs, they are one piece of a complex challenge that we all have an interest in facing up to and solving—the challenge of how we keep our society working.

Think It Through

Use details from both sources to complete the following activities. Your answers will help you write your article.

1 How does a hydroelectric plant work to produce electricity? List the steps below.

1. _____
2. _____
3. _____
4. _____

HINT Use the steps in both the text and the diagram to help you understand the process.

2 How is the way that a wind turbine works similar to the way that a hydroelectric plant works? How is it different?

HINT Use the diagrams in both sources to help you understand how each power source works.

3 Using renewable sources of energy is a benefit of both hydroelectric power plants and wind turbines. Explain how each one uses renewable sources of energy. Then explain why this is a benefit.

HINT What does *renewable* mean? What energy source does each type of power plant use?

- 4 Hydroelectric power and wind power are “clean” sources of energy, meaning they don’t cause air pollution. However, they can still cause problems for the environment. What is one problem that each of them can cause?

Hydroelectric Power: _____

Wind Power: _____

- 5 Based on what you read, do you think communities should keep investing in hydroelectric dams and wind turbines? Do the benefits of these power sources outweigh their problems? Explain your answer, using details from both texts.

HINT Look for details in both sources that you marked with a P.

HINT Look at the sidebars as well as the main text of the two sources.

Step 4 Organize Your Evidence



W.5.5: With guidance and support from peers and adults, develop and strengthen writing as needed by planning. . . .

W.5.8: . . . summarize or paraphrase information in notes. . . .

FOCUS Plan Your Article

Now that you've gathered information from your sources, it's time to organize it. You can use the three ideas you identified in your assignment to group your details. When you write your article, each idea and related group of details will become a paragraph or section.

Modeled Instruction

To organize his information, Beau created the chart below. Then he began adding details he underlined in his sources. He explained each detail in his own words.

Compare the first underlined sentence from "Hydroelectric Power" with the note in Beau's chart. Then help Beau complete the next three bullets by adding details from the remaining underlined sentences.

From "Hydroelectric Power" page 43

A typical hydroelectric dam is built on a big river with a large drop in elevation. The dam stores lots of water behind it in the reservoir. Near the bottom of the dam wall there is the water intake called a penstock. Gravity causes the water to fall through the penstock inside the dam. At the end of the penstock, there is a turbine propeller, which is turned by the moving water. The shaft from the turbine goes up into the generator, which produces the power.



Beau's Chart

Hydroelectric Plants	
How It Works	<ul style="list-style-type: none"> • Gravity makes water fall through the penstock. • The water _____ _____ _____ • _____ _____ _____ _____ • _____ _____ _____ _____

Guided Practice

Read the following excerpt from “Capturing the Wind” and continue helping Beau fill in his chart by completing the activities. Use the Hints for help.



Beau's Chart

Wind Turbines

How It Works

• Blades on the turbines catch the wind.

•

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From “Capturing the Wind” page 44

... Wind turbines are tall—sometimes as tall as a twenty-story building—so they can catch the wind. **W** At that height, the wind moves fast and is more reliable than the wind we feel near the ground.

How a Wind Turbine Works

- Blades are mounted around a turning part called a **rotor**, which is connected to a part called a **shaft**.
- When the blades catch the wind, it turns them. This spins the shaft.
- The shaft is connected to a **generator**, which turns the energy from the movement of the shaft into **current electricity**, or electricity that travels through cables and wires.

- 1** Draw an arrow from the underlined sentence to the matching detail in Beau's chart. Then explain why Beau put the detail in the chart.

HINT How did Beau mark the underlined sentence?

- 2** Find two additional details that describe how wind power works. **Underline** them, and **mark** them with a W. Add them to the chart using your own words.

HINT What happens after the blades catch the wind?

Independent Practice

Write Time In your own chart, record the evidence you marked in each source. Organize the evidence according to the idea it supports.

Turn and Talk

The first section of Beau's chart lists ideas about how each power source works. Discuss what other sections the chart should have, based on your assignment.

Step 5 Draft Your Article



W.5.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

W.5.2a: Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings) ... when useful to aiding comprehension.

FOCUS Write an Introduction

Read this chart to learn more about the parts of an article. You can refer back to this information as you write your draft.

Parts of an Article

INTRODUCTION

Tells what the article is about and captures readers' attention

The Introduction to an article should clearly state the topic. It should also grab readers' attention and make them want to keep reading. Here are three different approaches:

- **Show the importance** of the topic in your readers' everyday lives.
- **Ask a question** to make readers curious and get them thinking about possible answers.
- **Make an observation** that will help readers know what aspect of the topic your article will focus on.

BODY

Develops the topic with facts and details

The body of your article should include paragraphs that support and explain your topic. You should:

- **Group related information** into paragraphs.
- Include **facts, definitions, details, and examples** to develop your ideas.
- Use **headings** to tell what each major section is about.
- Use **precise language** and **domain-specific vocabulary** to present ideas accurately.
- Use **linking words, phrases, and clauses** to connect your ideas and make them easy to follow.

CONCLUSION

Sums up what the writer wants readers to know

Conclude your article by summing up your main points. You can also use these approaches:

- **Draw a conclusion** or make a statement based on the information you presented.
- Give your readers a **final thought** about the topic.

Draft Your INTRODUCTION

Practice writing three different approaches to an introduction. Study each example below. Then try writing in a similar way for your article.

Show the Importance of Your Topic

Sample Text	Imagine your life without heat, lights, television, and computers. They all depend on one thing—electricity.
Your Article	<hr/> <hr/> <hr/>

Ask a Question

Sample Text	But what price are we willing to pay for all that electricity?
Your Article	<hr/> <hr/> <hr/>

Make an Observation

Sample Text	All of the benefits we enjoy from cheap, reliable electricity come with some problems, too.
Your Article	<hr/> <hr/> <hr/>

INTRODUCTION

BODY

CONCLUSION

HINT Who is your audience? How does your topic relate to them?

HINT Consider some of the benefits and problems you learned about in your research. What do you want your audience to think about?

HINT Think about your assignment. What ideas will your article focus on?

Independent Practice

Write Time Use one or more of your ideas from this page to begin writing your introduction. Then begin writing your body paragraphs.

Turn and Talk

Discuss how you showed your audience the importance of your topic. What are some other ideas you could try?



W.5.2b: Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.

FOCUS Add Definitions and Examples

Draft Your **BODY**

As you write your draft, develop your topic by providing definitions and examples to explain complex technical processes. **Definitions** help your readers understand scientific words, and **examples** illustrate how ideas play out in reality.

- A **definition** is an explanation of what a word or phrase means. Introduce a definition with a phrase such as “This means . . .” or “In other words. . .”
- An **example** is a specific, real-world illustration of a general idea. Writers often introduce examples with phrases such as “For example . . .” or “For instance. . .”



Modeled Instruction

Read the excerpt from “Turn on the Power.” Note the underlined details. Complete the activities to show how they clarify the main idea of each paragraph.

From **MENTOR TEXT** page 35

That said, coal and nuclear plants have some major problems. Coal plants spew carbon dioxide into the air, an important cause of climate change. Another problem is that coal is a nonrenewable resource. That means it can never be replaced during our lifetimes. Once we run out of coal, that’s it.

The metals that fuel nuclear power plants are also nonrenewable resources. In addition, nuclear plants produce dangerous waste products that have to be stored carefully. Otherwise they can cause cancer and other health problems in people and animals.

1 How does the underlined sentence in the first paragraph help readers understand the main idea of the paragraph?

2 **Underline** two examples of coal plants’ “major problems” in the first paragraph.

3 Read the underlined word in the second paragraph. Explain why the writer included this detail.



Guided Practice

Beau used his notes to write the draft below. Now he must find ways to develop his ideas with specific definitions and examples.

Read Beau's notes and draft. Complete the activities, using the Hints for help.

Beau's Chart

Hydroelectric Plants	
Benefits	<ul style="list-style-type: none">• Uses a renewable resource• Cheapest way to generate electricity; once plant is built, source of energy is free• More efficient than fossil fuel or nuclear "for peak power demands during short periods"; can use pumped storage to keep water for later use
Problems	

Beau's Draft



Hydroelectric plants use water, a plentiful and renewable resource. Such power plants are the most inexpensive way to generate electricity. They're also more efficient in many ways. But they have their share of problems, too.

4 What words could Beau define to support the first sentence in his draft?

HINT What science term might be unfamiliar to readers?

5 Beau wants to include examples after the underlined sentence. On the lines below, write two sentences with examples from the source.

HINT Read the notes in Beau's chart. Which details could he use to show the efficiency of hydroelectric power plants?

Independent Practice

Write Time Finish drafting the body of your article. Then draft a conclusion using the tips from the chart on page 52 for help.

Turn and Talk

Why are definitions and examples especially important to use when writing about science?

Step 6 Revise: First Read

W.5.4: Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

W.5.5: With guidance and support from peers and adults, develop and strengthen writing as needed by ... revising....

FOCUS Ideas and Elaboration

As you revise, use your Informational Writing Checklist to check your writing. Work through the checklist, one line at a time. Reread the related parts of your article to decide whether you did your best possible work for each trait described. In this step, you will check your article for three of the traits in the categories of Ideas and Elaboration.

Modeled Instruction

The Mentor Text writer, Sung-Ki Yu, used the same checklist to evaluate his draft.

Read his Think Aloud to see how he checks his article.

MENTOR TEXT Draft

When you turn on a television or computer, electricity flows into it and makes it work. But where does that electricity come from? Two important sources of electricity are coal power plants and nuclear power plants.

How It Works: Coal

The United States has more than 500 coal plants located all over the country. All of them are near a water source such as a river. A river is far larger than a creek or a stream. Coal plants are near water because they use it to make electricity. Here's how the process works. After coal comes to the plant, it goes into a huge furnace. As the coal burns, it creates intense heat. The heat boils water into steam. The steam is pumped into a turbine to make the turbine spin. The turbine then makes a generator work. The electricity then flows through transmission lines to buildings, computers, and televisions everywhere.

Think Aloud

- **Ideas** Do I state my topic clearly? My article is mainly about the good and bad points of coal and nuclear power plants. My introduction doesn't say anything about that. I'll add a sentence to the end of the paragraph to make my topic clear: "Both types of plant provide power that keeps our country running, and both have their benefits and problems."
- **Elaboration** Do I include enough facts, details, and examples to support my ideas? In the second paragraph, my main idea is "How coal plants work." I include enough details in *most* of the paragraph, but I don't say what a generator does. I'll replace "The turbine then makes a generator work" with these sentences: "The turbine then spins a metal shaft in a generator. This action makes electricity."
- **Elaboration** Are all my details clearly related to the topic? Mostly. But my second paragraph has a detail that doesn't belong: "A river is far larger than a creek or a stream." It doesn't relate to coal plants or nuclear plants, so I'll delete it.

Guided Practice

Read the excerpt below from Beau's draft of the assignment. Then complete the activities. Use the Hints for help.



Beau's Draft

Wouldn't it be wonderful to have sources of power that pollute little, operate cheaply, and produce electricity for millions of people? We already do: hydroelectric power plants and wind turbines.

Most of the more than 2,000 hydroelectric power plants in the United States work in the following way. At the base of a dam is an entry called a penstock. Water flows through the penstock to a turbine. The turbine spins, making a shaft in a generator rotate quickly. The spinning shaft in the generator makes electricity, which then flows through power lines.

- 1 Ideas** Beau does not clearly state his topic in his first paragraph. Write a sentence that he could add to the end of the first paragraph to make his topic clear.

HINT Your assignment clearly states what the article should be about.

- 2 Elaboration** The main idea of Beau's second paragraph is how hydroelectric power plants work. Does he include enough facts, details, and examples so that his readers clearly understand this idea? Explain your answer.

HINT Imagine you haven't read the sources and don't know how a dam works. What information is missing from Beau's description?

- 3 Elaboration** Are all of Beau's details related to his topic? Explain your answer.

HINT Do any details seem out of place? Or do they all seem to fit?

Independent Practice

Write Time Use the Informational Writing Checklist passed out by your teacher to evaluate your draft for **Ideas**, **Organization**, and **Elaboration**.

Turn and Talk

Take turns reading aloud paragraphs from your drafts. Listen for whether your main ideas are supported by enough facts, details, and examples.



Step 7 Revise: Second Read

W.5.2d: Use precise language ... to inform about or explain the topic.

W.5.5: With guidance and support from peers and adults, develop and strengthen writing as needed by ... revising....

FOCUS Precise Language

In this step, you'll look for ways to use **precise language**. Good writers present their ideas using words and phrases that are very specific, rather than vague, and that accurately describe what is being discussed.

The charts below show some examples of vague words and the precise words that can replace them.

Vague	Precise
make	produce - "create something as part of a process"
need	demand - "a pressing requirement"

Vague	Precise
good thing	benefit - "advantage"
always there	reliable - "dependable"

Modeled Instruction

Read the following excerpt from "Turn on the Power." Note how Sung-Ki Yu uses precise language to make his ideas as clear as possible. Then complete the activities.

From MENTOR TEXT page 35

Both coal and nuclear plants have some benefits compared to other power sources. Coal produces power more cheaply than other sources, such as natural gas and oil. Coal plants are also reliable. They provide a steady supply of power even when there's a great need for it, such as during the hot summer months.

Like coal plants, nuclear plants are reliable. Unlike solar power plants, which depend on the sun, nuclear plants produce a steady supply of energy both night and day. And nuclear plants have an advantage over coal plants. They release steam, not smoke, into the air when they make electricity, and steam doesn't cause pollution.

1 In the second sentence, Sung-Ki uses the word *produces*. In an earlier draft, he used *makes*. Why did he replace this word?

2 Draw a box around two additional examples of precise language the writer uses in the first paragraph.

3 In the second paragraph, **cross out** a vague word the writer could replace with a precise one. Write the replacement on the line below.

Guided Practice

Read the following paragraph from an early draft of the Mentor Text. Then use the Hints to complete the activities that follow.

MENTOR TEXT Draft

Coal and nuclear power plants have some bad side effects. But for now, the good things outweigh the problems. In 2012, coal-powered plants met 37 percent of America's electricity needs. Nuclear plants made 19 percent of our energy.

- 4 Read this sentence from the draft:

But for now, the good things outweigh the problems.

Which word best replaces the underlined text in the sentence?
Circle the correct answer.

- A supplies
- B sources
- C demands
- D benefits

- 5 Read these sentences from the draft:

In 2012, coal-powered plants met 37 percent of America's electricity needs.
Nuclear plants made 19 percent of our energy.

Rewrite the sentence on the lines below, replacing any vague words with precise words.

HINT Which word is a more precise way to say "good things"?

HINT Check the chart on the opposite page for vague words that appear in these sentences.

Independent Practice

Write Time Use the Informational Writing Checklist passed out by your teacher to evaluate your draft for **Language**.

Turn and Talk

Take turns reading aloud your drafts, identifying where you or your partner could use precise language to express ideas more clearly.



Lesson 2 Writing to Inform: Article

Step 8 Edit for Conventions



W.5.5: With guidance and support from peers and adults, develop and strengthen writing as needed by ... editing.

L.5.1e: Use correlative conjunctions (e.g., *either/or*, *neither/nor*).

FOCUS Correlative Conjunctions

The last step is to make sure that your spelling, grammar, and punctuation are correct. In this step, you'll focus on using **correlative conjunctions**. Conjunctions are words such as *and*, *but*, and *or* that join words, phrases, or parts of a sentence. Correlative conjunctions are conjunctions that are used in pairs. The chart below shows examples.

Correlative Conjunctions	Examples
either ... or	We can visit either a hydroelectric plant or a wind turbine.
neither ... nor	Neither Beau nor Sung-Ki has actually seen such places.
both ... and	Both coal and nuclear power plants are essential sources of power.
not only ... but also	For now, our society depends not only on renewable energy resources but also on nonrenewable ones.

Language Handbook To learn more about correlative conjunctions, turn to page 196.

Modeled Instruction

Read the following excerpt from a draft of "Turn on the Power." Then complete the activities.

MENTOR TEXT Draft

Coal plants and nuclear plants share many similarities. Both coal and also nuclear power plants need sources of heat and water to produce electricity. And, both are relatively cheap and reliable after they are built. But neither coal or nuclear energy is without problems. They not only produce types of pollution but rely on nonrenewable resources to work. Still, they are an important part of modern American society.

1 Describe how to correct the sentence with the wavy line.

2 Decide whether the underlined sentence uses correlative conjunctions correctly. If not, correct it on the line below.

3 One more sentence uses correlative conjunctions incorrectly. Find it and correct it on the lines below.



Guided Practice

Read the following excerpt from an early draft of "Turn on the Power." Then complete the activities. Use the Hints for help.

MENTOR TEXT Draft

Nuclear plants can use either uranium and thorium metal as a heat source. Neither uranium or thorium is common or cheap. Both are hard to find but expensive to prepare for use. Once these metals are prepared, however, nuclear energy is not only cheap or also reliable.

- 4 Read this sentence from the draft:

Nuclear plants can use either uranium and thorium metal as a heat source.

Which of the following should replace the underlined words to make the sentence correct? Circle the correct answer.

- A either uranium nor
- B neither uranium nor
- C either uranium or
- D neither uranium and

- 5 On the lines below, rewrite the following sentences to correct any mistakes in the use of correlative conjunctions.

Neither uranium or thorium is common or cheap. Both are hard to find but expensive to prepare for use. Once these metals are prepared, however, nuclear energy is not only cheap or also reliable.

HINT The writer wants to show a choice between uranium and thorium.

HINT Check the chart on the opposite page for correct pairings of correlative conjunctions.



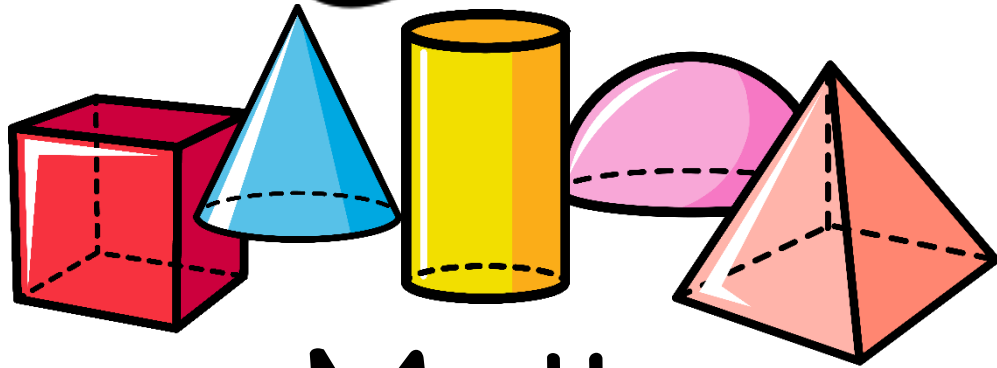
Independent Practice

Write Time Use the Informational Writing Checklist passed out by your teacher to evaluate your draft for **Conventions**.

Turn and Talk



Take turns reading aloud your drafts. Discuss whether you can connect any of your ideas by using correlative conjunctions.



Math Practice Pages





Determine the number that correctly fills in the blank.

- 1) 27 is _____ times as many as 3.
- 2) 5 times as many as 8 is _____.
- 3) 54 is 6 times as many as _____.
- 4) 3 times as many as 3 is _____.
- 5) 36 is _____ times as many as 4.
- 6) 2 times as many as 2 is _____.
- 7) 36 is _____ times as many as 6.
- 8) 54 is 9 times as many as _____.
- 9) 3 times as many as 2 is _____.
- 10) 14 is 2 times as many as _____.
- 11) 21 is _____ times as many as 7.
- 12) 48 is 6 times as many as _____.
- 13) 45 is _____ times as many as 5.
- 14) 15 is 5 times as many as _____.
- 15) 4 times as many as 7 is _____.
- 16) 24 is 3 times as many as _____.
- 17) 81 is _____ times as many as 9.
- 18) 6 times as many as 5 is _____.
- 19) 9 times as many as 7 is _____.
- 20) 12 is _____ times as many as 4.

Answers

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



Solve each problem.

1)
$$\begin{array}{r} \square \\ 52 \\ \times 72 \\ \hline \end{array}$$

Helper grid:

2)
$$\begin{array}{r} \square \\ 28 \\ \times 82 \\ \hline \end{array}$$

Helper grid:

3)
$$\begin{array}{r} \square \\ 95 \\ \times 45 \\ \hline \end{array}$$

Helper grid:

4)
$$\begin{array}{r} \square \\ 65 \\ \times 56 \\ \hline \end{array}$$

Helper grid:

5)
$$\begin{array}{r} \square \\ 65 \\ \times 39 \\ \hline \end{array}$$

Helper grid:

6)
$$\begin{array}{r} \square \\ 57 \\ \times 83 \\ \hline \end{array}$$

Helper grid:

7)
$$\begin{array}{r} \square \\ 93 \\ \times 62 \\ \hline \end{array}$$

Helper grid:

8)
$$\begin{array}{r} 21 \\ \times 59 \\ \hline \end{array}$$

Helper grid:

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____



Solve each problem.

1)
$$\begin{array}{r} \square \\ 84 \\ \times 30 \\ \hline \end{array}$$

Helper grid:

2)
$$\begin{array}{r} \square \\ 65 \\ \times 22 \\ \hline \end{array}$$

Helper grid:

3)
$$\begin{array}{r} \square \\ 47 \\ \times 19 \\ \hline \end{array}$$

Helper grid:

4)
$$\begin{array}{r} \square \\ 76 \\ \times 89 \\ \hline \end{array}$$

Helper grid:

5)
$$\begin{array}{r} \square \\ 38 \\ \times 20 \\ \hline \end{array}$$

Helper grid:

6)
$$\begin{array}{r} 84 \\ \times 11 \\ \hline \end{array}$$

Helper grid:

7)
$$\begin{array}{r} 74 \\ \times 21 \\ \hline \end{array}$$

Helper grid:

8)
$$\begin{array}{r} \square \\ 86 \\ \times 20 \\ \hline \end{array}$$

Helper grid:

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____



Solve each problem.

1)
$$\begin{array}{r} \square \\ 75 \\ \times 74 \\ \hline + \square\square\square\square \\ \hline \end{array}$$

2)
$$\begin{array}{r} 40 \\ \times 50 \\ \hline + \square\square\square\square \\ \hline \end{array}$$

3)
$$\begin{array}{r} \square \\ 25 \\ \times 69 \\ \hline + \square\square\square\square \\ \hline \end{array}$$

4)
$$\begin{array}{r} \square \\ 18 \\ \times 61 \\ \hline + \square\square\square\square \\ \hline \end{array}$$

5)
$$\begin{array}{r} 91 \\ \times 13 \\ \hline + \square\square\square\square \\ \hline \end{array}$$

6)
$$\begin{array}{r} \square \\ 25 \\ \times 31 \\ \hline + \square\square\square\square \\ \hline \end{array}$$

7)
$$\begin{array}{r} 90 \\ \times 51 \\ \hline + \square\square\square\square \\ \hline \end{array}$$

8)
$$\begin{array}{r} \square \\ 36 \\ \times 83 \\ \hline + \square\square\square\square \\ \hline \end{array}$$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____



Solve each problem.

1)

$$\begin{array}{r} \square \\ \square \\ 66 \\ \times 84 \\ \hline + \square\square\square\square \\ \hline \square\square\square\square \end{array}$$

2)

$$\begin{array}{r} \square \\ \square \\ 24 \\ \times 89 \\ \hline + \square\square\square\square \\ \hline \square\square\square\square \end{array}$$

3)

$$\begin{array}{r} 20 \\ \times 48 \\ \hline + \square\square\square \\ \hline \square\square\square \end{array}$$

4)

$$\begin{array}{r} \square \\ 47 \\ \times 91 \\ \hline + \square\square\square\square \\ \hline \square\square\square\square \end{array}$$

5)

$$\begin{array}{r} \square \\ 77 \\ \times 21 \\ \hline + \square\square\square\square \\ \hline \square\square\square\square \end{array}$$

6)

$$\begin{array}{r} 30 \\ \times 11 \\ \hline + \square\square\square \\ \hline \square\square\square \end{array}$$

7)

$$\begin{array}{r} 30 \\ \times 36 \\ \hline + \square\square\square\square \\ \hline \square\square\square\square \end{array}$$

8)

$$\begin{array}{r} \square \\ \square \\ 16 \\ \times 38 \\ \hline + \square\square\square\square \\ \hline \square\square\square\square \end{array}$$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____



Solve each problem.

Answers

1) $90 \div 2 =$ _____

2) $88 \div 2 =$ _____

1. _____

3) $22 \div 5 =$ _____

4) $98 \div 2 =$ _____

2. _____

3. _____

5) $72 \div 2 =$ _____

6) $78 \div 2 =$ _____

4. _____

5. _____

6. _____

7) $35 \div 2 =$ _____

8) $31 \div 3 =$ _____

7. _____

8. _____

9. _____

9) $54 \div 8 =$ _____

10) $37 \div 6 =$ _____

10. _____

11. _____

12. _____

11) $46 \div 6 =$ _____

12) $96 \div 2 =$ _____



Solve each problem.

1) $90 \div 2 =$ _____

2) $88 \div 2 =$ _____

3) $22 \div 5 =$ _____

4) $98 \div 2 =$ _____

5) $72 \div 2 =$ _____

6) $78 \div 2 =$ _____

7) $35 \div 2 =$ _____

8) $31 \div 3 =$ _____

9) $54 \div 8 =$ _____

10) $37 \div 6 =$ _____

11) $46 \div 6 =$ _____

12) $96 \div 2 =$ _____

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____



Find the missing value in each of the problems.

Answers

- 1) $? \times 2 = 4$
- 2) $5 \times ? = 40$
- 3) $18 = 9 \times ?$
- 4) $10 = ? \times 1$
- 5) $? = 10 \times 3$
- 6) $24 \div 8 = ?$
- 7) $63 \div ? = 7$
- 8) $? \div 7 = 6$
- 9) $? = 12 \div 2$
- 10) $4 = 16 \div ?$
- 11) $10 = ? \div 7$
- 12) $2 \times 2 = ?$
- 13) $? \times 6 = 60$
- 14) $4 \times ? = 32$
- 15) $72 = 8 \times ?$
- 16) $18 = ? \times 6$
- 17) $? = 8 \times 4$
- 18) $7 \div 7 = ?$
- 19) $2 \div ? = 2$
- 20) $? \div 9 = 8$

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



Find the missing value in each of the problems.

Answers

1) $? \times 2 = 4$

1. _____

2) $5 \times ? = 40$

2. _____

3) $18 = 9 \times ?$

3. _____

4) $10 = ? \times 1$

4. _____

5) $? = 10 \times 3$

5. _____

6) $24 \div 8 = ?$

6. _____

7) $63 \div ? = 7$

7. _____

8) $? \div 7 = 6$

8. _____

9) $? = 12 \div 2$

9. _____

10) $4 = 16 \div ?$

10. _____

11) $10 = ? \div 7$

11. _____

12) $2 \times 2 = ?$

12. _____

13) $? \times 6 = 60$

13. _____

14) $4 \times ? = 32$

14. _____

15) $72 = 8 \times ?$

15. _____

16) $18 = ? \times 6$

16. _____

17) $? = 8 \times 4$

17. _____

18) $7 \div 7 = ?$

18. _____

19) $2 \div ? = 2$

19. _____

20) $? \div 9 = 8$

20. _____



Find the missing value in each of the problems.

Answers

1) $? \times 5 = 5$

1. _____

2) $1 \times ? = 6$

2. _____

3) $7 = 1 \times ?$

3. _____

4) $60 = ? \times 10$

4. _____

5) $? = 7 \times 8$

5. _____

6) $24 \div 3 = ?$

6. _____

7) $90 \div ? = 10$

7. _____

8) $? \div 7 = 9$

8. _____

9) $? = 32 \div 8$

9. _____

10) $9 = 9 \div ?$

10. _____

11) $6 = ? \div 10$

11. _____

12) $3 \times 9 = ?$

12. _____

13) $? \times 2 = 18$

13. _____

14) $7 \times ? = 7$

14. _____

15) $16 = 8 \times ?$

15. _____

16) $12 = ? \times 4$

16. _____

17) $? = 10 \times 9$

17. _____

18) $6 \div 2 = ?$

18. _____

19) $100 \div ? = 10$

19. _____

20) $? \div 8 = 9$

20. _____



Solve each problem.

- 1) The table below show the customers an arcade had leading up to the weekend.

Day	Customers
Tuesday	128
Wednesday	191
Thursday	123
Friday	197

Over the weekend they had 7 times as many customers as they did before in the previous 4 days. How many more customers did they have over the weekend than they had in the previous 4 days?

- 3) The table below show the number of employees each store has.

Store #	Employees
1	6
2	10
3	5
4	10

A new larger store is opening that will employ 8 times as many employees as all the other stores combined. How many fewer employees did the old stores have compared to the new store?

- 2) The table below show the pounds of candy a company sold in the months leading up to October.

Month	Pounds of Candy Sold
June	118
July	168
August	151
September	151

In October they sold 2 times as many pounds of candy as they did in the previous 4 months combined. How many fewer pounds of candy did they sell in the previous 4 months compared to in October?

- 4) The table below show the points Sarah scored on a video game each time she played.

Game #	Points Scored
1	111
2	156
3	168

After the first 3 games, she took a break and came back the next day and scored 7 times as many points as she had during all the previous games combined. How many fewer points did she score before her break than she scored after her break?

Answers

1. _____
2. _____
3. _____
4. _____



Solve each problem.

- 1) The table below show the points Sarah scored on a video game each time she played.

Game #	Points Scored
1	112
2	150
3	117

After the first 3 games, she took a break and came back the next day and scored 4 times as many points as she had during all the previous games combined. How many fewer points did she score before her break than she scored after her break?

- 2) The table below shows the number of books Sarah read the first 3 months of school.

Month	Books Read
1	38
2	37
3	21

If Billy read 8 times as many books as Sarah, how many more books did Billy read?

- 3) A new fast food restaurant opened 5 months ago. The table belows shows the number of burgers they've sold so far.

Month	Burgers Sold
1	3,545
2	2,782
3	1,481
4	3,095
5	3,385

The next month (after spending some money on an ad) they sold 2 times as many as they had sold in the previous 5 months. How many more burgers did they sell after running the ad?

- 4) The table below show the pounds of candy a company sold in the months leading up to October.

Month	Pounds of Candy Sold
July	166
August	166
September	104

In October they sold 4 times as many pounds of candy as they did in the previous 3 months combined. How many more pounds did they sell in October than were sold in the previous 3 months?

Answers

- _____
- _____
- _____
- _____



Solve each problem.

- 1) The table below show the number of play tickets sold (excluding the first week).

Week	Tickets sold
2	112
3	123
4	115
5	160

In the first week there were 2 times as many tickets sold as there were in the next 4 weeks. How many more tickets were sold in the first week than in the remaining weeks?

- 2) The table below show the points Sarah scored on a video game each time she played.

Game #	Points Scored
1	124
2	176
3	104

After the first 3 games, she took a break and came back the next day and scored 9 times as many points as she had during all the previous games combined. How many more points did she score after her break?

- 3) The table below show the number of employees each store has.

Store #	Employees
1	9
2	6
3	5
4	5

A new larger store is opening that will employ 9 times as many employees as all the other stores combined. How many fewer employees did the old stores have compared to the new store?

- 4) A new fast food restaurant opened 5 months ago. The table belows shows the number of burgers they've sold so far.

Month	Burgers Sold
1	3,500
2	1,649
3	1,154
4	2,812
5	2,216

The next month (after spending some money on an ad) they sold 7 times as many as they had sold in the previous 5 months. How many more burgers did they sell after running the ad?

Answers

1. _____
2. _____
3. _____
4. _____