7th Grade Packet

Used All Week:

- ELA: Finish this Comic: Complete a Comic a day
- Math: Proportional Reasoning Focus
- SS: The Protestant Reformation
- Science: Instructions for Close Reading

	ELA	Math	Social Studies	Science
Day 1	**Reading Passage:** Genetic Basis of a Butterfly	**Concept Review:** Proportional Reasoning Focus Lessons **Practice and Activities:** Castle Learning Practice	**Review:** The Protestant Reformation	Instructions for Close Reading Close Reading: Hurricanes, Cyclones and Typhoons
Day 2	**Reading Passage:** The Artist's Search	**Concept Review:** Proportional Reasoning Focus Lessons **Practice and Activities:** Castle Learning Practice	**Review:** The Protestant Reformation	Instructions for Close Reading Close Reading: Explaining Energy Transfer
Day 3	**Reading Passage:** Portrait of a Journalist	**Concept Review:** Proportional Reasoning Focus Lessons **Practice and Activities:** Understanding and Interpreting Graphs of Proportional Relationships	**Review:** The Protestant Reformation	Instructions for Close Reading Close Reading: Air Pollution Across Pacifics
Day 4	**Reading Passage:** The Quest for a Desk	**Concept Review:** Proportional Reasoning Focus Lessons **Practice and Activities:** Solving Multi-Step Ratio and Percent Problems	**Review:** The Protestant Reformation	Instructions for Close Reading Close Reading: What are clouds?
Day 5	**Reading Passage:** Worldwide Loss of Bees a Growing Concern	**Concept Review:** Proportional Reasoning Focus Lessons **Practice and Activities:** Ratio Review-Castle Learning	**Review:** The Protestant Reformation	Instructions for Close Reading Close Reading: Your Food Choices Affect Climate

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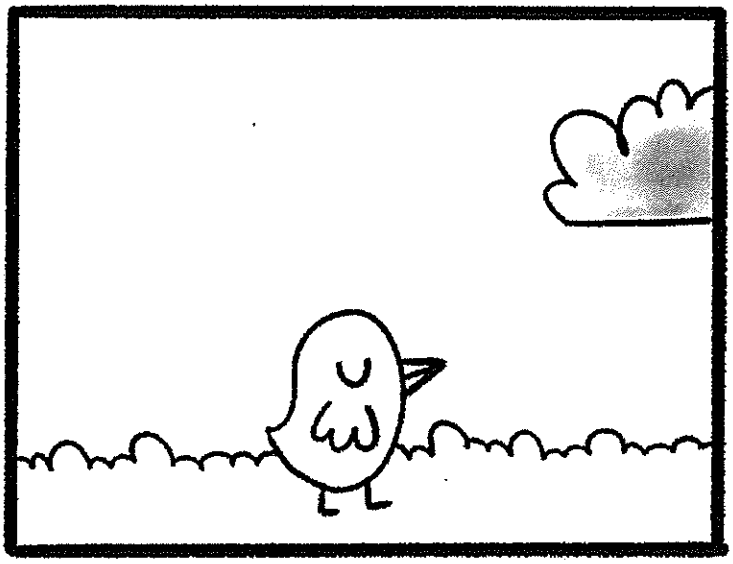

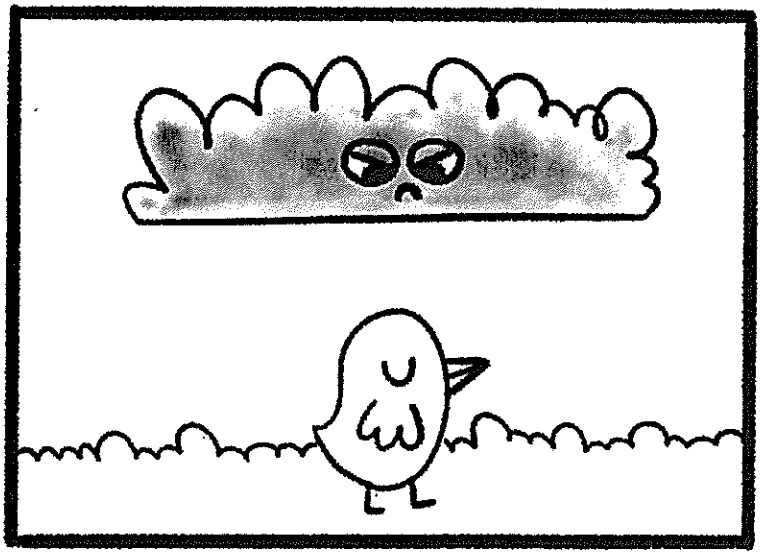

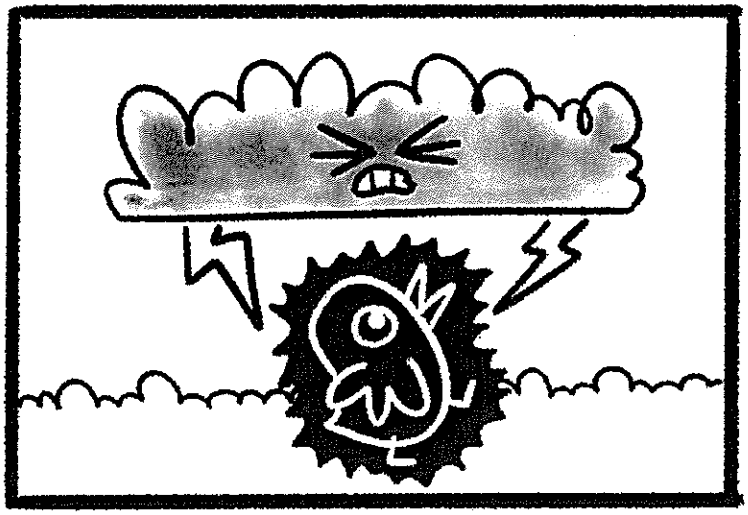

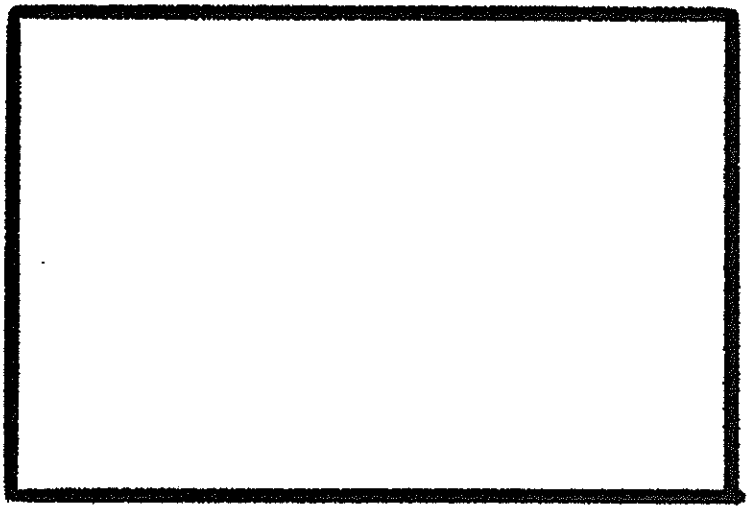

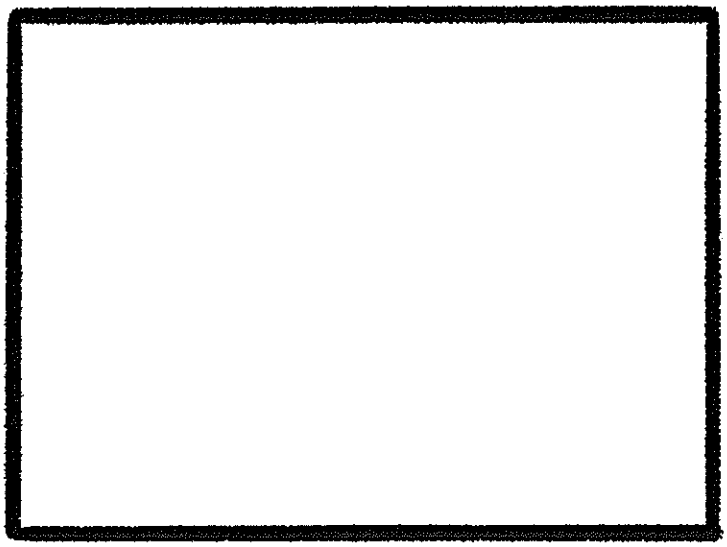

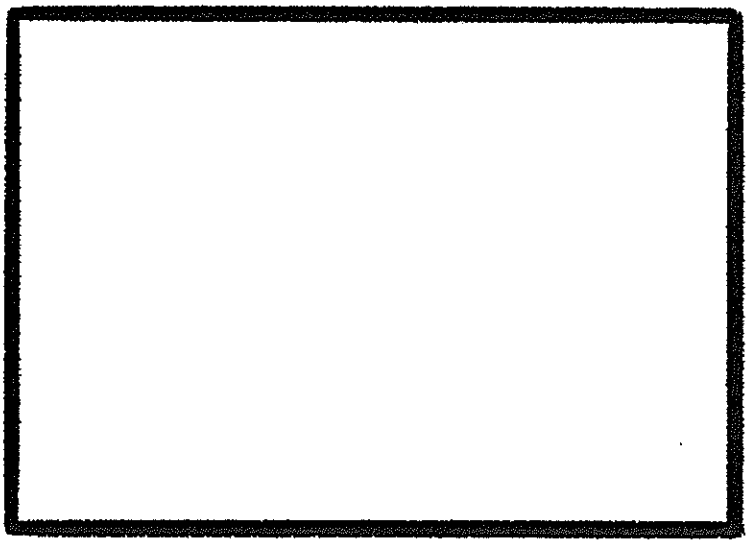

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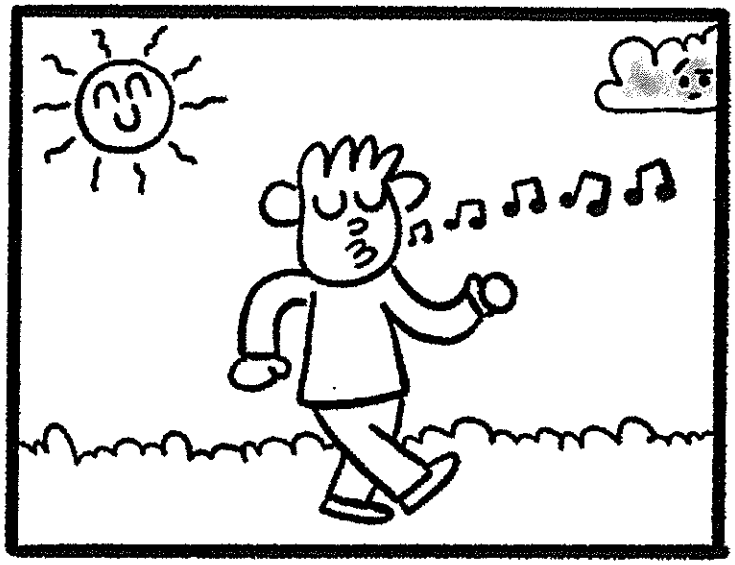

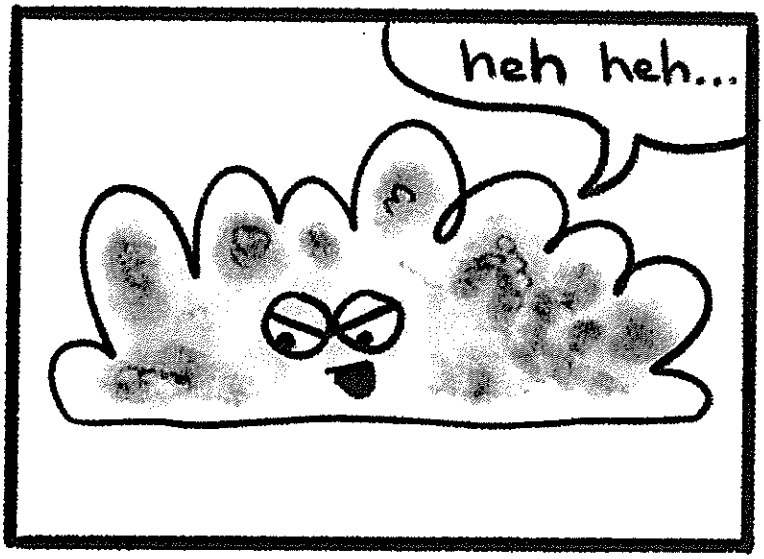

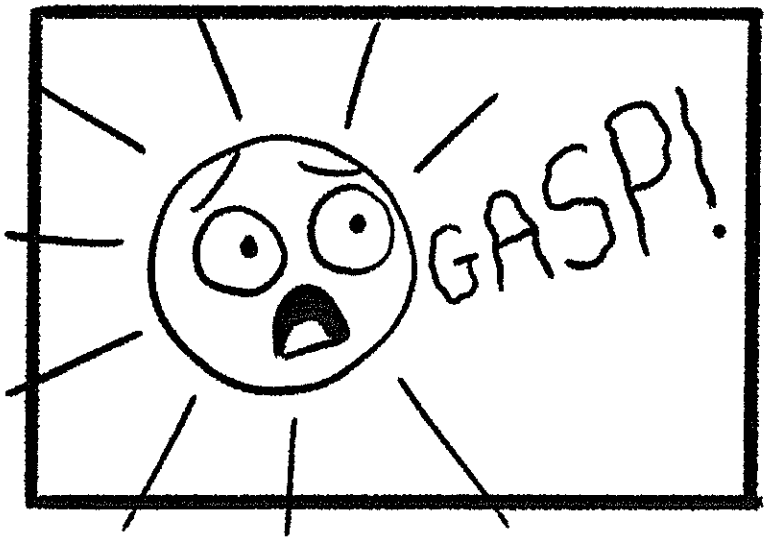

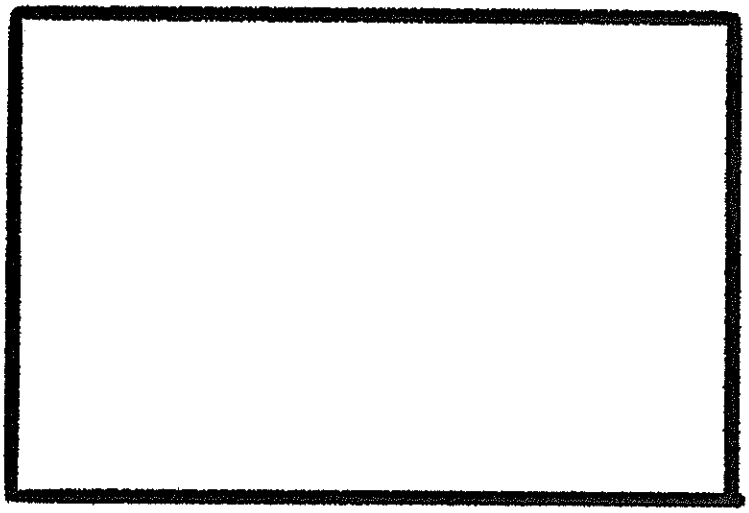

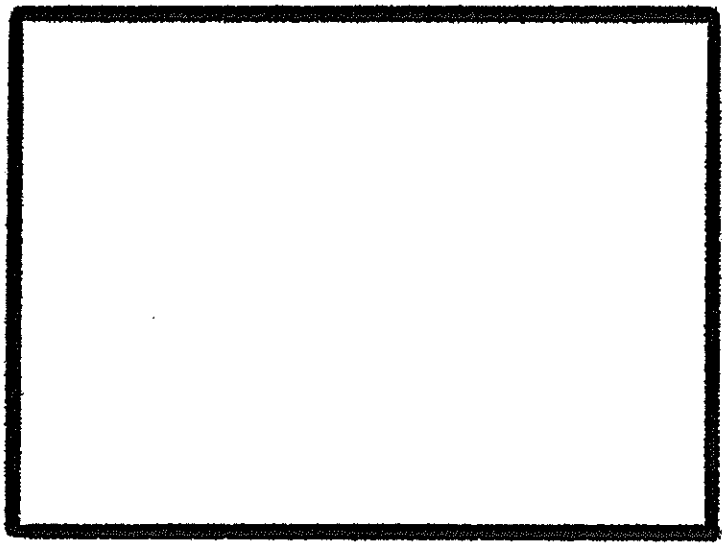

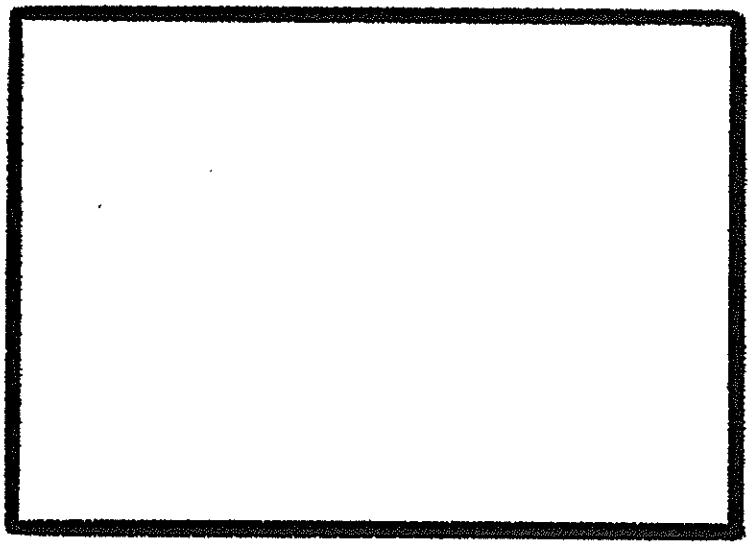

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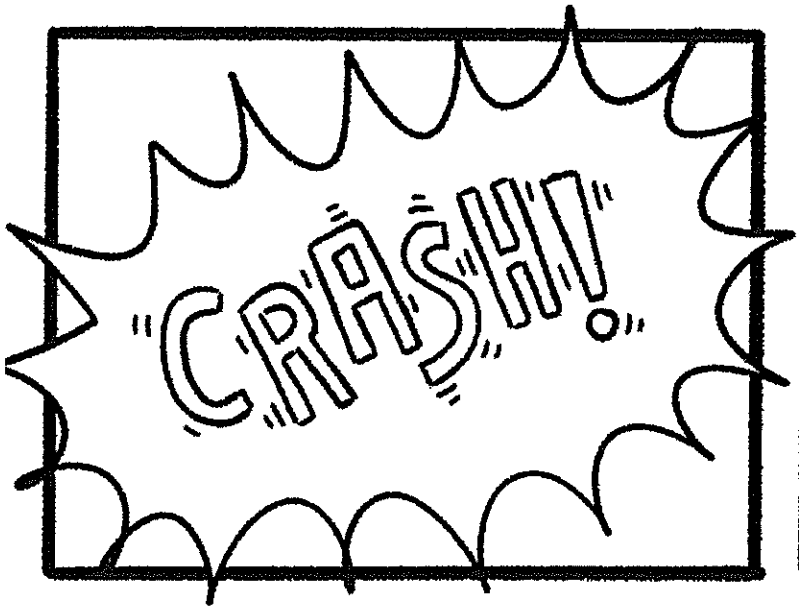

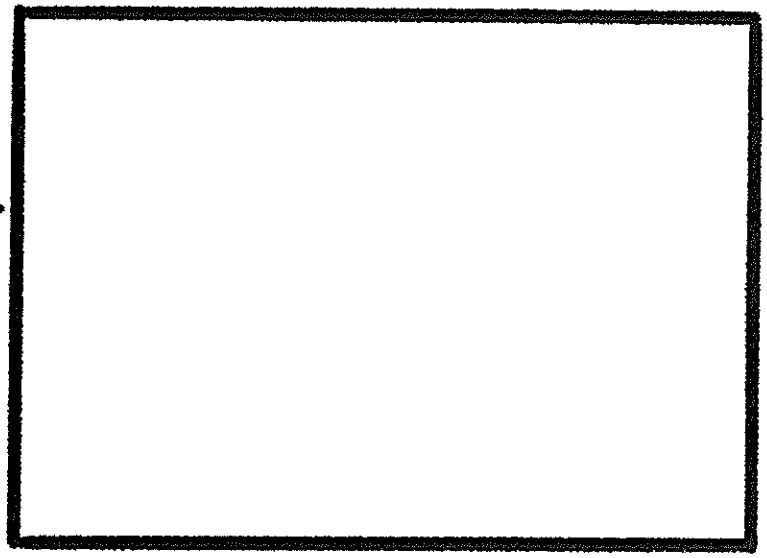

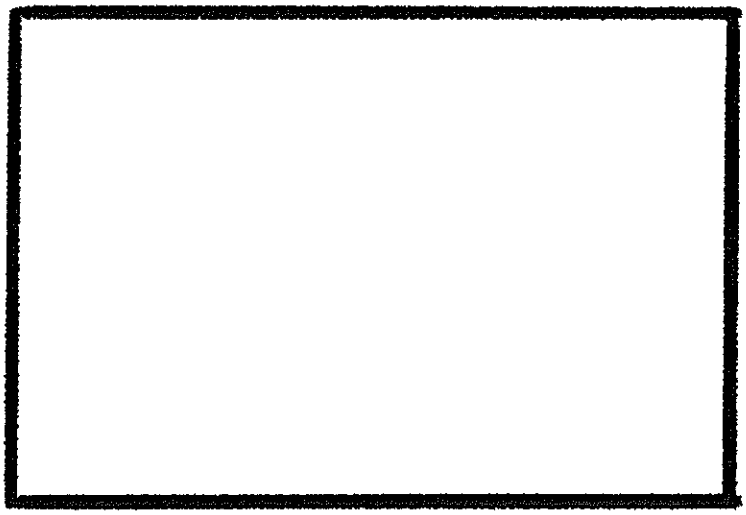

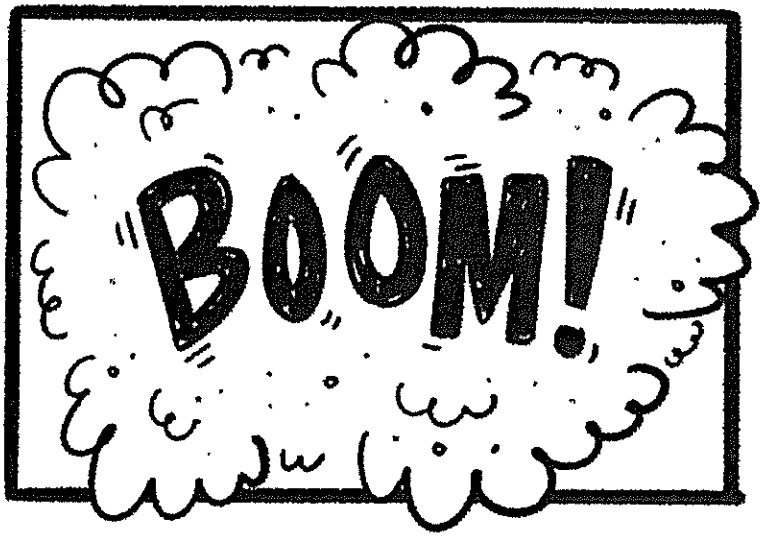

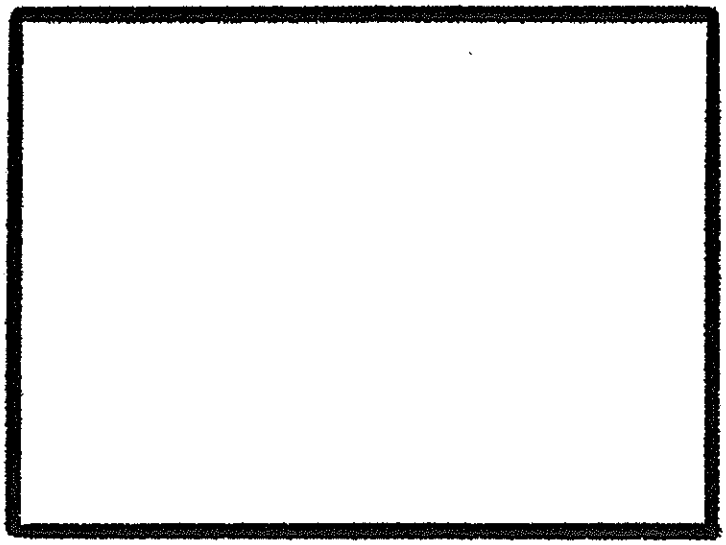

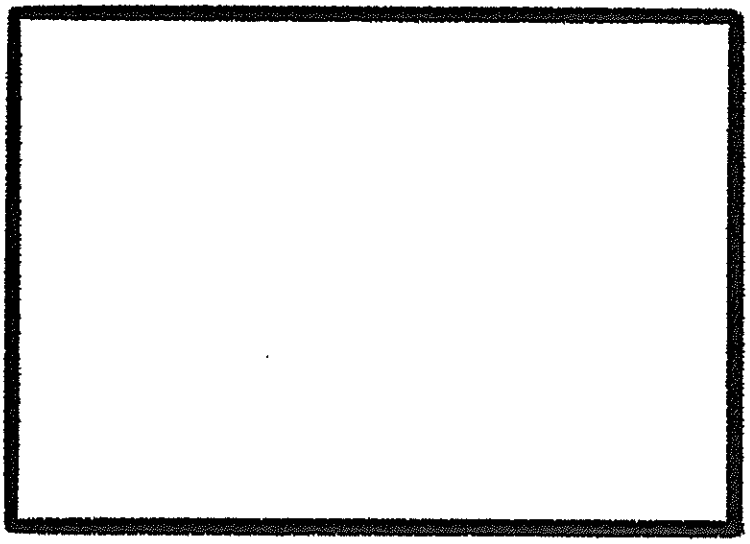

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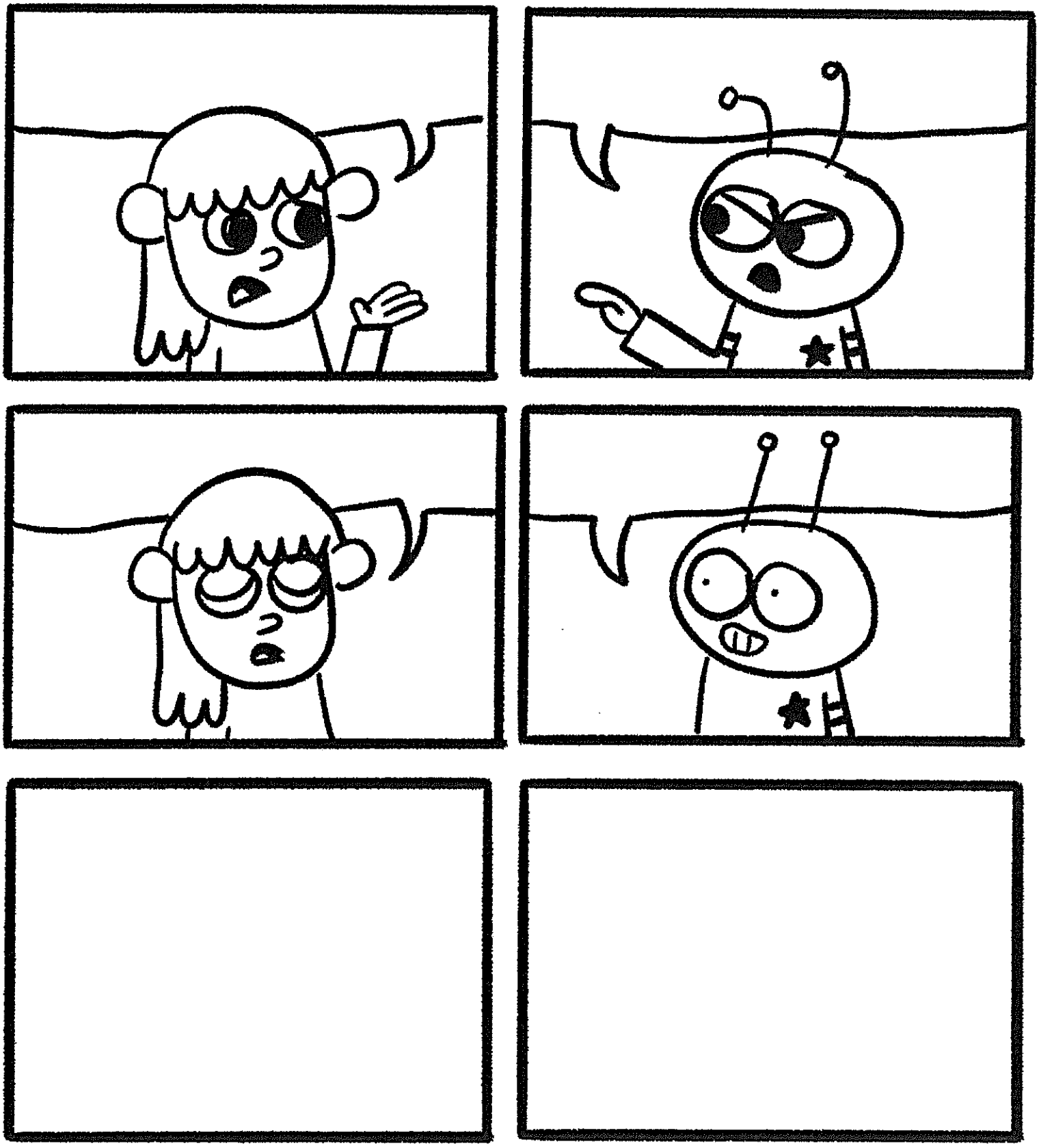

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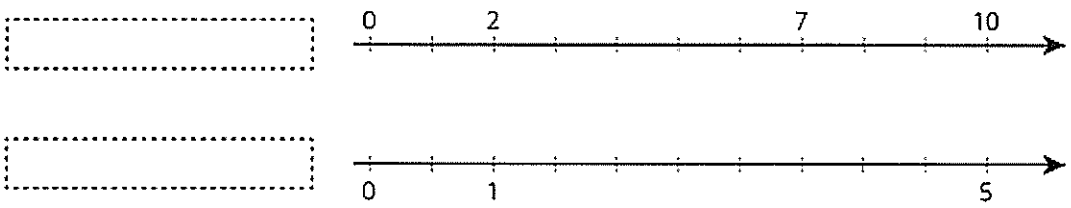
Unit 2, Lesson 1

One of These Things Is Not Like the Others

Let's remember what equivalent ratios are.

1.1 Remembering Double Number Lines

1. Complete the double number line diagram with the missing numbers.



2. What could each of the number lines represent? Invent a situation and label the diagram.

3. Make sure your labels include appropriate units of measure.

1.2 Mystery Mixtures

Your teacher will show you three mixtures. Two taste the same, and one is different.

1. Which mixture tastes different? Describe how it is different.

NAME DATE PERIOD

2. Here are the recipes that were used to make the three mixtures:
   - 1 cup of water with $1\frac{1}{2}$ teaspoons of powdered drink mix
   - 2 cups of water with $\frac{1}{2}$ teaspoon of powdered drink mix
   - 1 cup of water with $\frac{1}{4}$ teaspoon of powdered drink mix

   Which of these recipes is for the stronger tasting mixture? Explain how you know.

Are you ready for more?

Will any of these mixtures taste exactly the same?

- Mixture A: 2 cups water, 4 teaspoons salt, 0.25 cup sugar
- Mixture B: 1.5 cups water, 3 teaspoons salt, 0.2 cup sugar
- Mixture C: 1 cup water, 2 teaspoons salt, 0.125 cup sugar

1.3 Crescent Moons

Interactive digital version available

a.openup.org/ms-math/en/s/nc-7-2-1-3

Here are four different crescent moon shapes.

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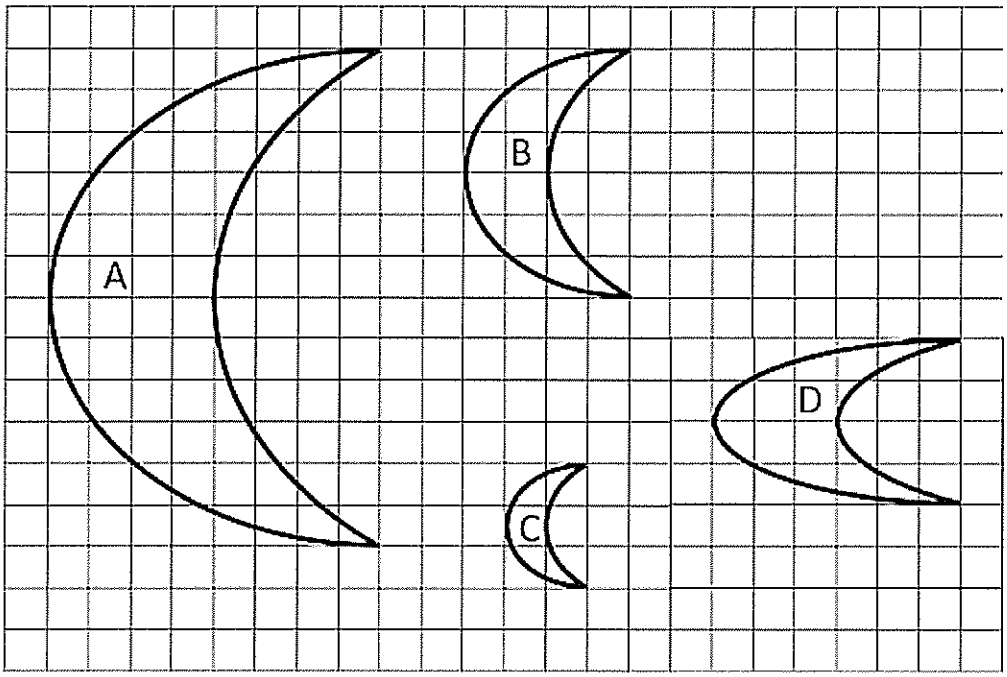

1. What do moons A, B, and C all have in common that moon D doesn't?

2. Use numbers to describe how moons A, B, and C are different from moon D.

3. Use a table or a double number line to show how moons A, B, and C are different from moon D.

Lesson 1 Summary

When two different situations can be described by **equivalent ratios**, that means they are alike in some important way.

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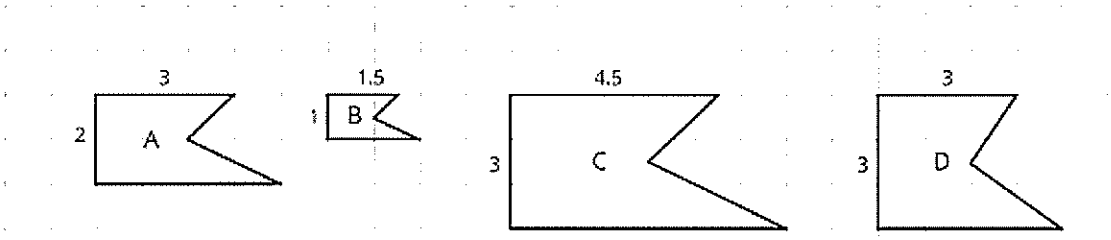
An example is a recipe. If two people make something to eat or drink, the taste will only be the same as long as the ratios of the ingredients are equivalent. For example, all of the mixtures of water and drink mix in this table taste the same, because the ratios of cups of water to scoops of drink mix are all equivalent ratios.

water (cups)	drink mix (scoops)
3	1
12	4
1.5	0.5

If a mixture were not equivalent to these, for example, if the ratio of cups of water to scoops of drink mix were $6 : 4$, then the mixture would taste different.

Notice that the ratios of pairs of corresponding side lengths are equivalent in figures A, B, and C. For example, the ratios of the length of the top side to the length of the left side for figures A, B, and C are equivalent ratios. Figures A, B, and C are *scaled copies* of each other; this is the important way in which they are alike.

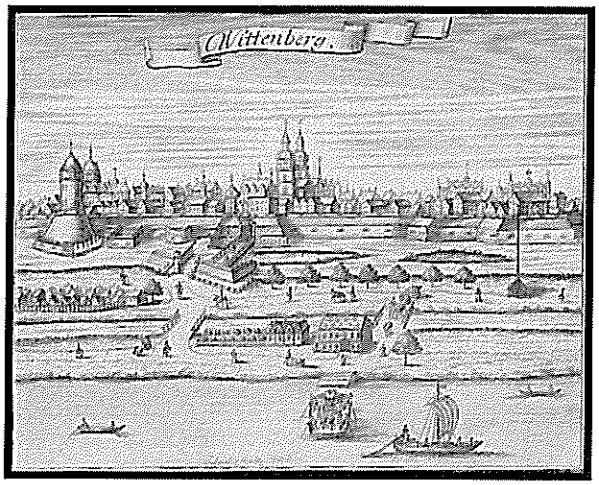


If a figure has corresponding sides that are not in a ratio equivalent to these, like figure D, then it's not a scaled copy. In this unit, you will study relationships like these that can be described by a set of equivalent ratios.

Glossary Terms

equivalent ratios

The Protestant Reformation



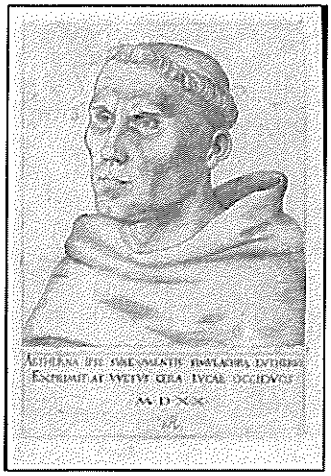
Today there are many types of Protestant Churches. For example, Baptist is currently the largest denomination in the United States but there are many dozens more. How did this happen? Where did they all begin? To understand the Protestant Reform movement, we need to go back in history to the early 16th century when there was only one church in Western Europe - what we would now call the Roman Catholic Church - under the leadership of the Pope in Rome. Today, we call this "Roman Catholic" because there are so many other types of churches (for example, Methodist, Baptist, Lutheran, Calvinist, Anglican...you get the

***an engraving of Wittenberg – where the Catholic Monk Martin Luther lived and worked as a professor.*

The Church and the State

So, if we go back to the year 1500, the Church (what we now call the Roman Catholic Church) was very powerful (politically and spiritually) in Western Europe (and in fact ruled over significant territory in Italy called the Papal States). But there were other political forces at work too. There was the Holy Roman Empire (largely made up of German speaking regions ruled by princes, dukes and electors), the Italian city-states, England, as well as the increasingly unified nation states of France and Spain (among others). The power of the rulers of these areas had increased in the previous century and many were anxious to take the opportunity offered by the Reformation to weaken the power of the papacy (the office of the Pope) and increase their own power in relation to the Church in Rome and other rulers.

Keep in mind too, that for some time the Church had been seen as an institution plagued by internal power struggles (at one point in the late 1300s and 1400s, church was ruled by three Popes simultaneously). Popes and Cardinals often lived more like kings than spiritual leaders. Popes claimed temporal (political) as well as spiritual power. They commanded armies, made political alliances and enemies, and, sometimes, even waged war. Simony (the selling of Church offices) and nepotism (favoritism based on family relationships) were rampant. Clearly, if the Pope was concentrating on these worldly issues, there wasn't as much time left for caring for the souls of the faithful. The corruption of the Church was well known, and several attempts had been made to reform the Church (notably by John Wyclif and Jan Hus), but none of these efforts successfully challenged Church practice until Martin Luther's actions in the early 1500s.



Lucas Cranach the Elder, Martin Luther as an Augustinian Monk, 1520, engraving, 6-1/4 x 4-3/16 (The Metropolitan Museum of

The World Catholic meant universal. The Church was so powerful in European society in the Middle Ages. The Pope in

Martin Luther

Martin Luther was a German monk and Professor of Theology at the University of Wittenberg. Luther sparked the Reformation in 1517 by posting, at least according to tradition, his "95 Theses" on the door of the Castle Church in Wittenberg, Germany - these theses were a list of statements that expressed Luther's concerns about certain Church practices - largely the sale of indulgences, but they were based on Luther's deeper concerns with Church doctrine. Before we go on, notice that the word Protestant contains the word "protest" and that reformation contains the word "reform"—this was an effort, at least at first, to protest some practices of the Catholic Church and to reform that Church.

Indulgences

The sale of indulgences was a practice where the church acknowledged a donation or other charitable work with a piece of paper (an indulgence), that certified that your soul would enter heaven more quickly by reducing your time in purgatory. If you committed no serious sins that guaranteed your place in hell, and you died before repenting and atoning for all of your sins, then your soul went to Purgatory - a kind of way-station where you finished atoning for your sins before being allowed to enter heaven.

This general practice of the Church issuing an indulgent for a good work had gone on for a while (that may not in itself be bad), but it got tied to money. The Catholic Church was thinking it was allowing people to do good works – make a donation for a majestic place of God. Johann Tetzel said, "As soon as the coin in the coffer rings, the soul from purgatory rings." Sick.

Pope Leo X had granted indulgences to raise money for the rebuilding of St. Peter's Basilica in Rome (this was very important – Peter is buried under that church). These indulgences were being sold by Johann Tetzel not far from Wittenberg, where Luther was Professor of Theology. Luther was

gravely concerned about the way in which getting into heaven was connected with a financial transaction. But the sale of indulgences was not Luther's only disagreement with the institution of the Church.

Faith Alone

Martin Luther was very devout and had experienced a spiritual crisis. He concluded that no matter how "good" he tried to be, no matter how he tried to stay away from sin, he still found himself having sinful thoughts. He was fearful that no matter how many good works he did, he could never do enough to earn his place in heaven (remember that, according to the Catholic Church, doing good works, for example commissioning works of art for the Church, helped one gain entrance to heaven). This was a profound recognition of the inescapable sinfulness of the human condition. After all, no matter how kind and good we try to be, we all find ourselves having thoughts which are unkind and sometimes much worse. Luther found a way out of this problem when he read St. Paul, who wrote "The just shall live by faith" (Romans 1:17). Luther understood this to mean that those who go to heaven (the just) will get there by faith alone - not by doing good works. In other words, God's grace is something freely given to human beings, not something we can earn. For the Catholic Church on the other hand, human beings, through good works, had some agency in their salvation.

Scripture Alone

Luther (and other reformers) turned to the Bible as the only reliable source of instruction (as opposed to the teachings of the Church). The invention of the printing press in the middle of the 15th century (by Gutenberg in Mainz, Germany) together with the translation of the Bible into the vernacular (the common languages of French, Italian, German, English, etc.) meant that it was possible for those who could read to learn directly from Bible without having to rely on a priest or other church officials. Before this time, the Bible was available in Latin, the ancient language of Rome spoken chiefly by the clergy. Before the printing press, books were handmade and extremely expensive. The invention of the printing press and the translation of the bible into the vernacular meant that for the first time in history, the Bible was available to those outside of the Church. And now, a direct relationship to God, unmediated by the institution of the Catholic Church, was possible.

When Luther and other reformers looked to the words of the Bible (and there were efforts at improving the accuracy of these new translations based on early Greek manuscripts), they found that many of the

practices and teachings of the Church about how we achieve salvation didn't match Christ's teaching. This included many of the Sacraments, including Holy Communion (also known as the Eucharist). According to the Catholic Church, the miracle of Communion is transubstantiation—when the priest administers the bread and wine, they change (the prefix "trans" means to change) their substance into the body and blood of Christ. Luther denied this change during Holy Communion. Luther thereby challenged one of the central sacraments of the Catholic Church, one of its central miracles, and thereby one of the ways that human beings can achieve grace with God, or salvation.

The Counter-Reformation

The Church initially ignored Martin Luther, but Luther's ideas (and variations of them, including Calvinism) quickly spread throughout Europe. He was asked to recant (to disavow) his writings at the Diet of Worms (an unfortunate name for a council held by the Holy Roman Emperor in the German city of Worms). When Luther refused, he was excommunicated (in other words, expelled from the church). The Church's response to the threat from Luther and others during this period is called the Counter-Reformation ("counter" meaning against).

The Council of Trent

In 1545 the Church opened the Council of Trent to deal with the issues raised by Luther. The Council of Trent was an assembly of high officials in the Church who met (on and off for eighteen years) principally in the Northern Italian town of Trent for 25 sessions.

Selected Outcomes of the Council of Trent:

1. The Council denied the Lutheran idea of justification by faith. They affirmed, in other words, their Doctrine of Merit, which allows human beings to redeem themselves through Good Works, and through the sacraments.
2. They affirmed the existence of Purgatory and the usefulness of prayer and indulgences in shortening a person's stay in purgatory.
3. They reaffirmed the belief in transubstantiation and the importance of all seven sacraments
4. They reaffirmed the authority of scripture and the teachings and traditions of the Church
5. They reaffirmed the necessity and correctness of religious art (see below)

The Council of Trent on Religious Art

At the Council of Trent, the Church also reaffirmed the usefulness of images - but indicated that church officials should be careful to promote the correct use of images and guard against the possibility of idolatry. The council decreed that images are useful "because the honour which is shown them is referred to the prototypes which those images represent" (in other words, through the images we honor the holy figures depicted). And they listed another reason images were useful, "because the miracles which God has performed by means of the saints, and their salutary examples, are set before the eyes of the faithful; that so they may give God thanks for those things; may order their own lives and manners in imitation of the saints; and may be excited to adore and love God, and to cultivate piety."

Violence

The Reformation was a very violent period in Europe, even family members were often pitted against one another in the wars of religion. Each side, both Catholics and Protestants, were often absolutely certain that they were in the right and that the other side was doing the devil's work.

The artists of this period - Michelangelo in Rome, Titian in Venice, Durer in Nuremberg, Cranach in Saxony - were impacted by these changes since the Church had been the single largest patron for artists. Now art was being scrutinized in an entirely new way. The Catholic Church was looking to see if art communicated the stories of the Bible effectively and clearly (see Veronese's Feast in the House of Levi for more on this). Protestants on the other hand, for the most part lost the patronage of the Church and religious images (sculptures, paintings, stained glass windows etc) were destroyed in iconoclastic riots.

Other developments

It is also during this period that the Scientific Revolution gained momentum and observation of the natural world replaced religious doctrine as the source of our understanding of the universe and our place in it. Copernicus up-ended the ancient Greek model of the heavens by suggesting that the sun was at the center of the solar system and that the planets orbited around it.

At the same time, exploration, colonization and (the often forced) Christianization of what Europe called the "new world" continued. By the end of the century, the world of the Europeans was a lot bigger and opinions about that world were more varied and more uncertain than they had been for centuries.

Please note, this tutorial focuses on Western Europe. There are other forms of Christianity in other parts of the world including for example the Eastern Orthodox Church.

Essay by Dr. Steven Zucker & Dr. Beth Harris

Reformation Timeline

1517	Johann Tetzel travels in Germany preaching on indulgences.
Oct. 31, 1517	Martin Luther sends his *95 Theses* with a letter to the Archbishop of Mainz (Doc A).
1518	Pope Leo calls on Luther to take back the *95 Theses*, but Luther refuses.
June 15, 1520	The Pope excommunicates Martin Luther from the Catholic Church.
1521	The Holy Roman Emperor, Charles V, declares Luther a criminal and attempts to arrest him.
1521	Frederick, a German prince, pledges his support to Luther and grants him protection at his castle.
1521-1545	Luther's ideas spread throughout Europe and gain more and more support. Over the next twenty years, it becomes clear that an irreversible break has occurred between the Catholic Church and the Protestant movement.

Document A: The Introduction to the *95 Theses* (Modified)

As a young man, Martin Luther became increasingly bothered by the practice of granting sinners indulgences to buy their way out of punishment for their sins. In 1517, Luther decided to write up his criticisms of indulgences and to send them to the Archbishop of Mainz. Luther's criticisms, known as The 95 Theses Against Indulgences, *eventually made their way to the Pope, who responded by attacking Luther and eventually excommunicating him from the Catholic Church. The passage below is an excerpt from the letter Luther sent to the Archbishop of Mainz with the* 95 Theses.

The grace of God be with you in all its fullness and power!

Spare me, Most Reverend Father in Christ and Most **Illustrious** Prince, that I, the **dregs** of humanity, have so much boldness that I have dared to think of [writing] a letter to someone of your **Sublimity**. . . .

Papal indulgences for the building of St. Peter's are circulating under your most **distinguished** name. I do not bring accusation against the outcries of the preachers, which I have not heard, so much as I grieve over the wholly false impressions which the people have conceived from [the indulgences]. The unhappy souls believe that if they have purchased letters of indulgence they are sure of their salvation.

Source: *Martin Luther's letter to the Archbishop of Mainz, 1517.*

Vocabulary

illustrious: respected and admired
dregs: a worthless part of something
sublimity: something of pure beauty or grandeur
distinguished: successful and well-respected

Document B: Against Catholicism (Modified)

As Luther gained popularity, some of his followers began to write down things that Luther said in private. These notes were known as Luther's Table Talk *and were collected and published in the 1560s. The following is presumed to be from* Luther's Table Talk *in 1535.*

The main reason I fell out with the pope was this: the pope boasted that he was the head of the Church, and condemned all that would not be under his power and authority. He said, although Christ is the head of the Church, there must be a physical head of the Church upon earth. With this I could have been content, if he had taught the gospel pure and clear, and not introduced human inventions and lies. Further, he took power, rule, and authority over the Christian Church, and over the Holy Scriptures, the Word of God. No man can explain the Scriptures. The pope did and he made himself lord over the Church, proclaiming [the Church] at the same time a powerful mother, and empress over the Scriptures. This could not be tolerated. Those who, against God's Word, boast of the Church's authority, are mere idiots. The pope gives more power to the Church, which is begotten and born, than to the Word [the Bible], which has conceived, and born the Church.

Source: *From* Luther's Table Talk, *1535.*

Reformation: Guiding Questions

Document A: Luther in 1517

1) (Sourcing) When was this document written? What was Luther's purpose in writing it?

2) (Close reading) How would you describe Luther's tone in this document?

3) (Close reading) According to this document, why did Luther challenge the Catholic Church?

Document B: Luther in 1535

1) (Sourcing) When was this document written? What was its purpose?

2) (Close reading) How would you describe Luther's tone in this document?

3) (Close reading) According to this document, why did Luther challenge the Catholic Church?

Corroboration

What are the differences between Luther's account from 1517 and his account of 1535?

Difference in:	1517	1535
Tone		
Place in Life		
Disagreement with the Church		

Hypothesis: After reading Documents A and B, and discussing the Guiding Questions, create a hypothesis regarding the question: *Why did Martin Luther's account of his break with the Church change between 1517 and 1535? Is one account more reliable than the other?*
Explain your answer with specific evidence from the documents:

CLOSE READING INSTRUCTIONS

1. **Close Read:** Read with a pencil/highlighter in hand, and annotate the text.
   - Annotating *means* underlining or highlighting key words and phrases—anything that strikes you as surprising or important, or that raises questions.
   - Annotating *includes* writing your thoughts and reactions in the margins next to what you have highlighted or underlined. These need to be rich comments. Rich comments might begin with the word, what or why or any of the phrases that could also be used to start your reflection statement.
   - Highlight or circle words you don't know, and look them up! Write down the definition in the margin next to the word.
   - I am looking for 6-8 annotations per page of the article.

2. **Summary Statement:** Write a summary statement for the article in which you include:
   - The author, title, and source
   - The sentence completed with the main idea of the article
   - The summary statement is 25 words or less; the author/title/source counts as **1** word.
   - At the end of your statement, write the number of words in your statement and circle it.

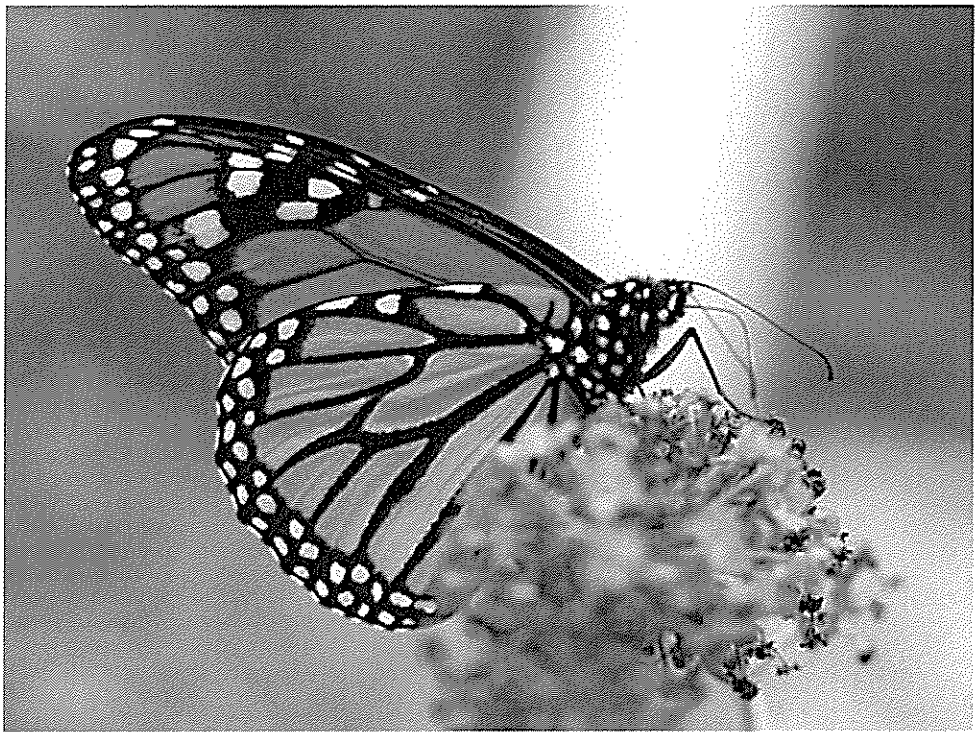
3. **Reflection Statement:** Use one of the following sentence starters and write a brief 1-2 sentence reflection statement for the article.

A. I noticed. . .
B. I wonder. . .
C. I was reminded of. . .
D. I am surprised that. . .
E) I'd like to know. . .
F) I realized. . .
G) If I were. . .
H) I am not sure. . .

Day 1

Genetic Basis of Butterflies

by ReadWorks



If you've ever been in a park during the summer, you may have seen butterflies flitting from flower to flower. They are quite beautiful, and like humans, seem to have individual traits. There are orange butterflies with big brown eyes, blue butterflies with black markings on their wings, and white butterflies with small black antennae. According to some butterfly experts, there are approximately 20,000 kinds of butterflies in the world. Each species (or type) of butterfly has its own genetic information that dictates what characteristics it will have and distinguishes it from other butterflies.

Inherited genetic information explains why certain species look different from others. Monarch butterflies, orange butterflies with black markings and white spots on their wings, are most common in Mexico and the United States. Their bright color makes them easily noticeable to predators, but also acts as a warning that they are poisonous if eaten.

The poison of monarch butterflies can be traced back to a plant they feed on during an earlier stage in their lives. What we think of as butterflies are the adult versions of caterpillars. As caterpillars, monarchs feed on milkweed, which contains a toxin that is poisonous to most vertebrates but not to monarch caterpillars. When the caterpillars become adult monarch butterflies, the milkweed in their bodies is poisonous to any predators that might try to eat them.

An unsuspecting predator that did not know the monarch butterfly was poisonous would soon realize its mistake. After tasting the poisonous bug, most predators quickly spit out the monarch and learn not to eat them again. Unlike other butterflies, whose genetic information (and therefore their

coloration) helps them blend into their habitats in order to defend themselves from predators, monarch butterflies rely on their bright coloration to keep them safe. An interesting fact: another species of butterfly, the viceroy, mimics the coloration of the monarch in order to keep predators from eating it!

Even though there are many kinds of butterflies that look very different, all butterflies share a certain number of traits, which are also determined by their genetic information. They all have the same life cycle. First a caterpillar hatches from an egg. The caterpillar eats plants and grows bigger. Then it covers itself in a hard case called a chrysalis, and it enters a stage of transformation. During this stage, the insect is called a *pupa*. Inside the chrysalis, the pupa grows the legs, wings, and other parts of an adult butterfly. Once the butterfly is fully developed, the chrysalis splits apart, and the butterfly emerges. All butterflies have four wings-two upper, two lower-that are covered in tiny colored scales. A butterfly's genes determine the color of its scales, and more-they dictate the insect's size and shape as well.

Colorful decorations are key to the survival of the monarch butterfly. Vivid colors signal danger to the predators which might otherwise eat the butterfly. Other species of butterfly, with different genes, rely on different survival strategies, and have their own distinctive designs. But no matter the pattern, the blueprints for each of the 20,000 different species' development are written in their genetic codes.

Name: _____ Date: _____

1. What does genetic information dictate, or control?

A. what characteristics an organism will have

B. where an organism will live and die

C. which predators will eat the organism

D. who the organism's parents were

2. The passage describes the sequence of a butterfly's life. Which of the following shows the life cycle of a butterfly in the correct order?

A. egg, pupa, adult, caterpillar

B. pupa, egg, caterpillar, adult

C. egg, caterpillar, pupa, adult

D. egg, pupa, caterpillar, adult

3. Monarch butterflies are protected by their bright coloration. What evidence from the passage supports this conclusion?

A. Their bright coloration makes monarch butterflies easily noticeable to predators.

B. The monarch's color warns predators that they are poisonous, so they don't get eaten.

C. Unlike other butterflies, monarchs do not blend into their surroundings to protect themselves.

D. If a predator eats a monarch, it can taste the poison and will spit the butterfly out.

4. Butterfly A is blue with black markings. Butterfly B is green with brown spots. What conclusion can you make about these two butterflies?

A. Both butterflies protect themselves by blending into their surroundings.

B. The two butterflies have different life cycles.

C. Both butterflies have the same genetic information.

D. The two butterflies have different genetic information.

5. What is this passage mostly about?

A. monarch butterflies

B. viceroy butterflies

C. milkweed toxins

D. caterpillars and pupae

6. Read the following sentences: "Inside the chrysalis, the pupa grows the legs, wings, and other parts of an adult butterfly. Once the butterfly is fully **developed**, the chrysalis splits apart, and the butterfly emerges."

What does the word "**developed**" mean?

A. young and small

B. changed and grown

C. safe and protected

D. soft and vulnerable

7. Choose the answer that best completes the sentence below.

Monarch butterflies are brightly colored; _____, they are highly visible to predators.

A. however

B. for example

C. as a result

D. initially

8. Why are monarch butterflies poisonous?

_____

_____

_____

9. How do predators know that monarch butterflies are poisonous?

10. How does the monarch's coloration help both the butterfly and predators?

Name:_____ Class/Period:_____

Assignment: CC 7.NS.3 (Set 1) Teacher: Martin

1 Mike is building a deck on his house. He bought $\frac{1}{10}$ of his supplies on Tuesday, $\frac{3}{10}$ of his supplies on Wednesday, and $\frac{1}{10}$ of his supplies on Thursday. How much more does he need to have all of his supplies? Write your answer in simplest form.

Answer: $\frac{\square}{\square}$

2 Sam is making a fruit punch. He starts with $\frac{1}{8}$ cup of grape juice, then $\frac{3}{8}$ cup of orange juice and $\frac{6}{8}$ cup of pineapple juice. How much juice does Sam have in the fruit punch? Write your answer in simplest form.

Answer: $\frac{\square}{\square}$ cups

3 Steve has 5 cans of soda. If he gives $3\frac{1}{2}$ of them away, how many cans of soda does he have left? Write your answer in simplest form.

Answer: $\frac{\square}{\square}$

4 Al wants to put a railing next to his stairs. The railing needs to be $18\frac{1}{3}$ feet long. If he has 2 pieces of wood that are each $7\frac{1}{2}$ feet long, how long must the third piece be? Write your answer in simplest form.

Answer: $\frac{\square}{\square}$ feet

5 Kim is baking a batch of cookies. She needs $2\frac{3}{4}$ cups of sugar. If she only has $1\frac{1}{3}$ cups, how much more sugar does Kim need? Write your answer in simplest form.

Answer: $\frac{\square}{\square}$ cups

6 If there are 240 students in the eleventh grade and 80 of them received a B+ or better in Math. What fraction received a B+ or better in math? Write your answer in simplest form.

Answer: $\frac{\square}{\square}$

7 Justin threw a football $24\frac{1}{3}$ yards, and Bill threw one $28\frac{2}{3}$ yards. How much farther did Bill's football travel? Write your answer in simplest form.

Answer: $\square\frac{\square}{\square}$ yards

8 Jorge is making a videotape of Jorge Jr.'s baseball games. The cassette holds $9\frac{1}{2}$ hours of footage. If he has used $4\frac{2}{3}$ hours up, how much time does Jorge have left? Write your answer in simplest form.

Answer: $\square\frac{\square}{\square}$ hours

9 Todd needs to make 3 steps for his deck. One step must be $4\frac{1}{2}$ feet long. Another step must be $5\frac{1}{2}$ feet long, and the third step must be $6\frac{1}{2}$ feet long. If he has a board of wood that is 20 feet long, how much wood will Todd have left when he is done making the steps? Write your answer in simplest form.

Answer: $\square\frac{\square}{\square}$ feet long

10 If there were 300 people surveyed and 68 of them *did not* like the new product, what fraction of people surveyed *did* like the new product? Write your answer in simplest form.

Answer: $\frac{\square}{\square}$

11 Robert drives $2\frac{1}{3}$ miles to work every day. If he works 5 days, how many total miles will he drive to work? Express your answer in simplest form.

Answer: $\square\frac{\square}{\square}$ miles

12 Cindy wants to make $2\frac{1}{2}$ orders of tacos. Each order needs $3\frac{1}{3}$ ounces of cheese. How many ounces of cheese will she need? Express your answer in simplest form.

Answer: ☐ ☐/☐ ounces

13 Jim spends $3\frac{1}{2}$ days a month away from home. If he does this for $6\frac{1}{2}$ months. How many days would Jim be away from home? Express your answer in simplest form.

Answer: ☐ ☐/☐ days

14 There are 32 students in Ms. Jayne's third period class. 1/8 of the students received an *A* in her class. How many students received an *A*?

Answer: ☐ students

15 If there are 30 days in June and Steve only worked $\frac{1}{4}$ of the days, how many days did Steve work? Express your answer in simplest form.

Answer: ☐ ☐/☐ days

16 If Felicia needs $2\frac{1}{3}$ cups of sugar to make one batch of cupcakes, how many cups of sugar does she need to make $7\frac{1}{2}$ batches of cupcakes? Write your answer in simplest form.

Answer: ☐ ☐/☐ cups

17 36 children showed up for Max's birthday party, but there were only enough cupcakes for $\frac{2}{3}$ of the children. How many children received cupcakes?

Answer: ☐ children

18 Andy pitched $6\frac{2}{3}$ innings a game for 14 games. How many innings did Andy pitch?

Answer: ☐ ☐/☐ innings

19 Maria needs $3\frac{1}{3}$ yards of fabric to make a baby quilt for her store.

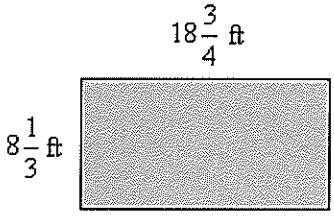
How many yards of fabric will she need to make 8 quilts?

Answer: $\frac{\square}{\square}$ yards

20 Amy needs $1\frac{3}{4}$ feet of wrapping paper to wrap one of her Secret Santa gifts. There are 5 gifts in all that she has to wrap. How much wrapping paper will Amy use?

Answer: $\frac{\square}{\square}$ feet

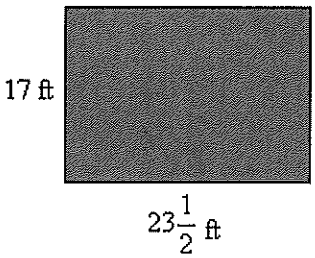
21 The area of a rectangle is its length × width. Sajad's swimming pool is in the shape of a rectangle. The length of pool is $18\frac{3}{4}$ feet. The width is $8\frac{1}{3}$ feet.



What is the area of Sajad's swimming pool?

Answer: $\frac{\square}{\square}$ square feet

22 The perimeter of a rectangle is the sum of the lengths of its sides. Mark wants to build a fence around his yard, which is in the shape of a rectangle. The length of the yard is $23\frac{1}{2}$ feet. The width is 17 feet.



How much fencing does Mark need to buy?

Answer: $\square$ feet

23 The area of a rectangle is the length × width. Morris has a garden in the shape of a rectangle that is $15\frac{2}{6}$ feet long and $6\frac{1}{2}$ feet wide. How much of his yard does Morris's garden cover?

Answer: $\frac{\square}{\square}$ square feet

24 There are $\frac{3}{4}$ of a pound of grapes left after the picnic. Cody wants to split them evenly among his three friends. How many grapes will each friend get? Express your answer in simplest form.

Answer: $\frac{\square}{\square}$ pound each

25 Bill wants to make steps to his back porch. He has a board of wood that is 28 feet long. He wants each step to be $4\frac{3}{5}$ feet long. How many steps can Bill make?

Answer: $\square$ steps

Name: _____ Class: _____

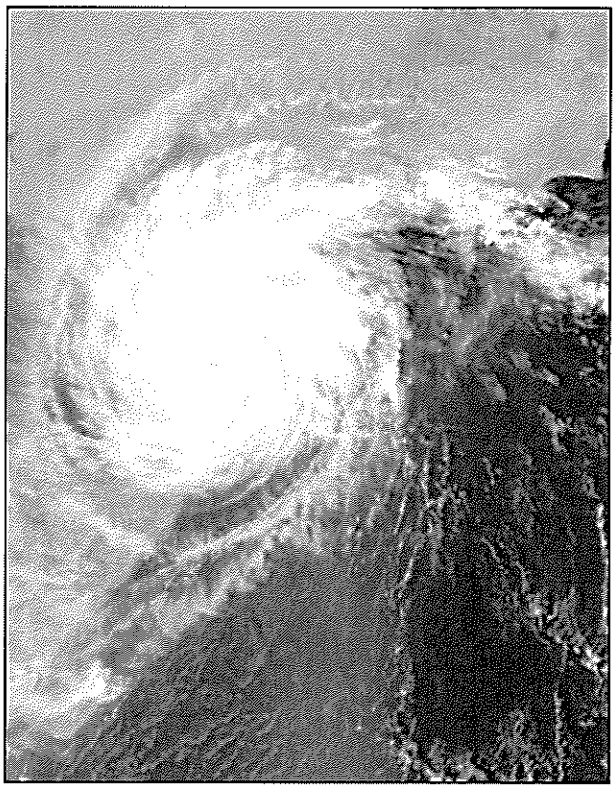
Explainer: Hurricanes, Cyclones, and Typhoons

Here's how the storms form and why they are so dangerous

By Lillian Steenblik Hwang
2017

In this informational text, Lillian Steenblik Hwang discusses how hurricanes, cyclones, and typhoons form, as well how they impact people. As you read, take notes on the different factors that contribute to the formation of hurricanes, cyclones, and typhoons.

[1] A tropical cyclone is one of the most destructive natural forces on Earth. These enormous, swirling storm systems form over the ocean. Tropical cyclones in the Atlantic Ocean or Eastern Pacific are known as hurricanes. Those in the Western Pacific are known as typhoons. When such storms erupt in the Indian Ocean, they're referred to as cyclones.



"Untitled" by NASA is licensed under CC0

Whatever you call them, these storms need several starting ingredients. First, there must be some sort of atmospheric disturbance or event. Typically, that will be a thunderstorm. Second, that disturbance has to occur over ocean water that is at least 26° Celsius (80° Fahrenheit). The air also needs to contain plenty of moisture, notes Kam-Biu Liu. He studies hurricanes at Louisiana State University in Baton Rouge.

Next? As the sun warms the atmosphere, pockets of warm, humid air begin to rise from above the ocean's surface. This temperature driven movement is known as convection. This now-water-saturated[1] air rises into the tropopause. This is a region in the atmosphere somewhere between 9 and 17 kilometers (5.6 and 11 miles) above Earth's surface.

As soon as the warm air gets here, it begins to cool. Cool air can't hold as much moisture as warm air. So some of that excess water vapor condenses[2] to form clouds and rain. This releases some heat, which warms the surrounding air. As this warm air rises, it creates regions of low air pressure beneath it.

1. full of moisture or water
2. to change from a gas or vapor to a liquid

[5] A new parcel[3] of air will now spin under the storm and into the space left behind by the rising warm air. This air flows in from a region of higher pressure outside the storm. It gets drawn into the center of the cyclone, the region having the lowest pressure. If the cyclone is strong enough, this center will form an "eye." That's a calm and cloud-free area of low pressure. A quiet zone, it sits smack dab in the middle of the raging bands of turbulence[4] encircling it.

Together, convection and condensation[5] drive the hurricane, explains Liu. They "create a very efficient heat engine that fuels the hurricane."

From storm to hurricane

But swirling ocean-born storm clouds are not enough to qualify as a hurricane. The critical issue is wind speed.

As a storm strengthens, its circulating winds will become more powerful. As long as the winds' sustained speed does not exceed 61 kilometers (38 miles) per hour, this storm will be known as a *tropical depression*. If its winds continue to build, attaining 62 to 117 kilometers (39 to 73 miles) per hour, it will formally become a *tropical storm*. At this point, it will receive an official name — such as Katrina (2005 in the Gulf of Mexico), Nepartak (2016 in China and Taiwan), Roanu (2016 in the Bay of Bengal) or Harvey (2017 in the Gulf of Mexico).

Finally, if conditions are right, the storm can intensify into a hurricane (or typhoon or cyclone, depending on its location). These intense circulating storms are rated category 1 to 5 on the Saffir-Simpson Hurricane Wind Scale. That rating reflects the maximum sustained wind speed (as measured over a 2-minute period).

[10] **Category 1** storms range from 119 to 153 kilometers per hour (74 to 95 miles per hour). Such winds can rip shingles off of houses and snap tree branches. The damage frequently is bad enough to knock out electric power for up to a few days.

A **Category 2** storm will have sustained winds of 153 to 177 kph (96 to 110 mph). Winds this strong can rip siding off of buildings and uproot trees. Associated power outages can last more than a week.

A **Category 3** storm slams a region with 178 to 208 kph (111 to 129 mph) winds. Category 3 and higher tropical cyclones are classified as major hurricanes. These can unleash enough damage to knock out power and water for weeks. Superstorm Sandy was, at its strongest, a category 3 hurricane. It weakened to below true hurricane status by the time it came ashore in New York and New Jersey. Still, it was devastating enough to cripple[6] large swaths[7] of coastal communities there.

A **Category 4** storm's sustained winds run from 209 to 251 kph (130 to 156 mph). That's enough to flatten homes or rip through them, rendering whole communities uninhabitable. Hurricane Opal, a category 4 storm, ravaged the Florida Panhandle in 1995.

3. a quantity or amount of something
4. violent or unsteady movement of air or water
5. **Condensation** *(noun):* the process by which a gas cools and becomes a liquid
6. **Cripple** *(verb):* to cause serious damage to something
7. a broad strip or area of something

Category 5 storms are the most powerful of all. Their catastrophic winds lash a region at speeds of 252 kph (157 mph) or higher. They can unleash such extensive destruction that people may not be able to return to their homes for months. At its strongest, Hurricane Katrina reached category 5 status. It flooded whole sections of New Orleans, La., and devastated the U.S. Gulf Coast.

[15] Tropical cyclones travel, often creating havoc[8] far from the warm waters that first spawned them. Some may move hundreds to thousands of kilometers (or miles) across open oceans. Along that path, they may strengthen or weaken several times. Especially dangerous are storms that "make landfall." This refers to their having crossed some island or coastline. Most hurricanes lose steam within a day or two of making landfall.

Why hurricanes are dangerous

Hurricanes are defined by their winds. And those winds unquestionably pose[9] a major threat to coastal communities. Steady winds and even higher gusts can blow down electric-power lines, upend trees, and toss debris through the air. Whole buildings can be knocked down. The gusting, gale-force tempests[10] can even transform branches and other types of debris into potentially deadly projectiles.

But storm dangers are not due solely to the speed at which hurricanes blow.

One of the greatest dangers that these storms pose to coastal areas is what's known as a storm surge. As a tropical cyclone spins toward land, its winds can push seawater ashore. This may temporarily flood the land to depths of 1 to 4 meters (3 to 13 feet) or more. A storm surge can be especially dangerous if it coincides with high tide; this can push an even higher wall of water onshore.

Another hazard: Torrential storms may dump 25 centimeters (10 inches) or more of rain within 24 hours. These rains can fall too fast to soak into the ground, posing a risk of flash floods. This may occur inland, far from any storm surge. And these storms may trigger lightning and tornadoes, which pose their own risks.

Preparing for hurricane season

[20] In the Atlantic, nearly all tropical cyclones occur between June 1 and November 30. The number of storms that form during this "hurricane season" can vary widely from year to year. In general, August and September tend to be the most at-risk months.

If you live in an area that is vulnerable[11] to hurricanes, there are things you can do to prepare. Consider stocking up on emergency supplies. Families may want to also draw up a hurricane plan. This will include things like identifying who is supposed to take on which tasks in preparing for the storm. Part of the plan also should include identifying your closest storm shelters.

8. **Havoc** *(noun):* widespread destruction
9. **Pose** *(verb):* to cause something, especially a problem
10. a violent windy storm
11. **Vulnerable** *(adjective):* open to harm or damage

If a hurricane is headed toward your community, you might be directed to evacuate altogether. Know the best routes to get out of town. If you need to evacuate, make sure your family has a pre-packed hurricane kit. It might include batteries, cash, matches, a flashlight, first aid supplies, medications and copies of important documents.

If you aren't advised to leave and your family decides to take shelter at home, make sure to stock up with several days' worth of food and water. Expect that you could lose power and running water for several days. So prepare by charging all phones and other electronic devices ahead of the storm.

And help your family prepare your home. This may include covering windows and clearing yards and porches of toys, chairs or other large items that the winds could turn into dangerous missiles.

Text-Dependent Questions

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

1. PART A: Which statement identifies the central idea of the text?
   A. Hurricanes, cyclones, and typhoons are differentiated based on how powerful they are and the damage they can do.
   B. Storms that form over water cause greater damage to the environments than human populations.
   C. Hurricanes, cyclones, and typhoons all have the potential to cause serious damage to humans because of wind speeds and flooding.
   D. Storms that form over water are unpredictable and nearly impossible for humans to adequately prepare for.

2. PART B: Which TWO details from the text best support the answer to Part A?
   A. "Tropical cyclones in the Atlantic Ocean or Eastern Pacific are known as hurricanes. Those in the Western Pacific are known as typhoons." (Paragraph 1)
   B. "That's a calm and cloud-free area of low pressure. A quiet zone, it sits smack dab in the middle of the raging bands of turbulence encircling it." (Paragraph 5)
   C. "These intense circulating storms are rated category 1 to 5 on the Saffir-Simpson Hurricane Wind Scale." (Paragraph 9)
   D. "Steady winds and even higher gusts can blow down electric-power lines, upend trees, and toss debris through the air. Whole buildings can be knocked down." (Paragraph 16)
   E. "As a tropical cyclone spins toward land, its winds can push seawater ashore. This may temporarily flood the land to depths of 1 to 4 meters (3 to 13 feet) or more." (Paragraph 18)
   F. "If you aren't advised to leave and your family decides to take shelter at home, make sure to stock up with several days' worth of food and water." (Paragraph 23)

3. How do paragraphs 10-14 contribute to the development of ideas in the text?
   A. They show how dangerous hurricanes can become as their wind speeds increase.
   B. They prove that all hurricanes are dangerous, no matter their category.
   C. They emphasize how difficult it is for people to protect themselves from hurricanes.
   D. They show how the size of hurricanes directly relate to the dangers they pose.

4. What is the connection between a storm's wind speeds and its power?
   A. A storm's wind speeds determine what type of storm it will turn into, such as a hurricane, cyclone, or typhoon.
   B. A storm's wind speeds decide how far a hurricane will travel and the level of damage it can inflict on people.
   C. A storm's wind speeds regulate how much water it absorbs and when it releases that water, resulting in floods.
   D. A storm's wind speeds determine whether or not it will become a hurricane and its strength.

5. What is the relationship between preparation and protecting yourself against a hurricane?

Discussion Questions

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

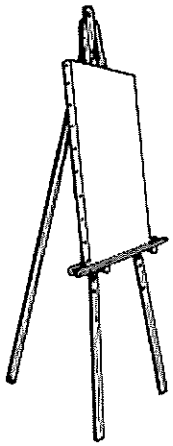
1. In the context of the text, how do hurricanes, cyclones, and typhoons affect people? What can people do to protect themselves against these storms? Have you ever experienced a severe storm? What did you do to keep yourself safe?

2. In the context of the text, what do you think could be the benefits of scientists learning more about hurricanes, cyclones, and typhoons? What else should scientists need to learn about these storms to better protect communities?

Day 2

The Artist's Search

by ReadWorks



Ariana put down her palette knife and took a step back from her canvas. In front of her sat her finished product: a medley of blues, oranges, pinks, and reds-a version of the sunset she had seen outside her window. It had only taken her an hour to finish the work, and she nodded her head in satisfaction. Not a single paintbrush lay near her; the young artist preferred to use alternative painting tools, like string and sponges. So when she found herself alone at home with nothing to do, she grabbed a canvas, a knife, and a bunch of paint, and set her easel right in front of a window. She smeared, wiped, carved, and brushed bright colors across the blank space with the edge of her palette knife, inspired by the sunset, but not exactly copying its bright streaks and perfect blend of colors.

She admired abstract artists, like Wassily Kandinsky, and therefore adhered to that style more than anything else she had been taught in art class. Her teacher had shown her one of Kandinsky's most famous abstract works, "Colour Studies: Squares and Concentric Circles," when she first began taking classes from him. The painting is divided into twelve square sections, each with a series of concentric circles within. Although she loved the simplicity of the work, what she liked most was Kandinsky's use of contrasting colors-the circles were painted with both earthy, dark hues as well as bright reds, yellows, and oranges. Many of Ariana's friends criticized abstract art-"What's the point?" they would ask-but she loved that it had the potential to elicit a strong emotional reaction to an untraditional image. Her painting of the sunset hardly looked like the sky; she'd borrowed hues from what she saw outside to create her own piece, which turned out to be a series of contrasting horizontal lines that spanned across the canvas.

The next day, she brought the painting to her teacher, Marcus. "Ariana, please, I've had enough of this," he said with a stern expression. While most passersby would have assumed he was harshly criticizing her work, he was in fact praising it. He loved her style so much that he wanted her to sell her pieces. But time after time, she had declined, saying that she wanted to paint only for herself. And even though he understood, he'd become increasingly frustrated; he desperately wanted to show her work to the greater public.

As the winter of her senior year of high school approached, however, Ariana found herself worrying about paying her college tuition. Although her parents had agreed to support her financially in her studies, she still wanted to pay for her textbooks and any other school supplies, all of which would quickly add up. So this time, when Marcus let out a teasing groan upon seeing her sunset piece, Ariana cleared her throat.

"All right, let's do it," she said. Marcus snapped his head up, and his left eyebrow raised way above his

right. "Excuse me? Did I just hear what I think I heard?" he replied in surprise. It had been more than a year of him nagging her to sell her artwork. Ariana nodded her head slowly, trying to convince her teacher. He didn't need an explanation; Marcus was much too excited. "Yes! Let's do it!" he exclaimed.

The next day, the two of them scoured the newspaper and real estate listings for any small open spaces that they could rent and transform into an art gallery. Marcus himself owned one that featured his friends' work in addition to his own, but since his gallery was booked through the rest of year with various showings, he could not feature Ariana's artwork anytime soon. But the two did not let that deter them. They wandered around town, peering into a few possible locations and asking around about any new empty spaces. Ultimately, though, they could not find anything within their price range.

After a long day of searching, Marcus and Ariana stumbled into a small local coffee shop to take a break. A waitress approached them after they both sat down and took their orders. After a long period of silence, Ariana spoke. "So what are we going to do now?" she asked, a bit disappointed about the day's events. "We'll find something-without a doubt, we'll discover a way to showcase your art," he assured her. Just as he said that, the waitress returned with their drink orders.

"Sorry to eavesdrop," she started, "but did you mention something about art?"

"Yes, we've been looking around all day for a small space to showcase my work, but we've been having a hard time finding something that's in our price range..." Ariana explained.

"No way! We actually display art in here-see all the pieces on the walls? Those are all from local artists," the waitress said, pointing to the nearest drawing. Ariana followed her finger to the image and noticed that the artist had employed a pointillist style, meaning that he or she had only used small dots of pure color to create an impressive depiction of an owl. "That's really beautiful," she told the waitress.

"Yeah, just bring in a couple samples of your work tomorrow, anytime between 8 a.m. and 12 p.m., that's when the owner should be here," the waitress said. "And hopefully she'll agree to feature your work!" Ariana thanked her profusely and gave Marcus a huge smile. They immediately walked to the studio and began to choose which works they would present to the shop's owner.

The following day, Ariana and Marcus strolled into the store lugging four of Ariana's best (and biggest) pieces of artwork at eight o'clock on the dot. A few customers sat quietly at different tables sipping coffee, but for the most part, the store was empty. Behind the counter, a woman with graying hair and round, red-framed glasses peered up from her book to see who had entered. "Oh, you must be the artist!" she said, extending her hand to Ariana. "Lily told me that you would be bringing in your work today. My name is Susan."

Ariana shook her hand and introduced herself and Marcus. "Well, here are some of my favorite pieces," she said, and with Marcus's help, laid them on the ground for Susan to see. The owner fell silent, concentrating hard on each painting, analyzing their colors, shapes, and overall design. After what felt like forever, she looked up at Ariana. "I would be honored to hang these in my store," she said.

Name: _____ Date: _____

1. What style of art does Ariana adhere to more than anything else she's been taught?

A. traditional

B. abstract

C. pointillist

D. three-dimensional

2. What finally motivates Ariana to sell her artwork?

A. She wants to be famous like Wassily Kandinsky.

B. She feels bad that her art teacher, Marcus, has asked her to sell it so many times.

C. She likes the idea of her art hanging in a coffee shop.

D. She wants money to help pay for college.

3. Marcus greatly believes in Ariana's talents as an artist. What evidence from the text supports this conclusion?

A. "Her teacher had shown her one of Kandinsky's most famous abstract works, 'Colour Studies: Squares and Concentric Circles,' when she first began taking classes from him."

B. "He loved her style so much that he wanted her to sell her pieces...And even though he understood, he'd become increasingly frustrated; he desperately wanted to show her work to the greater public."

C. "Marcus himself owned one that featured his friends' work in addition to his own, but since his gallery was booked through the rest of year with various showings, he could not feature Ariana's artwork anytime soon."

D. "Not a single paintbrush lay near her; the young artist preferred to use alternative painting tools, like string and sponges."

4. Read this sentence from the text.

"Many of Ariana's friends criticized abstract art-'What's the point?' they would ask-but she loved the way in which it had the potential to illicit a strong emotional reaction to an untraditional image."

Based on this statement, what can be concluded about Ariana?

A. She doesn't like her friends.

B. She prefers talking to Marcus instead of her friends.

C. She is an independent thinker.

D. She is embarrassed by her love of abstract art.

5. What is the main idea of this passage?

A. Ariana finally gives in to Marcus's wish to sell her artwork.

B. Ariana decides to go to college because she is tired of painting.

C. After Ariana decides to sell her abstract art, she and Marcus search for available spaces to show her art.

D. Ariana and Marcus disagree about where to sell Ariana's artwork, but they finally find a gallery they like.

6. Read this sentence from the text.

"Many of Ariana's friends criticized abstract art- 'What's the point?' they would ask- but she loved the way in which it had the potential to elicit a strong emotional reaction to an untraditional image."

As used in the passage, what does the word "elicit" mean?

A. to remember or recall

B. to irritate or anger

C. to bring out or evoke

D. to push down or eliminate

7. Choose the answer that best completes the sentence.

Ariana and Marcus originally planned to set up their own art gallery. _____, however, Ariana displayed her art in a coffee shop.

A. Ultimately

B. Therefore

C. Previously

D. Namely

8. What does Ariana like about abstract art?

9. Why had Ariana repeatedly declined Marcus's requests to sell her artwork?

10. What can be inferred about Ariana's character or personality based on the text?

Support your answer with evidence from the text.

Name:_____ Class/Period:_____

Assignment: CC 7.RP.1 Teacher: Martin

1 A boat travels 32 miles on 4 gallons of fuel. How many miles per *half gallon* is that?

Answer: [ ] miles per half gallon

2 Sandy can type 75 words per minute. How many words can she type in one half-hour?

Answer: [ ] words

3 A recipe for brownies calls for 2 cups of oil and 3 cups of sugar. How many cups of oil are used for 1 cup of sugar?

1 6

2 $\frac{2}{3}$

3 $1\frac{1}{2}$

4 $\frac{1}{3}$

4 Katrina and her 7 friends evenly split 4 cookies. How many cookies did each person eat?

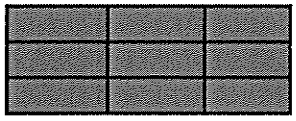
1 $\frac{7}{4}$

2 2

3 $\frac{4}{7}$

4 $\frac{1}{2}$

5 A pan of brownies is cut into 9 pieces of equal size. If 6 friends want to evenly divide all the brownies, how much does each person get?



1 1

2 1.5

3 3

4 $0.\overline{6}$

6 Kal can type 165 words in 3 minutes. How can this ratio be written to show words per minute?

1 $\frac{1 \text{ word}}{55 \text{ min}}$

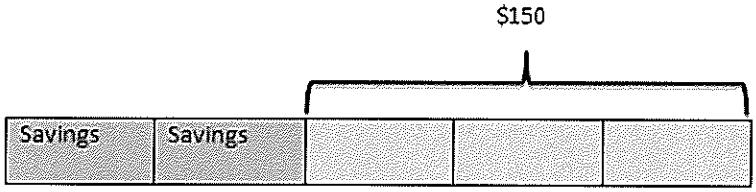
2 $\frac{1 \text{ min}}{55 \text{ words}}$

3 $\frac{55 \text{ min}}{1 \text{ word}}$

4 $\frac{55 \text{ words}}{1 \text{ min}}$

7 Ellie put two-fifths of her money into a savings account. She had $150 left to spend. How much money did Ellie have before she put some into savings?

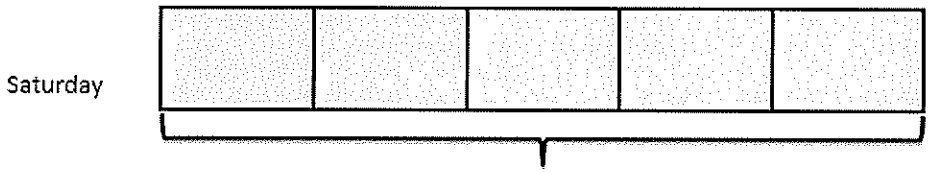
Use the tape diagram to help answer the question.

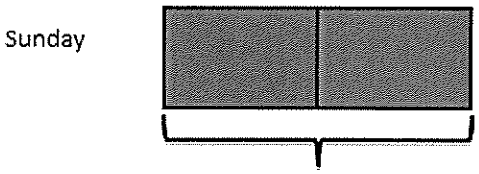


1 $50
2 $60
3 $100
4 $250

8 A sporting goods store sold $ 5,000 worth of merchandise on Sunday. That same store sold $2\frac{1}{2}$ times that amount on Saturday.

Remember: $2\frac{1}{2} = \frac{5}{2}$



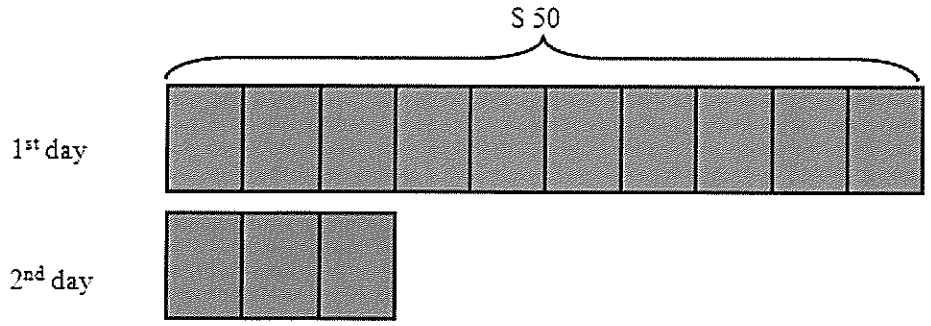


Use the tape diagram above to help determine how much merchandise was sold on Saturday.

1 $ 2,000
2 $ 2,500
3 $12,500
4 $15,000

9 Paige's lemonade stand made \$50 on the first day she was open for business. This is $3\frac{1}{3}$ times more than she made on the second day. Use the tape diagram to help answer the question below.

Remember: $3\frac{1}{3} = \frac{10}{3}$



How much did Paige make on the second day?

1 \$ 5
2 \$ 15
3 \$ 20
4 \$ 16

10 A car is traveling at 60 miles per hour. How many miles per minute is the car traveling?

1 1
2 $\frac{1}{60}$
3 $\frac{1}{360}$
4 3600

Explaining energy transfer and transformation

By National Geographic Society, adapted by Newsela staff on 09.12.19

Word Count **769**
Level **940L**

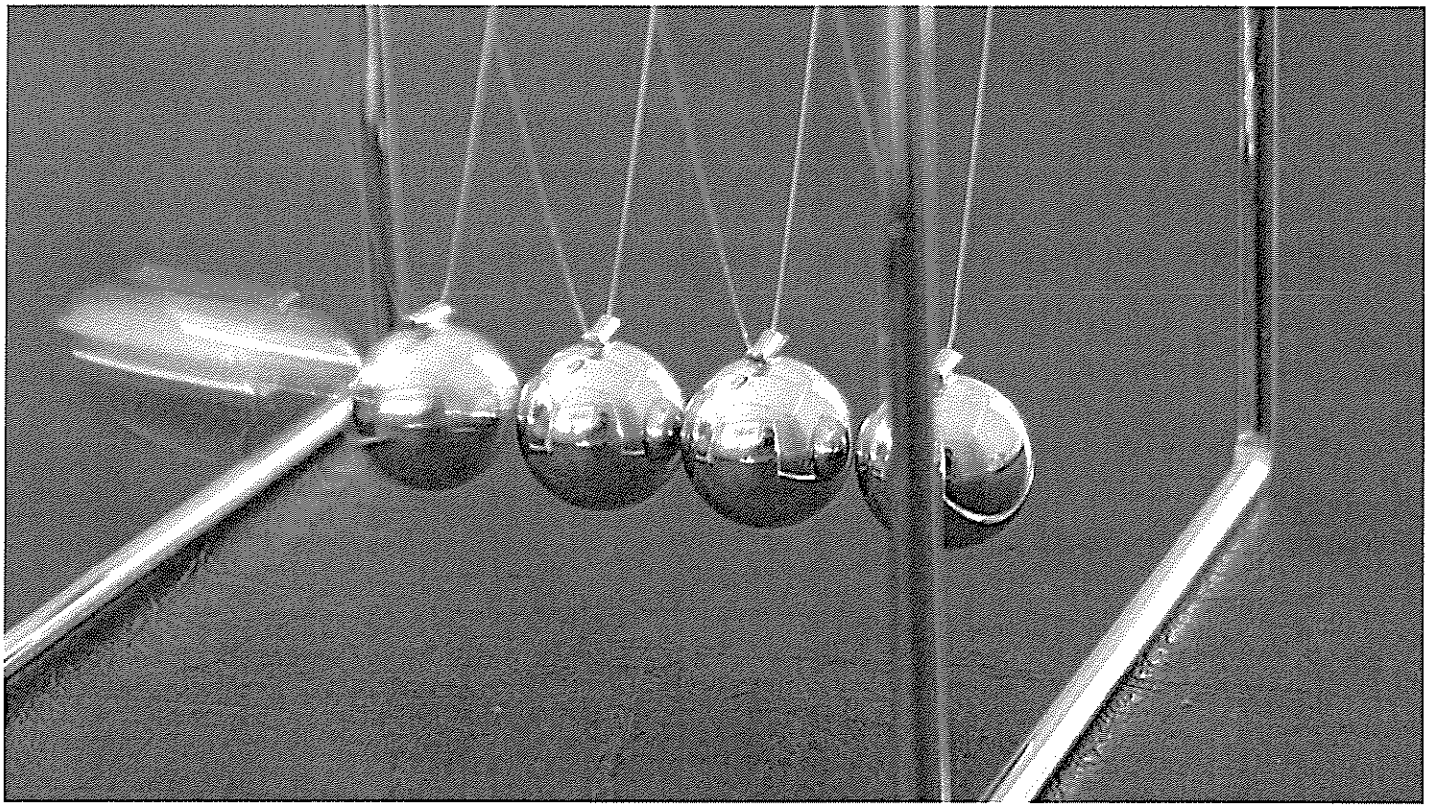


Image 1. Newton's cradle is a device that demonstrates the transfer of kinetic energy. Photo from: Wikimedia Commons

Energy cannot be created or destroyed. This means the total amount of energy in the universe has always been and will always be constant. However, energy can change form and even transfer between objects.

A common example of energy transfer is the transfer of kinetic energy — the energy of motion — from a moving object to a stationary object. When a golf club is swung and hits a golf ball, some of the club's kinetic energy transfers to the ball. In this type of energy transfer, energy moves from one object to another but stays in the same form. A kinetic energy transfer is easy to observe and understand, but other important transfers are not as easy to visualize.

Thermal energy has to do with the internal energy of a system from its temperature. When a substance is heated, its temperature rises because its molecules move faster and gain thermal energy. Temperature measures the "hotness" or "coldness" of an object. The term heat refers to thermal energy being transferred from a hotter system to a cooler one. Thermal energy transfers occur in three ways: conduction, convection and radiation.

Conduction is when thermal energy is transferred between molecules in contact with one another. If you place a metal spoon in a pot of boiling water, the end not touching the water gets very hot. This happens because metal is an excellent conductor. Heat travels easily through the material. Vibrations of molecules at the end of the spoon touching the water spread up the spoon, until all the molecules are vibrating faster. The whole spoon gets hot. Some materials, such as wood and plastic, are poor conductors. Heat does not travel through them easily. They are known as insulators.

Radiation Transfers Heat Through Space

Convection only occurs in liquids and gases. When water is boiled on a stove, water molecules at the bottom of the pot are closest to the heat source. They gain thermal energy first. They move faster and spread out. They create a lower density of molecules, or quantity of molecules in that volume, at the bottom of the pot. These molecules rise. They are replaced at the bottom by cooler, denser water. The process repeats, creating a current of molecules sinking, heating up, rising, cooling down and sinking again.

The third type of heat transfer — radiation — is critical to life on Earth. With radiation, a heat source does not have to touch the object being heated. Radiation can transfer heat even through the vacuum of space. Nearly all thermal energy on Earth comes from the sun. It radiates to the surface of our planet. It travels in the form of energy waves, such as visible light. Materials on Earth absorb these waves to use them for energy or reflect them back into space.

In an energy transformation, energy changes form. A ball sitting on a hill has gravitational potential energy, which is the ability for an object to do work due to its position in a gravitational field. The higher on the hill this ball is, the more gravitational potential energy it has. When a force pushes it down the hill, that potential energy transforms into kinetic energy. The ball loses potential energy and gains kinetic energy.

In a frictionless universe, the ball would continue rolling forever. On Earth, however, the ball's kinetic energy is transformed into heat by the opposing force of friction. The ball stops at the bottom of the hill. Just as with energy transfers, energy is conserved in transformations.

Energy Moves From One Form To Another

In nature, energy transfers and transformations happen constantly, such as in a coastal dune environment.

Thermal energy radiates from the sun, heating the land and ocean. However, water heats up more slowly than land. This temperature difference creates a convection current, which appears as wind.

This wind possesses kinetic energy, which it transfers to sand by carrying it short distances. If the moving sand hits something, it stops due to the friction created. Its kinetic energy is then transformed into thermal energy, or heat. Once enough sand builds up, these impacts can create sand dunes.

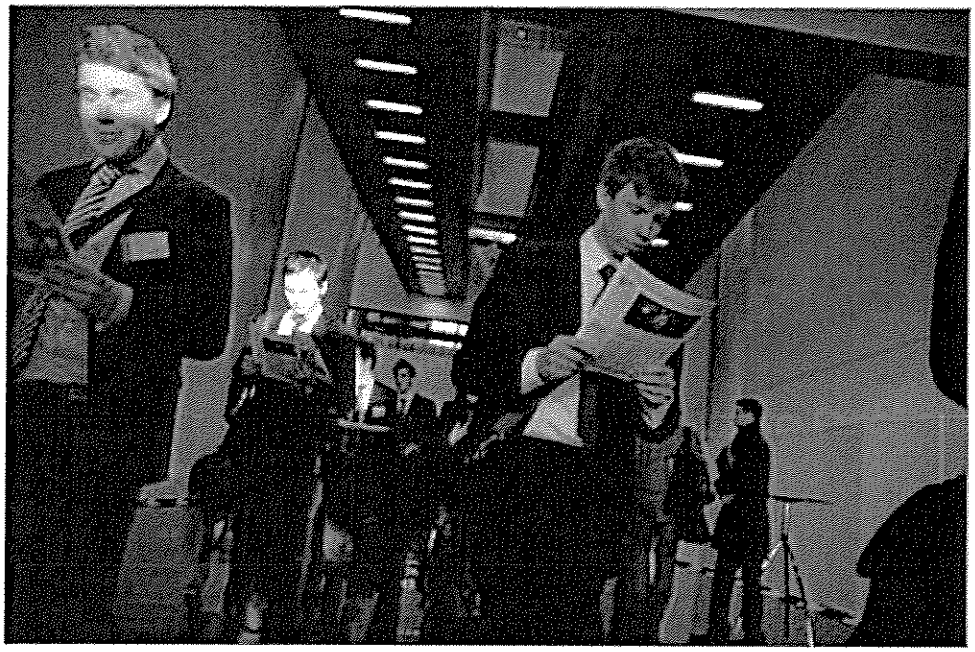
These newly formed sand dunes provide a special environment. Plants grow there, using light energy to transform water and carbon dioxide into chemical energy, which is stored in sugar. When an animal eats the plant, it uses the stored energy to heat its body and move around. This transforms the chemical energy into kinetic and thermal energy.

Though it may not always be obvious, energy transfers and transformations happen constantly. They are what enable life to exist.

Day 3

Portrait of a Journalist

by ReadWorks



Peter Smith is a science journalist in Brooklyn, New York. He travels the country to report stories for national newspapers and magazines. Since he doesn't work for a single publication, however, he does not have an office. He works out of his apartment, coffee shops, and the local library. Being a journalist is his dream job. He only wishes it paid a bit more money.

"That's the one big downside of working as a journalist these days," Smith says. "There are so many stories out there, and so many people to write about. But fewer places are willing to give you money to write about them."

Smith was sitting in a coffee shop in Red Hook, the neighborhood in Brooklyn where he lives. Last year, he and his girlfriend moved there from Portland, Maine. The two of them loved the summers in Maine and the lobster that came with it. But the winters were simply too cold to bear.

"I couldn't believe how cold it got in Maine during the winter!" he says, shivering at the thought. "Being from upstate New York, I thought I knew what cold meant. But I had no idea."

New York winters are not exactly mild, he admits. But they're warmer than Maine. More importantly, New York was a place where Smith could meet other writers. Being a journalist can be a solitary profession. To succeed, it is important to make friends in the field.

"It was much quieter in Maine," he says with a laugh. "It was definitely easier to concentrate. But I didn't have many other journalists to talk to and share ideas with. After a while, it got pretty lonely."

New York City, he says, is the opposite of lonely. "I can't walk from my apartment to the subway

without bumping into another journalist."

Smith grew up near Beacon, New York and graduated from Hampshire College in Western Massachusetts. From age 20, he knew he wanted to be a writer. The question was: What *kind* of writer?

He got his first job as an intern at the *Christian Science Monitor*, a national newspaper. A few years later, he started writing a column for a magazine that focused on health and the environment. It was that experience-writing about science on a weekly basis-that inspired him to become a science journalist.

Asked why he liked to write about science, Smith said it offered the best way to satisfy his endless curiosity.

"To me, science is the best possible subject for a journalist," he says. "Scientists make major discoveries every day. And unlike music or art, these discoveries often have the potential to save hundreds, thousands, even millions of lives. It's a pretty great feeling to study and write about research that will affect so many people."

To find his stories, Smith often spends days digging through scientific journals and blogs on the Internet. He reads at least two newspapers every morning: the *New York Times* and the *Wall Street Journal*. On occasion, he will call up a scientist he knows and ask what she or he has been working on lately. When he finds what looks like a story, that's when the real work begins.

"I spend a lot of my time doing research to see what other people have written about the subject I'm interested in," he says. "Then I start contacting sources to see if they will agree to an interview. If they say yes, we usually talk over the phone. If necessary, and if I think they're a good character, I will travel to meet them in person."

"In-person reporting," he adds, "is my favorite part of the job. If I have the chance to meet someone I'm writing about face-to-face, it always improves the story. And it's fun, too."

For Smith, working as a "freelancer"-as opposed to a "staff writer," or someone who writes for a single publication-has both benefits and drawbacks. He doesn't have a boss, for one. This means he can write about whatever he wants. And he is not expected to show up to an office every day at a certain time. He wakes up when he wants to, and sets his own schedule each day.

Not reporting to a boss, however, means there is no one there to help him. At newspapers, editors will often assign story ideas to a writer. As a freelancer, Smith has to come up with all his own ideas. This can be exhausting, he admits.

"There are weeks when I just can't seem to find anything to write about," he says. "It's at those times I wish I had a nice cozy desk somewhere and an editor looking over my shoulder, giving me ideas."

For the most part, though, he likes the freedom that freelance journalism entails.

"I'm the kind of person who likes to do things my way," he says with a smile. "I have a bit of a problem with authority. If someone tells me what to do-even if it's in my best interest-I tend to ignore him. At an early age, I knew that working at a desk job was probably not for me."

As a boy, Smith was always examining bugs and asking his mother questions like how ocean waves form. His parents figured he would grow up to be a scientist. For someone with his background, I ask, what made him choose writing about science instead of conducting actual scientific research?

Smith laughs at the question. "I didn't want to take organic chemistry in college," he says. "That prevented me from applying to medical school." But more than that, he adds, writing about science instead of practicing it allows him to learn about a wider range of subjects.

"Had I gone to medicine and become a doctor, I probably would have wound up studying the same thing for ten, fifteen, or even twenty years," he says. "As a journalist who writes about science, I can write about dozens of different things every year. Sure, it doesn't pay as well as being a doctor and doesn't have the same prestige. But I'm satisfying my curiosity about the world. For me, that's what really matters."

Name: _____ Date: _____

1. What is Peter Smith's dream job?

A. scientist

B. novel writer

C. journalist

D. newspaper editor

2. How does the author describe the profession of journalism?

A. solitary; satisfies one's curiosity

B. requires a graduate education

C. a well-paid, steady desk job

D. only done by freelancers

3. Finding things to write articles about is a challenging process. What evidence from the passage best supports this conclusion?

A. Smith contacts sources to see if they will agree to an interview, either by phone or in person.

B. Scientists make discoveries everyday, which have the potential to save lives.

C. On occasion, Smith will call a scientist he knows and ask what she or he has been working on lately.

D. Smith digs through scientific journals for days, and reads at least two newspapers every morning.

4. Which of the following conclusions about Peter Smith's personality is supported by the passage?

A. Smith is motivated mainly by prestige and money.

B. Smith is independent and loves to learn new things.

C. Smith would enjoy writing about art as much as science.

D. Smith is not a social person and prefers to work alone.

5. What is this passage mostly about?

A. the life story of Peter Smith

B. the pros and cons of freelancing

C. the job of a science journalist

D. why science is more important than art

6. Read the following sentences: "'I'm the kind of person who likes to do things my way,' he says with a smile. 'I have a bit of a problem with **authority**. If someone tells me what to do-even if it's in my best interest-I tend to ignore him.'"

What does "**authority**" mean as used in this sentence?

A. somebody with official power

B. the editor of a newspaper

C. somebody who takes orders

D. somebody who talks a lot

7. Choose the answer that best completes the sentence below.

Peter Smith was interested in science from a young age; _____, he decided to become a journalist instead of conducting scientific research.

A. therefore

B. however

C. particularly

D. meanwhile

8. Why does Smith like to write about science?

_____

_____

_____

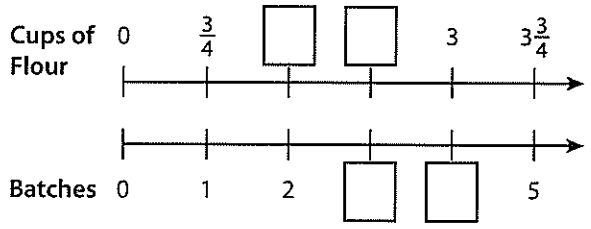
9. What are the benefits and drawbacks of being a freelancer, according to Smith?

10. Explain whether Peter Smith would enjoy working as a staff writer at a science magazine. Support your answer using information from the passage.

Understanding Proportional Relationships

➢ **Read and solve the problems. Show your work.**

1. Josie is making pizza dough. Complete the double number line by filling in the missing values. Then write an equation that models the relationship between the total cups of flour, c, and number of batches, n. Show your work.



2. Lilli bought each of her friends a pair of colorful socks that cost $5.50. Complete the table to show how much Lilli paid to buy different numbers of socks. Then write an equation that shows the total cost, c, for p pairs of socks.

Cost		$11.00			
Pairs of socks	1	2	3		

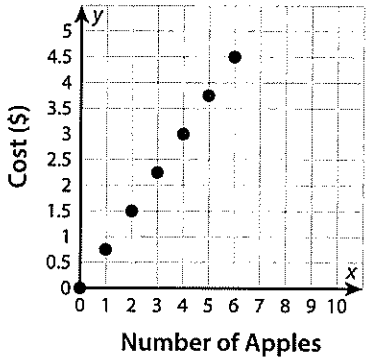
3. Explain how using a table is similar to using a double number line and how it is different.

4. Mrs. Lopez types at a constant rate. The constant of proportionality for the relationship between the number of words she types, w, and the number of minutes she types, m, is 38. Write an equation to show this relationship.

Interpreting Graphs of Proportional Relationships

➢ **The graph shows the cost of apples at a local market. Use the graph to answer problems 1–3.**

1. What is the cost of 1 apple and of 3 apples? How do you know?

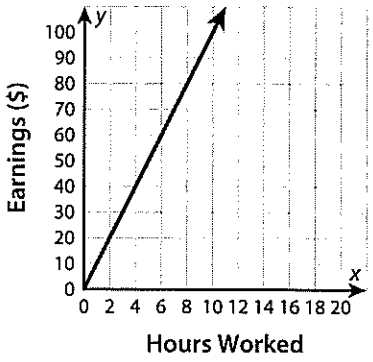


2. What does the point (0, 0) represent in this context?

3. What does the point (2, 1.5) represent in this context?

➢ **The graph shows Manuela's earnings for the number of hours she spends tutoring. Use the graph to answer problems 4 and 5.**

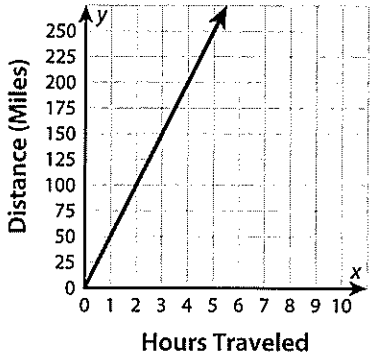
4. How much does Manuela earn for each hour of tutoring? Explain.



5. Write an equation that shows the relationship between Manuela's earnings, y, and hours, x.

Interpreting Graphs of Proportional Relationships *continued*

➢ **The graph shows the distance Jason's family traveled on a recent road trip. Use the graph to answer problems 6–8.**

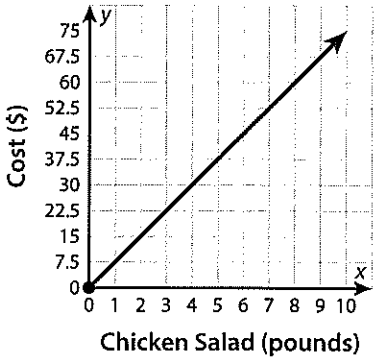


6 What is the constant of proportionality? Explain how you know.

7 Identify and interpret one other point on the graph.

8 Write an equation that models the distance, d, traveled in t hours.

➢ **The graph shows the cost per pound of chicken salad. Use the graph to answer problems 9 and 10.**



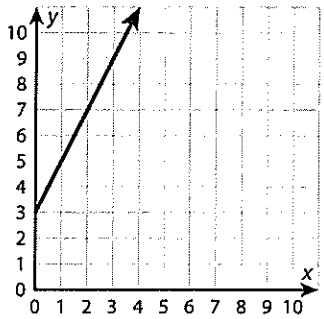
9 Randy claims that he can purchase 3.5 pounds of chicken salad for $23.50. Is he correct? Explain.

10 Explain how you can determine how much chicken salad may be purchased for $52.50.

Recognizing Graphs of Proportional Relationships

➢ **Circle all the problems with graphs that do NOT represent a proportional relationship. For the problems that are circled, explain why the graphs do not represent a proportional relationship.**

1



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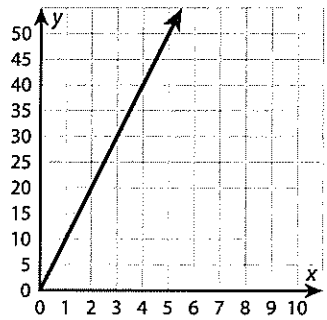

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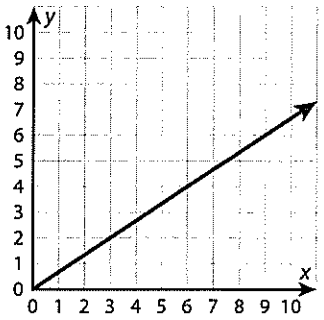

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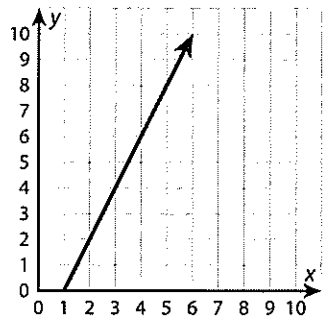

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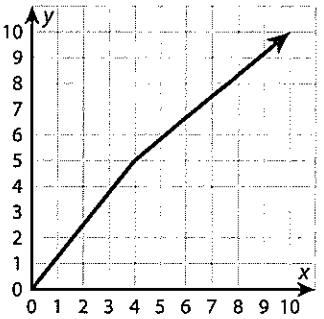

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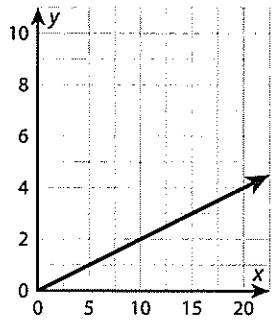
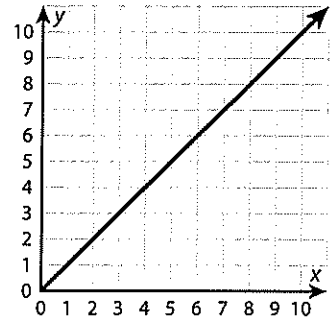
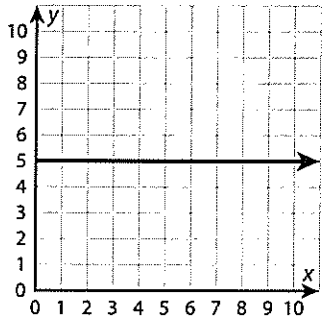
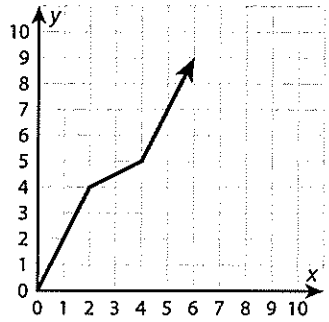
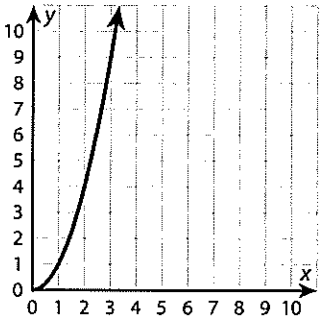


Recognizing Graphs of Proportional Relationships *continued*

7 

8 

9 

10 

11 Without analyzing specific points on a graph, explain how you know whether a graph shows a proportional relationship.

Air pollution from Asia is blowing across the Pacific Ocean to California

By Los Angeles Times, adapted by Newsela staff on 02.12.15
Word Count **539**
Level **860L**

Downtown Los Angeles as seen from Mount Lee through a light layer of smog on March 18, 2008. AP Photo/Don Ryan

CARMEL VALLEY, Calif. — The Santa Lucia Mountains along California's Big Sur Coast should have some of the country's cleanest air. However, scientist Ian Faloona is finding high levels of pollution there. He says the pollution is blowing across the Pacific Ocean from Asia.

Faloona has been measuring ozone, the lung-damaging gas in smog. For the last three years, he has been studying it as it reaches California. His measuring devices are located on Chews Ridge more than 5,000 feet above sea level. There he can test air from across the Pacific Ocean before it is affected by U.S. pollution.

Dirty Air, Unhealthy Lungs

He and other scientists are finding rising levels of ozone across the western United States. Ozone pollution is caused by cars, trucks and factories. It leads to asthma, heart and lung disease and even early death.

The rise in ozone levels was not supposed to happen. Across the country, pollution from cars, trucks and factories has been cut a lot.

Scientists say pollution from China and other fast-growing Asian countries is causing the increase. Ozone from Asia is blowing across the Pacific Ocean. It is increasing ozone levels in the western U.S.

Winds carry the ozone from Asia to the U.S. West Coast in about a week. The ozone is then added to pollution created by American cars and factories. In California's cities such as Bakersfield, Fresno and Los Angeles smog has become worse.

Who Is Responsible?

The problem is bigger in western states, which get the ozone from Asia first.

It will not be easy to limit pollution from China, said scientist Owen Cooper. The U.S. and China would have to work out a deal. A deal between two countries is called a treaty.

Such an agreement is unlikely, Cooper said. Therefore, the U.S. will have to concentrate on fixing the pollution created here. Pollution from U.S. cars and factories will just have to be cut even more than it has been already.

"Further Excuses?"

In Denver, some kinds of pollution "have come down enormously due to cleaner cars," Cooper said. However, "our ozone pollution isn't coming down. It's kind of stuck."

Some believe there is too much attention on ozone from Asia. They say state and local regulators should focus on cutting down pollution from cars and factories here in the U.S.

Dolores Weller is director of the Central Valley Air Quality Coalition. She says that state and local officials are looking for "further excuses." Weller believes officials do have the power to control pollution that is created at home.

Problems Are Linked

Nevertheless, the U.S. did not used to worry about pollution in Asia. Now, people are realizing that smog in a faraway country can affect us here.

Faloona agrees that the Asian and U.S. pollution problems are linked. He can see the connection from up on Chews Ridge.

Looking west, he sees ozone blowing in across the Pacific Ocean. Looking inland, he sees the San Joaquin Valley covered by a cloud of air pollution.

People used to think Asian pollution would not affect us here, Faloona said. They did not believe it could travel all the way across the Pacific Ocean. However, "we've realized it's all connected."

Day 4

The Quest for a Desk

by ReadWorks

My cell phone buzzed, and I felt a momentary apprehension. Would this be a good call or a bad call? I looked at the number: "Unknown." A good sign.

"Hello?"

"Hi, is this Greg? You called about the desk?"

Yes! This was the call that I had been waiting for. I tried to keep the excitement out of my voice, to sound casual. It doesn't do to sound too eager when you're dealing with someone from an online classified ad.

"Oh, yes. I was just wondering if the desk you advertised is still available. I might possibly be interested in it."

"Well, if you can pick it up in the next two hours and pay in cash, it's all yours. But let me know, because if not, I have others who want it."

"No, no, I can be there!" I dropped the facade of nonchalance. This desk was too important to trifle with. "Just give me the address, and I'll be there within an hour."

That was how I came to be barreling down the Louisiana prairie highway in a borrowed pick-up truck at 7 a.m. on a Sunday morning. For most people, buying used furniture is a hobby. For me, it's a crucial part of my job.

When audiences watch a movie, they disappear into an alternate world. It's my job to create that fantasy. What kind of couch would this character sit on? Would they have pictures of their family on the wall to show how they miss their home, or would they have posters of faraway cities that they dream of visiting? These are the questions that I consider on every project. When you watch a video, you may not realize it, but every detail has been agonized over. Every picture frame, every book, has been carefully chosen by someone like me. In this universe, I call the shots. I am a set designer.

The process is the same every time. A director calls and asks if I'm interested in working with him or her on a film. Then the director sends a script for me to read through. I skim the script once and then read more deeply, making notes on how I imagined the settings could reflect the emotions and inner lives of the characters.

A few months ago, Robby, one of my favorite directors, had approached me about filming a biopic. Biopics are films about the lives of real people, though the films often embellish the truth. This biopic was going to be about Flannery O'Connor, one of my favorite authors. Flannery O' Connor's genius had been a bright flame that was extinguished too soon. She lived much of her life in excruciating pain, as she suffered from lupus. Lupus is an autoimmune disease that causes the body's immune system to attack healthy cells in the body. In spite of her physical pain, Flannery was wry, sarcastic, and brilliant. She was the perfect subject for a film.

The script specified that many of the scenes of her writing her early work would be shot at a desk.

This desk would loom in importance in those early scenes; it would be the key piece anchoring the first half of the film. I had to find the perfect desk.

I searched everywhere for the ideal desk. It had to be appropriate for the time; you couldn't have a sleek, modern piece of furniture in a film set in the 1940s. It had to be the kind of desk Flannery would've owned. It also had to be aesthetically pleasing, something that would look beautiful on film without stealing the show. Finally, after scouring antique sales, furniture stores, and online ads, I'd come across a classified ad online that looked perfect. The desk was in Sarepta, a small town just an hour north of where we were shooting.

I pulled off the highway onto a gravel driveway. Cows were grazing in the fields on either side of the road, and a "No Trespassing" sign hung from one of the gates. After about a mile, I pulled in front of a house. It was a sprawling, plantation-style mansion. Though it had once been the home of someone rich and powerful, you could see that in recent years it had fallen into disrepair. Some of the doors hung off their hinges, and the house's white paint had darkened to a dingy grey. Piles of junk sat on the front porch, and two broken cars were in the yard.

I summoned my courage, went up to the door, and knocked. The door opened just a crack, and a voice called out, "You here about the desk?"

"Yes, sir," I responded. "I'm the one who called about the online ad."

The door opened wider, and a small man glared up at me. He had to be at least seventy, and his shrewd eyes peered at me through large, thick glasses. I saw them linger suspiciously on my piercings and tattoos. I realized I should probably have tried harder to cover them up; after all, I wasn't in Los Angeles anymore.

"What exactly do you want with my desk?" The man spit out the words like an accusation.

"Well, sir, I work in the film industry," I began.

"I don't have any patience for Hollywood. It's all fake," he said. I took a deep breath. This wasn't the most auspicious beginning.

"We're working on a film about a famous author. Many of the scenes will show her writing at a large, wooden desk. I think your desk is absolutely perfect for the film, and I'm happy to pay you a fair price for it," I blurted out quickly.

"Well... which author?" the man asked.

"Flannery O'Connor," I said, tentatively.

The man's face seemed to melt, and the rigid scowl and frown lines relaxed into something closer to a smile.

"Well, why didn't you say so?" he asked. "My favorite author, you know. Kind of like the thought of her sitting and writing all those stories at my desk."

Name: _____ **Date:** _____

1. What is the narrator's job?

A. movie director

B. makeup artist

C. costume designer

D. set designer

2. What point of view is this story told from?

A. second person point of view

B. third person omniscient point of view

C. first person point of view

D. third person limited point of view

3. Read these sentences from the text:

> Yes! This was the call that I had been waiting for. I tried to keep the excitement out of my voice, to sound casual. It doesn't do to sound too eager when you're dealing with someone from an online classified ad.
>
> 'Oh, yes. I was just wondering if the desk you advertised is still available. I might possibly be interested in it.'
>
> 'Well, if you can pick it up in the next two hours and pay in cash, it's all yours. But let me know, because if not, I have others who want it.'
>
> 'No, no, I can be there!" I dropped the facade of nonchalance. This desk was too important to trifle with. "Just give me the address, and I'll be there within an hour.'

Based on this evidence, how interested is the narrator in the desk?

A. The narrator is not interested in the desk.

B. The narrator cannot decide whether he is interested in the desk.

C. The narrator is a little bit interested in the desk.

D. The narrator is very interested in the desk.

4. Based on the information in the story, what can you infer about the desk in Sarepta?

A. The desk is sleek and modern.

B. The desk is beautiful and modern.

C. The desk is old and ugly.

D. The desk is old and beautiful.

5. What is the main idea of this story?

A. A set designer's job is to help audiences disappear into the world of a movie.

B. A set designer's quest for a desk leads him to someone who shares his interest in Flannery O'Connor.

C. A man who dislikes Hollywood shows interest in a film about Flannery O'Connor, his favorite author.

D. As a set designer drives to a house in Sarepta, he sees cows on either side of the road and a "No Trespassing" sign hanging from a gate.

6. Read these sentences from the text:

> When audiences watch a movie, they disappear into an alternate world. It's my job to create that fantasy. What kind of couch would this character sit on? Would they have pictures of their family on the wall to show how they miss their home, or would they have posters of faraway cities that they dream of visiting? These are the questions that I consider on every project. When you watch a video, you may not realize it, but every detail has been agonized over. Every picture frame, every book, has been carefully chosen by someone like me. In this universe, I call the shots. I am a set designer.

Based on this paragraph, what does the phrase "I call the shots" mean?

A. I am the person shooting the movie.

B. I call people on the phone when I need something.

C. I am in charge.

D. I direct action movies.

9. Read these sentences from the text:

> We're working on a film about a famous author. Many of the scenes will show her writing at a large, wooden desk. I think your desk is absolutely perfect for the film, and I'm happy to pay you a fair price for it,' I blurted out quickly.
>
> 'Well... which author?' the man asked.
>
> 'Flannery O'Connor,' I said, tentatively.
>
> The man's face seemed to melt, and the rigid scowl and frown lines relaxed into something closer to a smile.
>
> 'Well, why didn't you say so?' he asked. 'My favorite author, you know. Kind of like the thought of her sitting and writing all those stories at my desk.'

Based on this evidence, how does the old man probably feel about his desk being used in a film about Flannery O'Connor?

10. Explain whether the old man is likely to go see the film about Flannery O'Connor when it is released. Support your answer with evidence from the text.

Solving Multi-Step Ratio Problems

➢ **Solve each problem.**

1. At The Green House of Salad, you get a $1 coupon for every 3 salads you buy. What is the least number of salads you could buy to get $10 in coupons?

2. Kim orders catering from Midtown Diner for $35. She spends $5 on a large order of potato salad and the rest on turkey sandwiches. Each sandwich is $2.50. How many sandwiches does Kim buy?

3. Molly and Liza are exercising. Molly does 10 push-ups at the same time as Liza does 15 push-ups. When Molly does 40 push-ups, how many push-ups does Liza do?

4. A shark swims at a speed of 25 miles per hour. The shark rests after 40 miles. How long, in minutes, does the shark swim before resting?

5. Ali and Janet are selling gifts at a local craft show. For every bar of soap that Ali sells, she earns $5. For every mug that Janet sells, she earns twice as much as Ali. Ali sells 5 bars of soap, and Janet sells 7 mugs. How much money did they make altogether?

6. Ted is making trail mix for a party. He mixes $1\frac{1}{2}$ cups of nuts, $\frac{1}{4}$ cup of raisins, and $\frac{1}{4}$ cup of pretzels. How many cups of pretzels does Ted need to make 15 cups of trail mix?

7. The ratio of chaperones to students on a field trip is 2 : 7. There are 14 chaperones on the field trip. In all, how many chaperones and students are there?

8. Dayren is driving to visit family. She drives at an average of 65 miles per hour. She drives 227.5 miles before lunch and then 97.5 miles after lunch. How many hours did she spend driving?

Solving Problems Involving Multiple Percents

➢ **Solve each problem.**

1. A chair's regular price is $349. It is on clearance for 30% off, and a customer uses a 15% off coupon after that. What is the final cost of the chair before sales tax?

2. A calculator is listed for $110 and is on clearance for 35% off. Sales tax is 7%. What is the cost of the calculator?

3. Cara started working for $9 per hour. She earns a 4% raise every year. What is her hourly wage after three years?

4. A factory manufactures a metal piece in 32 minutes. New technology allowed the factory to cut that time by 8%. Then another improvement cut the time by 5%. How long does it take to manufacture the piece now? Round your answer to the nearest minute.

5. An apartment costs $875 per month to rent. The owner raises the price by 20% and then gives a discount of 8% to renters who sign an 18-month lease. How much less do renters who sign an 18-month lease pay per month to rent the apartment?

Solving Problems Involving Multiple Percents *continued*

6. Damon buys lumber worth $562. He gets a 20% contractor's discount. The sales tax is 6%. His credit card gives him 2% off. How much does he pay?

7. Cindy is shopping for a television. The original price is $612. Store A has the television on clearance for 30% off. Store B has it on clearance for 25% off, and Cindy has a 10% off coupon to use at Store B. At which store will she pay less? How much less?

8. John goes to a restaurant and has a bill of $32.57. He uses a 10% off coupon on the cost of the meal. The tax is 8%. He leaves a tip of 18% on the amount before the coupon or tax is applied. How much does he spend?

9. Explain which situation will give you the best price: a discount of 15% and then 10% off that amount, a discount of 10% and then 15% off that amount, or a discount of 25%.

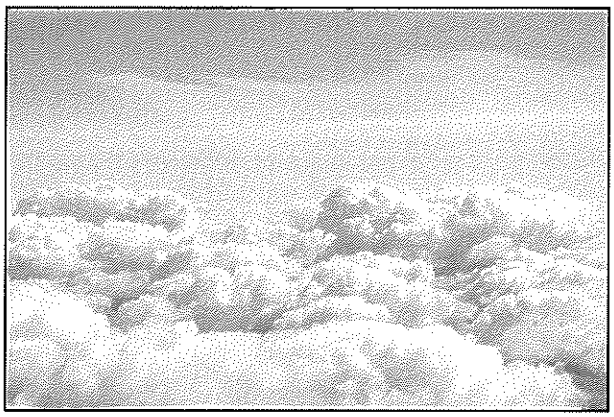
Name: _____ Class: _____

What Are Clouds?

By NASA
2014

Spotting a cloud floating overhead is a common sight on our planet, but what are clouds made of? Why do they look like they do? This informational text explains the formation of different clouds and how they contribute to different types of weather on Earth. As you read, take notes on how clouds can affect weather on Earth.

[1] A cloud is made of water drops or ice crystals floating in the sky. There are many kinds of clouds. Clouds are an important part of Earth's weather.



"Untitled" by Pero Kalimero is licensed under CC0.

How Do Clouds Form?

The sky can be full of water. But most of the time you can't see the water. The drops of water are too small to see. They have turned into a gas called water vapor. As the water vapor goes higher in the sky, the air gets cooler. The cooler air causes the water droplets to start to stick to things like bits of dust, ice, or sea salt.

What Are Some Types of Clouds?

Clouds get their names in two ways. One way is by where they are found in the sky. Some clouds are high up in the sky. Low clouds form closer to Earth's surface. In fact, low clouds can even touch the ground. These clouds are called fog. Middle clouds are found between low and high clouds.

Another way clouds are named is by their shape. Cirrus clouds are high clouds. They look like feathers. Cumulus clouds are middle clouds. These clouds look like giant cotton balls in the sky. Stratus clouds are low clouds. They cover the sky like bed sheets.

What Causes Rain?

[5] Most of the water in clouds is in very small droplets. The droplets are so light they float in the air. Sometimes those droplets join with other droplets. Then they turn into larger drops. When that happens, gravity causes them to fall to Earth. We call the falling water drops "rain." When the air is colder, the water may form snowflakes instead. Freezing rain, sleet, or even hail can fall from clouds.

Why Does NASA Study Clouds?

Clouds are important for many reasons. Rain and snow are two of those reasons. At night, clouds reflect heat and keep the ground warmer. During the day, clouds make shade that can keep us cooler. Studying clouds helps NASA better understand Earth's weather. NASA uses satellites[1] in space to study clouds.

NASA also studies clouds on other planets. Mars has clouds that are like the clouds on Earth. But other planets have clouds that aren't made of water. For example, Jupiter has clouds made of a gas called ammonia.

1. A satellite is a man-made or natural object that orbits around another object. In this context, it refers to a man-made object that sends information from space back to Earth.

Text-Dependent Questions

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

1. PART A: Which TWO of the following sentences best summarize the article?
    A. Clouds are named based on their shape and how high or how low they are in the sky.
    B. By studying clouds, scientists can determine when there will be deadly storms.
    C. Clouds release water in different forms based on how cold or warm the air is.
    D. Earth is the only planet in the universe that can produce clouds out of vapor.
    E. Clouds are named for how much water they hold and whether they are likely to produce rain.
    F. Only clouds of certain shapes and at certain heights will release rain.

2. PART B: Which TWO details from the text best support the answers to Part A?
    A. "There are many kinds of clouds. Clouds are an important part of Earth's weather." (Paragraph 1)
    B. "The cooler air causes the water droplets to start to stick to things like bits of dust, ice, or sea salt." (Paragraph 2)
    C. "Cumulus clouds are middle clouds. These clouds look like giant cotton balls in the sky." (Paragraph 4)
    D. "When the air is colder, the water may form snowflakes instead. Freezing rain, sleet, or even hail can fall from clouds." (Paragraph 5)
    E. "Studying clouds helps NASA better understand Earth's weather. NASA uses satellites in space to study clouds." (Paragraph 6)
    F. "For example, Jupiter has clouds made of a gas called ammonia." (Paragraph 7)

3. Which of the following best describes the structure of the section "What Are Some Types of Clouds" (Paragraphs 3-4)?
    A. The author describes of the height of different kinds of clouds and then gives examples of their shapes.
    B. The author lists all of the different names of clouds and describes how quickly each kind of cloud moves.
    C. The author compares the shapes of large clouds to the shapes of smaller clouds.
    D. The author explains the science behind how clouds form.

4. What connection does the author draw between clouds and weather on Earth?

Discussion Questions

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

1. In the context of the text, how do we understand the world around us? How does studying clouds help scientists better understand the world?

2. Have you ever studied the clouds and guessed what the weather would be like? Describe what you saw or experienced while studying the clouds. Were you right about the weather?

Day 5

Worldwide Loss of Bees a Growing Concern

by Alissa Fleck

When we think of bees, we think of pesky, buzzing insects that sting us and ruin outdoor gatherings. We might wonder: how badly can we possibly need bees? The truth is, bees are an incredibly important part of our ecosystem on Earth-no matter how annoying they may be to humans. Unfortunately, bees have been disappearing around the world for some time now, and their mass disappearance continues to present new problems around the planet.

According to Reuters news source, scientific researchers have been trying desperately for the past 15 years to understand why honeybees around the world are dying off at frighteningly high rates. Over 1 million bee colonies disappear every year, never to return, Reuters reporters noted in 2012.

Kevin Hackett, the national program leader for the bee and pollination program at the U.S. Department of Agriculture (USDA), called the massive honeybee disappearance "the biggest general threat to our food supply."

How could something so small be so important to us as humans? Bees are used to pollinate many crops, for instance a large portion of California's almond crop, which relies heavily on bee pollination. Bees are also essential for the pollination of apple and citrus fruit crops. Without the pollination by bees, these plants are unable to reproduce and may die off.

The mass deaths of honeybees have been linked to something known as Colony Collapse Disorder (CCD)-a mysterious loss of bee colonies with many potential causes-as well as a variety of pesticides, parasites and disease, all of which hurt bee populations. Other possible causes include land development and changes in agricultural practices around the world.

There are numerous kinds and species of bees, and honeybees are not the only ones disappearing in large quantities. Bumblebees can be added to the list of pollinators whose widespread disappearance

worries scientists. While the dangers of losing bees, such as the damage to our food supplies, have long been known, researchers are uncovering even more distressing information about the loss of these ecologically crucial insects.

According to researchers who published their findings in the Proceedings of the National Academy of Sciences in 2013, the disappearance of bumblebees offers new cause for concern: certain plants are having difficulties reproducing with the loss of their bumblebee pollinators, and are at higher risk for extinction.

Two scientists, who conducted research on the impact of bumblebee loss on plant reproduction, found that when a particular species of bumblebee was removed from the pool of pollinators, other bees did not completely take over the pollinating duties. Instead, with less competition from the bees which had been removed from the pool, the remaining bumblebees flew between many different plants and were less likely to be faithful to one kind of plant.

The researchers noted this experiment had damaging effects. For instance, the larkspur, a purple wildflower, requires pollination from its own species-other larkspurs-to survive. The researchers found with fewer bumblebees, the remaining bees were "less faithful" to a particular plant, meaning the larkspur was unable to survive as it would have before the loss of bumblebees.

This particular study highlights the importance of bees to the continuation of, not just our food supply, but also all biodiversity, as the effects of this study do not end with the larkspur plant alone, but point to a much larger issue. The larkspur is just one example of this issue.

In 2012, the USDA and Environmental Protection Agency (EPA) released a joint statement discussing the issue of bee loss, and the search for a solution to the cycle of problems caused by bees dying off.

The organizations concluded: "No single silver bullet will solve the problems affecting honey bees and other pollinators."

In terms of solutions, the organizations proposed: "Habitat enhancement...targeted pesticide use, improved colony management techniques and improved disease and pest resistant stocks of bees are collectively needed to improve the health of honey bee colonies."

"It is imperative that we increase honey bee survival both to make beekeeping profitable," the statement noted, "but more importantly to meet the demands of U.S. agriculture for pollination and thus ensure of [sic] food security."

Name: _____ **Date:** _____

1. What problem does this article mainly discuss?

A. Bees can sting us.

B. Bees can ruin outdoor gatherings.

C. Bees are disappearing around the world.

D. Bees are annoying to humans.

2. Experts think that pesticides, parasitess and diseases, as well as land development and changes in agricultural practices around the world, are some possible causes of bee death.

According to this article, what is the most important effect of this new bee shortage?

A. Researchers are publishing new findings.

B. Many crops will be unable to survive without pollination.

C. Scientists are studying bees.

D. Gardeners are having a harder time growing larkspurs.

3. In the article, Kevin Hackett, the national program leader for the bee and pollination program at the U.S. Department of Agriculture (USDA), calls the massive honeybee disappearance "the biggest general threat to our food supply."

What evidence from the article supports his claim?

A. Honeybees are not the only ones disappearing in large quantities.

B. Bees are used to pollinate many food plants, such as California's almond crops, apple crops and citrus fruit crops.

C. The larkspur, a purple wildflower, requires pollination from its own species-other larkspurs-to survive.

D. Over 1 million bee colonies disappear every year, never to return.

4. Leaders from the U.S. Department of Agriculture (USDA), researchers from the National Academy of Sciences, and the USDA and Environmental Protection Agency (EPA) are all reported to be working hard to understand and solve the problem of the disappearance of honeybees.

Based on this evidence, what can be concluded about the organizations trying to solve this problem?

A. The organizations do not play an important role in keeping humans and the environment safe.

B. The organizations play an important role in keeping humans and the environment safe.

C. The organizations are dealing with a problem that is not relevant to their focus.

D. The organizations are being forced to deal with a problem they do not care about.

5. What is this article mostly about?

A. threats to bees' health from human development

B. the origins of the crops we eat

C. the science of bee pollination

D. the causes and effects of bee death around the world

6. Read the following paragraphs:

"In 2012, the USDA and Environmental Protection Agency (EPA) released a joint statement discussing the issue of bee loss, and the search for a solution to the cycle of problems caused by bees dying off.

"The organizations concluded: 'No single **silver bullet** will solve the problems affecting honey bees and other pollinators.'

"In terms of solutions, the organizations proposed: 'Habitat enhancement...targeted pesticide use, improved colony management techniques and improved disease and pest resistant stocks of bees are collectively needed to improve the health of honey bee colonies.'"

As used in the passage, what does the phrase "**silver bullet**" mean?

A. a complex solution
B. an easy solution
C. a pollinating bee
D. a dangerous pesticide

7. Choose the answer that best completes the sentences below.

Bees are an incredibly important part of our ecosystem on Earth-no matter how annoying they may be to humans. _____, bees have been disappearing around the world for some time now, and their mass disappearance continues to present new problems around the planet.

A. Instead
B. First
C. However
D. Finally

8. What has the mass deaths of honeybees been linked to?

9. List two reasons why the USDA and Environmental Protection Agency (EPA) believe that "it is imperative that we increase honey bee survival."

10. Explain the impact honeybees and humans have on each other. Use evidence from the text to support your answer.

Name:_____ Class/Period:_____

Assignment: CC 7.RP.2 (Set 3) Teacher: Martin

1 A recipe for spinach dip calls for 2 cups of sour cream. The recipe makes 16 fluid ounces of dip. Maureen is having a graduation party and wants to make 56 fluid ounces of dip. How many cups of sour cream does Maureen need?

Answer: [ ] cups

2 Which value of x will make the fraction, $\frac{x}{12}$, equivalent to $\frac{4}{3}$?

1 6
2 8
3 14
4 16

3 Which value of x will make the fraction, $\frac{10}{x}$, equivalent to $\frac{2}{3}$?

1 10
2 20
3 15
4 30

4 Which value of x will make the fraction, $\frac{36}{20}$, equivalent to $\frac{x}{5}$?

1 18
2 9
3 10
4 4

5 Which value of x will make the fraction, $\frac{36}{144}$, equivalent to $\frac{1}{x}$?

1 16
2 8
3 12
4 4

6 If three-fourths of the marbles in a bag are blue and there are 20 marbles in the bag, how many marbles are *not* blue?

1 15
2 16
3 10
4 5

7 Aiden put two-fifths of his money into his piggy bank. He had $15 left in his pocket to buy a toy. How much money did Aiden have before he put some into his bank?

1 $30
2 $25
3 $10
4 $15

8 Gina had two-sevenths of all the goals scored by her soccer team. Her team scored 28 goals this past season. How many goals did the rest of the team score?

1 24
2 22
3 20
4 8

9 Derek Jeter hit 22 home runs one season. If that was only two-thirty-firsts of all the home runs hit by the Yankees, how many home runs in all were hit by the Yankees in that season?

Answer: [ ] home runs

10 Jody and Liam were driving to a cabin on Long Lake. It is 360 miles from their house to Long Lake. If Jody drove two-fifths of the trip, how many miles did she actually drive?

Answer: [ ] miles

11 Stacy went to the store to purchase some fruit. She saw that she could buy 5 apples for $1.35. Stacy has $2.97. At most, how many apples could Stacy buy?

Answer: [ ] apples

12 Sammy's mother asked him to buy some aspirin at the supermarket. There were two different sizes of aspirin bottles, and Sammy was not sure which one to buy. The bottle with 150 tablets cost $7.50. The bottle with 50 tablets cost $3.00. Sammy used proportions to make his decision.
Which bottle is the better buy?

1 the bottle with 150 tablets
2 the bottle with 50 tablets
3 both bottles work out the same

13 Jenna is buying a box of girl scout cookies. She knows that there are 30 cookies in the box. The price of the box is $3.60. Jenna uses the following proportion to find how much 7 of the cookies cost from that box. Help Jenna decide what values need to be substituted for each of the variables.

$$\frac{7 \text{ cookies}}{x \text{ cookies}} = \frac{y \text{ cents}}{z \text{ cents}}$$

* Enter money values as cents; for example, $1.75 = 175 cents

$x =$ [ ] cookies
$y =$ [ ] cents
$z =$ [ ] cents

14 Bo and Luke are driving to Uncle Jesse's house. Their car, the *General Lee*, can go nearly 208 miles on 13 gallons of gas. They only have 3 gallons of gas left in the tank, but they are 42 miles from Uncle Jesse's.

How far can the *General Lee* go on the 3 gallons of gas it has in its tank? [ ] miles

Does the *General Lee* have enough gas to make to Uncle Jesse's house? Answer **Y** for Yes or **N** for No: [ ]

15 Which of the following is a true statement?

1 $5 : 10 = 3 : 9$
2 $5 : 10 = 4 : 8$
3 $8 : 4 = 5 : 10$
4 $5 : 10 = 10 : 15$

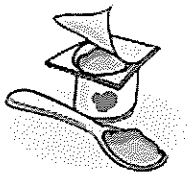
16 Which of the following is a true statement?

1 $2 : 3 = 6 : 4$
2 $2 : 3 = 10 : 20$
3 $2 : 3 = 6 : 9$
4 $2 : 3 = 4 : 5$

17 Which of the following is a true statement?

1 $12 : 10 = 6 : 8$
2 $12 : 10 = 10 : 14$
3 $60 : 50 = 12 : 10$
4 $12 : 10 = 14 : 12$

18



Seven cups of yogurt cost $3.50. How much does one cup of yogurt cost?

1 $1.50
2 $2.00
3 $.50
4 $.35

19

Henry completed a 20-mile bike ride in 4 hours. Josie completed a 30-mile bike ride in 5 hours. If both riders continue at those speeds, how many more miles can Josie ride in 1 hour as compared to Henry?

1 1 mile
2 10 miles
3 $\frac{1}{2}$ mile
4 $\frac{5}{6}$ mile

20 Katrina and her 7 friends evenly split 4 cookies. How many cookies did each person eat?

1 $\frac{7}{4}$
2 2
3 $\frac{4}{7}$
4 $\frac{1}{2}$

COMMONLIT

Name: _____ Class: _____

Your food choices affect Earth's climate

Eating meat can have twice the 'carbon footprint' of consuming fruits, veggies and grains

By Janet Raloff
2014

Are you a meat-eater, vegan, or something in between? In this text, Janet Raloff discusses a study about how your diet can affect the Earth's climate. As you read, take notes on the effects that the production of certain foods has on the environment.

[1] Every action has a cost. That's as true for driving a car as it is for growing food and delivering it to your dinner plate. A team of researchers has just tallied the costs of producing meat versus other types of foods for human diners. They find that meat production — from farm to fork — releases more climate-warming pollution that does producing fruits, vegetables, nuts and grains. A lot more.

Their calculations suggest that people could do a lot to slow global warming if they limited how much meat they eat.

"California Whopper" by Joey is licensed under CC BY 2.0

There are plenty of "costs" to producing any goods, including food. Sure, people pay money for the food as well as the fuel needed to get groceries to the store or restaurant. But those are just the most visible costs. Producing things also takes resources. For foods, this includes the water used to irrigate[1] crop fields. It also includes the fertilizer and chemicals that boost plant growth and fight pests. And don't forget the gasoline and diesel that fuel plows and also those trucks that take crops to market.

Along with those resources are wastes: pollution. Manure is one obvious pollutant associated with meat production. But there are others, including the air pollutants spewed by tractors that plow fields and the trucks that move feed to the animals and animals to the slaughterhouse. Peter Scarborough at the University of Oxford in England, and his colleagues decided to tally some of the less-visible pollution created by food production.

[5] They focused on greenhouse gases. In the atmosphere, these gases trap heat from sunlight. Lately they've been trapping too much, causing a sort of mild, global fever. Overall, food production accounts for one-fifth of this type of pollution.

1. to water land or crops

One greenhouse gas emitted through the production of our food is carbon dioxide, or CO_2. It's released by the burning of fossil fuels, such as gasoline and natural gas. They are used to power farm machinery, to take foods to market (and home), to store foods awaiting processing and to cook foods. The researchers also tallied methane. Fermentation[2] in the guts of ruminant[3] livestock — mostly cows — releases this gas. And the scientists calculated the nitrous oxide released during the plowing and fertilizing of crop fields.

All three gases are important. CO_2 is the greenhouse gas released in the highest volume. But methane and nitrous oxide stay in the atmosphere far longer than CO_2 does. As such, they are more potent,[4] molecule for molecule, in warming Earth's atmosphere.

A computer converted the methane and nitrous-oxide emissions for each person's diet into its carbon-dioxide "equivalent." That's the amount of CO_2 needed to warm Earth's atmosphere by the same amount as the methane or nitrous oxide would.

Switching from meat-rich meals to vegetarian ones would reduce the average meat eater's CO_2 equivalents — also known as its carbon footprint — by 1,230 kilograms (about 1.4 U.S. tons) per year, the new study calculated. Scarborough's team presented its findings in the July issue of Climatic Change.

How they calculated food's 'carbon footprint'

[10] In the 1990s, a survey asked 65,000 adults what they typically had eaten throughout the past year. Scarborough's team fed those data into a computer. The researchers also included the amount of greenhouse gases linked with producing nearly 100 common foods. Then the computer matched those greenhouse-gas amounts to the mix of foods each person had reported eating.

Some people had eaten lots of meat. Others hadn't. Some had been big fish eaters. Others weren't. All people ate some plant-based foods, such as salads, grains, bread, beans or fruit. Some reported being vegetarians. That means they downed only plant-based foods with the exceptions of possibly eggs, fish or milk. Others, vegans, reported eating no meat, poultry, fish or dairy foods (including cheese, butter and yogurt).

The diet of someone whose meals included an average of 50 to 99 grams (1.8 to 3.5 ounces) of meat each day would be responsible for the daily release of 5.6 kilograms (12.4 pounds) of CO_2 equivalents,[5] according to the new analysis.

Vegans would contribute only 2.9 kg (6.4 lbs) of CO_2 equivalents, the researchers calculated. Indeed, those vegans had the lowest diet-linked greenhouse-gas emissions. Vegetarians had the next lowest emissions, followed by people who ate fish but no red meat or poultry.

2. the process in which a substance breaks down into a simpler substance
3. an animal that brings its food up from its stomach and chews it again
4. **Potent** ***(adjective):*** having greater affect or influence
5. something that is equal to or corresponds to another value

Scientists don't expect many people will give up eating meat entirely. In fact, in England the trend has been in the opposite direction. The share of people there who consider themselves vegetarians or vegans fell from 5 percent in 2000 to just 2 percent by 2010. Over the same period, meat consumption climbed 7.8 percent — to 84.2 kg (186 lbs) per person.

[15] U.S. data show that as of 2012, 4 percent of men and 7 percent of women considered themselves vegetarians. However, Americans continue to consume more meat than people in the United Kingdom and Europe. Each year the average American adult downs about 120 kg (265.7 lbs) of meat.

Still, the new study "demonstrates that reducing the intake of meat and other animal-based products can make a valuable contribution to climate change mitigation,"[6] its authors conclude. And there's another advantage to reducing meat consumption, the researchers point out. Compared to meat, more plant-based food calories can be grown on a plot of land — and with less water and other resources. In places where many people are going hungry, as they are in large parts of the world, raising meat may make it harder to ensure that everyone gets enough to eat.

Beyond greenhouse gases

"I think it's interesting," Danielle Nierenberg said of the new study. She's president of Food Tank, a food-policy organization based in Washington, D.C. Looking at greenhouse gases is important, she says. But, she adds, it's just one of many environmental costs of foods.

"The more we think about what we're eating, and food's role in sustainability or in climate change, that's a good thing," she says. But, she adds, "more needs to be done to be sure that we're capturing everything." By that she means scientists want to be sure that they are not missing important environmental "costs" of producing food.

Those costs may have to do with the resources. Some crops are water hogs, which can be a problem in areas with little rain. Others may require a lot of processing — using water and plenty of expensive energy — to clean, cook-up, package or deliver foods to grocery shoppers.

[20] And then there are a range of less visible environmental problems. Animals may harden the soils, making the land less likely to soak up water when it rains. Often farmers rely on weed killers and pest killers to improve the size of their crop harvests. Many of those chemicals can be toxic to wildlife and people. Some fertilizers can pollute groundwater.[7] Plowing fields can lead to erosion.[8] That can diminish the fertility of soils.

Finally, Nierenberg notes, even for meat, "not all meat is created equal." Some farmers pen cattle in feedlots to fatten them quickly. This requires feeding them an unnatural diet and releases a lot of animal wastes (poop and pee) into a small area. In contrast, some farmers graze their cattle on pastures. Allowing the animals to eat grass and over a broad expanse of land helps ensure that the soil is protected and that native plants are not trampled to death.

There can also be a similar range of environmental differences in the way plant-based foods are farmed. Some can be less wasteful and less polluting than others.

6. the action of reducing the severity of something
7. water held underground in the soil
8. the gradual destruction of something

Scarborough's team took a good first step in tallying costs, Nierenberg says. But, she argues, more details will be needed about how foods are grown to truly know which foods — or farm practices — take the biggest toll on Earth's total environment.

Text-Dependent Questions

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

1. PART A: Which statement best expresses the central idea of the text?
    A. The types of food people eat and the way that it is produced has varying costs for the environment, ranging from releasing pollution to wasting resources.
    B. People tend to buy food that is a low cost to themselves, however, this type of food is usually produced in a way that is costly to the environment.
    C. The only way to reduce the emission of greenhouse gases is for the biggest meat eaters to convert to vegetarian or vegan diets.
    D. People don't have to change what they eat to help the environment, just how their food is farmed or raised.

2. PART B: Which TWO paragraphs from the text best support the answer to Part A?
    A. Paragraph 7
    B. Paragraph 14
    C. Paragraph 16
    D. Paragraph 19
    E. Paragraph 21
    F. Paragraph 23

3. What is the author's main purpose in the text?
    A. to pressure people to switch to diets free of any and all animal products
    B. to inform readers about how the types of food they eat have environmental costs
    C. to show how reducing the greenhouse gases emitted from food production isn't enough
    D. to stress the health benefits of switching to a diet free of meat and animal products

4. How does the section "Beyond greenhouse gases" contribute to the development of ideas in the text (Paragraphs 17-23)?
    A. It suggests that Scarborough's study misleads people to think that it's enough to just cut meat out of their diet to help the environment.
    B. It further supports the idea that greenhouse gases released during food production has the largest impact on the environment.
    C. It challenges the idea that eating meat and animal products contributes to more greenhouse gases than eating plant-based foods.
    D. It shows how more than just greenhouse gases need to be considered when looking at food production's effect on the environment.

5. What is the relationship between how food is produced and the costs to the environment? Use details from the text to support your answer.

Discussion Questions

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

1. In the text, the author discusses how what you choose to eat matters. How can you help reduce the emission of greenhouse gases by making different choices about what you eat? How often do you eat meat or animal products? Has this article inspired you to change what you eat? Why or why not?

2. In the text, the author discusses how it's not just what we eat, but how that food is grown or raised. How can food be grown and raised to be more environmentally friendly? How can you, as a consumer, encourage farmers to produce food in more environmental ways?