

2025-2026

6TH GRADE AMI WORKBOOK



A graphic of a spiral-bound notebook with a dark blue cover and a white page. The spiral binding is on the left side. The text "DAY 1" is centered on the page in a dark blue, sans-serif font. The word "DAY" is in all caps and is smaller than the large number "1".

DAY

1

AMI DAY #1

ELA	Read and annotate the article, "Young Activists raise money to save rain forests," then answer the comprehension questions.
Math	Complete the <i>Recognize the Opposite of a Number on a Number Line</i> practice page.
Science	Read the short article about atoms, then complete the pages on the number of protons, neutrons, and electrons within each atom.
Social Studies	<u>What happened to Harappa?</u> Read each source and respond to the prompts. Write a RACE response that provides an answer to the question.

Young activists raise money to save rain forests

By Lela Nargi, Washington Post, The Washington Post on 05.26.21

Word Count **551**

Level **MAX**



Beckett McGrath (right) started a group called Protection of Earth. The group has hosted several events to raise money for the Rainforest Trust, including this Run for the Rainforest in 2019. Photo: Courtesy of the McGrath family

Many people are learning about climate change thanks to Greta Thunberg. The Swedish teenager started Fridays for Future in 2018 by skipping school once a week to call people's attention to our warming planet. In this case, skipping school is called a "strike." Her actions launched a movement of school strikes around the world.

Lots of other kids — even those who are much younger — have figured out ways to help save the Earth. They've gotten involved in environmental causes close to their hearts. Some of them are inspired by the "30 by 30" initiative: Fifty countries, including the United States, have promised to protect 30 percent of Earth's land and waters by 2030.

One of the kids is 11-year-old Beckett McGrath from Georgetown, Texas. He wants to help conserve endangered species. In 2019, he began working with Rainforest Trust. "I was really

interested in trying to stop climate change," he said.

Beckett's idea was to start a group called Protection of Earth. With his home-school classmates and other kids, the group organized a local Run for the Rainforest that raised more than \$700. The money helped Rainforest Trust save more than 1,000 acres of rain forest land.

When the coronavirus pandemic stopped people from gathering in person to fundraise, Beckett put together an online event called Trivia for the Rainforest: People could log on and test their knowledge of birds, endangered species and climate change. That raised \$600 for rain forest land.

Beckett says kids should remember that every effort to help the environment matters. "Even if you don't do a huge amount, it still is good to do stuff," he said. Most important, he said, "humans need to learn to be with nature."

In Los Angeles, California, 10-year-old Justin Sather is obsessed with frogs. He calls them "magical, because they come in different colors and they start out as tadpoles."

Last year he joined Rainforest Trust's Reserva: The Youth Land Trust to help protect 244 acres of Ecuador's Chocó cloud forest and its amazing frogs. Justin especially likes glass frogs, chachi tree frogs and tiger-striped leaf frogs, which he hopes to see when he visits Ecuador this summer.

Justin has been successful raising money for the land trust. He appeared on local TV news, and many people found out about his efforts. That helped him raise \$2,000 to conserve almost 3 acres of the Chocó forest. Fundraising has been a great way for him to put his frog passion to use. Many species of frogs are becoming extinct because of climate change and habitat loss, so protecting habitats protects frogs, too.

Justin hopes he can inspire other people to understand why frogs are so cool.

"Frogs are indicator species, telling us the planet needs help," he said. "If frogs are dying wherever you are, that's bad because it means the water you're drinking has pollution and pesticides."

For anyone who's still not convinced that frogs are worth protecting, Justin recites his favorite frog fact: "Their tongues are really long. If [it were in] a person instead of a frog, their tongue would go to their belly button!"



Image 1. Justin Sather, 10 years old, helped raise \$2,000 to conserve almost 3 acres of Ecuador's Chocó cloud forest, which is home to several species of frogs. Photo: Daniela Franco

Quiz

- 1 Which statement is a CENTRAL idea of the article?
- (A) Beckett McGrath raised enough money to conserve almost three acres of the Chocó Cloud Forest.
 - (B) Fundraising became more difficult after the coronavirus prevented people from meeting in person.
 - (C) Young kids are finding new ways to work on environmental causes to help stop climate change.
 - (D) Countries in the "30 by 30" initiative promise to protect 30 percent of the Earth's lands and oceans by 2030.
- 2 Which sentence from the article would be MOST important to include in a summary of the article?
- (A) With his home-school classmates and other kids, the group organized a local Run for the Rainforest that raised more than \$700.
 - (B) People could log on and test their knowledge of birds, endangered species and climate change.
 - (C) He calls them "magical, because they come in different colors and they start out as tadpoles."
 - (D) "If [it were in] a person instead of a frog, their tongue would go to their belly button!"
- 3 Which answer choice BEST describes the author's point of view about Greta Thunberg?
- (A) She was wrong to encourage kids around the world to skip school.
 - (B) She has inspired many kids to take action to protect the planet.
 - (C) She has worked hard to raise money for the Rainforest Trust.
 - (D) She should have helped Beckett McGrath start Protection of Earth.
- 4 Justin Sather thinks that frogs can teach people about the health of the planet. Which detail from the article supports this opinion?
- (A) In Los Angeles, California, 10-year-old Justin Sather is obsessed with frogs.
 - (B) Last year he joined Rainforest Trust's Reserva: The Youth Land Trust to help protect 244 acres of Ecuador's Chocó Cloud Forest and its amazing frogs.
 - (C) Fundraising has been a great way for him to put his frog passion to use.
 - (D) "Frogs are indicator species, telling us the planet needs help," he said.

- 1** Describe the locations of 3 and -3 with respect to 0 on a number line.

Ⓐ 3 is to the right of 0, and -3 is to the right of 0.
 Ⓑ 3 is to the left of 0, and -3 is to the left of 0.
 Ⓒ 3 is to the left of 0, and -3 is to the right of 0.
 Ⓓ 3 is to the right of 0, and -3 is to the left of 0.

- 2** Select **all** the pairs of numbers that lie on opposite sides of 0 on a number line.

Ⓐ 8, 7 Ⓓ -8 , -15
 Ⓑ -10 , 10 Ⓔ -21 , 21
 Ⓒ -4 , 9 Ⓕ 2, 200

- 3** What is the opposite of 12?

Ⓐ -12 Ⓒ $\frac{1}{12}$
 Ⓑ $-\frac{1}{12}$ Ⓓ 12

- 4** What is the value of $-(-100)$?

Ⓐ 100 Ⓒ -10
 Ⓑ 0 Ⓓ -100

- 5** What is the opposite of -8 ?

Ⓐ -8 Ⓒ $\frac{1}{8}$
 Ⓑ $-\frac{1}{8}$ Ⓓ 8

- 6** Rank each value from 1 being the LEAST to 5 being the GREATEST.

the opposite of 0 _____

the opposite of 2 _____

the opposite of -10 _____

$-(-6)$ _____

-4 _____

- 7** What is the opposite of 0?

Ⓐ 1 Ⓒ 0
 Ⓑ -1 Ⓓ $\frac{1}{2}$

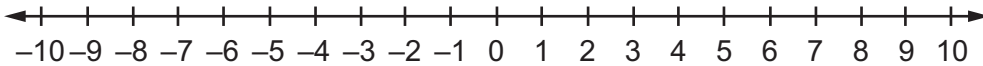
- 8** For which value of x is $-(-x)$ a positive number?

Ⓐ -15 Ⓒ 0
 Ⓑ -1 Ⓓ 11

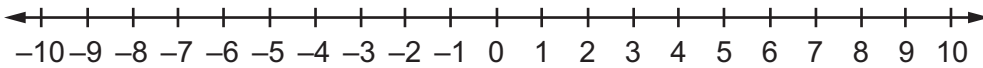
- 9** Draw lines to match each number in the left column with its opposite in the right column.

10	•	$\frac{1}{2}$	•
$\frac{1}{2}$	•	10	•
$-\frac{1}{2}$	•	-10	•
-10	•	$-\frac{1}{2}$	•

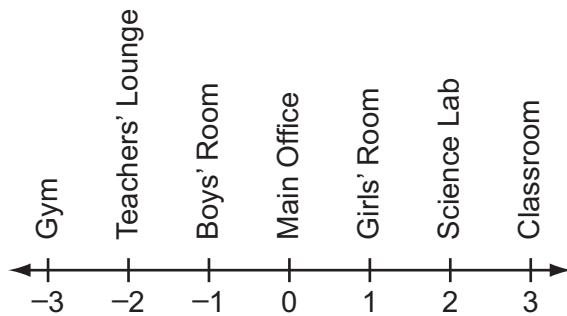
- 10** Plot the points that represent the opposites of -5 , 0 , 2 , and 4 .



- 11** Plot the points that represent the opposites of -8 , 0 , 1 , and 7 .



- 12** To celebrate the 100th anniversary of the opening of their school, the teachers organize a treasure hunt for the students. One of the clues states, "Think of the main office as 0 on a number line. You will find the next clue in the room that is opposite of the teachers' lounge." In which room is the next clue?

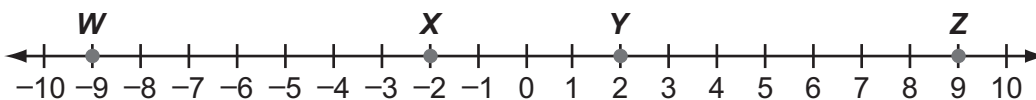


- 13** Which point represents the opposite of B on the number line shown?



- (A) A (B) B (C) C (D) D

- 14** Which point represents the opposite of Y on the number line shown?



- (A) W (B) X (C) Y (D) Z

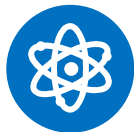


Atoms

Periodic Table of the Elements

1 1A Hydrogen 1.008	2 2A Helium 4.003	3 3A Boron 10.811	4 4A Carbon 12.011	5 5A Nitrogen 14.007	6 6A Oxygen 15.999	7 7A Fluorine 18.998	8 8A Neon 20.180	9 9A Sodium 22.990	10 10A Magnesium 24.305	11 11A Aluminum 26.982	12 12A Silicon 28.086	13 13A Phosphorus 30.974	14 14A Sulfur 32.066	15 15A Chlorine 35.453	16 16A Argon 39.948	17 17A Potassium 39.098	18 18A Calcium 40.078	19 19A Scandium 44.956	20 20A Titanium 47.867	21 21A Vanadium 50.942	22 22A Chromium 51.996	23 23A Manganese 54.938	24 24A Iron 55.845	25 25A Cobalt 58.933	26 26A Nickel 58.693	27 27A Copper 63.546	28 28A Zinc 65.38	29 29A Gallium 69.723	30 30A Germanium 72.631	31 31A Arsenic 74.922	32 32A Selenium 78.971	33 33A Bromine 79.904	34 34A Krypton 83.798	35 35A Rubidium 85.468	36 36A Strontium 87.62	37 37A Yttrium 88.906	38 38A Zirconium 91.224	39 39A Niobium 92.906	40 40A Molybdenum 95.95	41 41A Technetium 98.907	42 42A Ruthenium 101.07	43 43A Rhodium 102.906	44 44A Palladium 106.42	45 45A Silver 107.868	46 46A Cadmium 112.414	47 47A Indium 114.818	48 48A Tin 118.711	49 49A Antimony 121.760	50 50A Tellurium 127.6	51 51A Iodine 126.904	52 52A Xenon 131.294	53 53A Cesium 132.905	54 54A Barium 137.328	55 55A Lanthanum 138.905	56 56A Cerium 140.116	57 57A Praseodymium 140.908	58 58A Neodymium 144.243	59 59A Promethium 144.913	60 60A Samarium 150.36	61 61A Europium 151.964	62 62A Gadolinium 157.25	63 63A Terbium 158.925	64 64A Dysprosium 162.500	65 65A Holmium 164.930	66 66A Erbium 167.259	67 67A Thulium 168.934	68 68A Ytterbium 173.055	69 69A Lutetium 174.967	70 70A Hafnium 178.49	71 71A Tantalum 180.948	72 72A Tungsten 183.84	73 73A Rhenium 186.207	74 74A Osmium 190.23	75 75A Iridium 192.217	76 76A Platinum 195.085	77 77A Gold 196.967	78 78A Mercury 200.592	79 79A Thallium 204.383	80 80A Lead 207.2	81 81A Bismuth 208.980	82 82A Polonium [208.982]	83 83A Astatine 209.987	84 84A Radon 222.018	85 85A Francium 223.020	86 86A Radium 226.025	87 87A Actinium 227.028	88 88A Thorium 232.038	89 89A Protactinium 231.036	90 90A Uranium 238.029	91 91A Neptunium 237.048	92 92A Plutonium 244.064	93 93A Americium 243.061	94 94A Curium 247.070	95 95A Berkelium 247.070	96 96A Californium 251.080	97 97A Einsteinium [254]	98 98A Fermium 257.095	99 99A Mendelevium 258.1	100 100A Nobelium 259.101	101 101A Lawrencium [262]	102 102A Rutherfordium [261]	103 103A Dubnium [262]	104 104A Seaborgium [266]	105 105A Bohrium [264]	106 106A Hassium [269]	107 107A Meitnerium [278]	108 108A Darmstadtium [281]	109 109A Roentgenium [280]	110 110A Copernicium [285]	111 111A Nihonium [286]	112 112A Flerovium [289]	113 113A Moscovium [289]	114 114A Livermorium [293]	115 115A Tennessine [294]	116 116A Oganesson [294]
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sciencecenter.org



Name: _____ Date: _____

Directions: Read the information below about atomic models. Highlight the parts you find important. Then follow along with the directions as you draw the model for an atom of Argon.

Atoms

Atoms are the tiny units that make up all matter. Atoms are not something we can see, so the model we use to represent atoms has changed over time as more information has been discovered.

The currently accepted model of the atom shows the nucleus with an electron cloud like the bottom picture here. That model is difficult to draw though, so we usually draw atomic models like the planetary model on the top. The electrons don't actually travel in rings around the nucleus, but it's easier to see what we have in the atom when we draw them that way.

These rings we draw around the atom are called orbitals or energy levels. Different atoms have different numbers of energy levels.

Atoms also contain three different subatomic particles: protons, neutrons, and electrons. The number of energy levels in an atom is determined by its number of electrons.

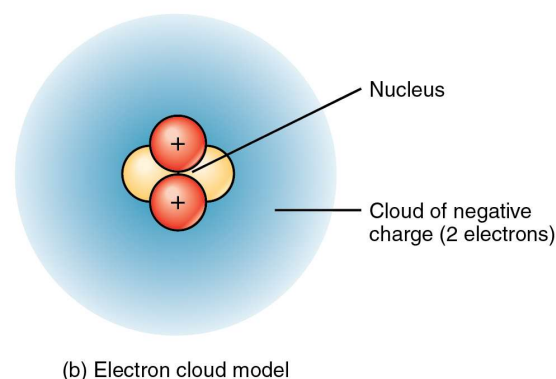
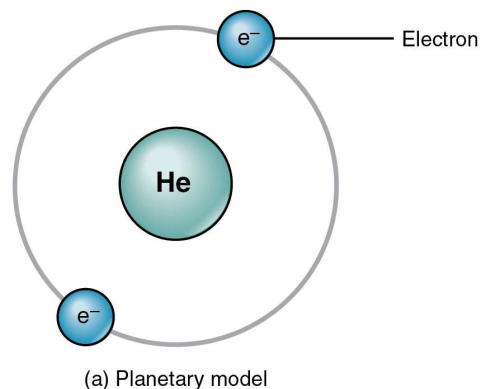


Image source: OpenStax College [CC BY 3.0
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Atoms

It is really easy to figure out how many energy levels an atom has by looking at the periodic table. The horizontal row (or period) of the element corresponds to the number of energy levels; this can be 1 through 7.

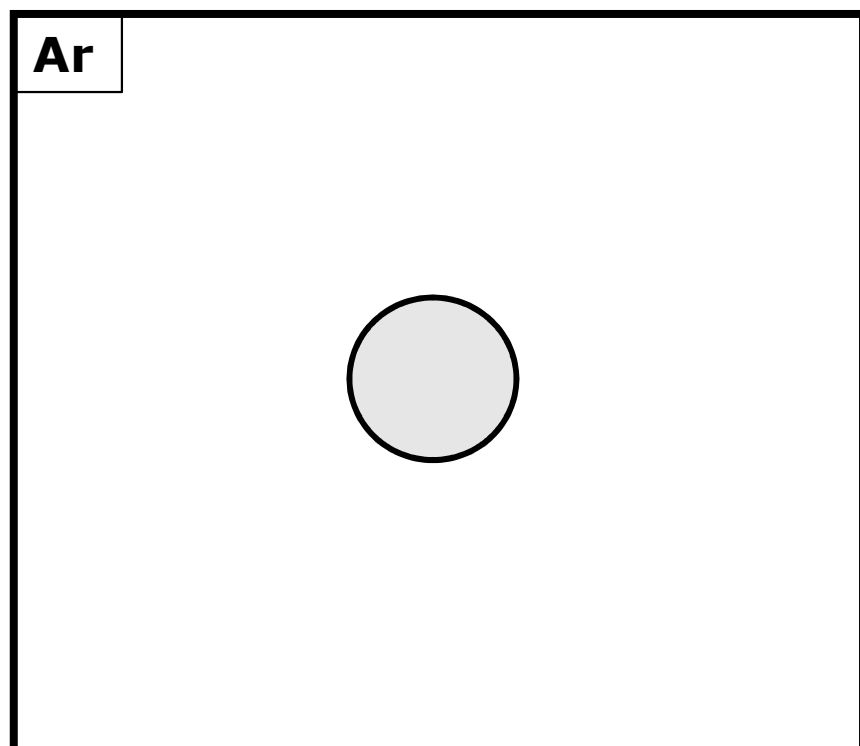
1. Find argon on the periodic table. Which period is it in? _____
2. How many energy levels will argon have? _____

Draw the correct number of energy levels around argon in the space below. (The circle in the middle is not an energy level, it represents the nucleus.)

The protons have a positive charge and are found in the nucleus of the atom. The number of protons corresponds to the atomic number of the element, which can be found on the periodic table.

3. How many protons does argon contain? _____

Draw the correct number of protons in the nucleus of the argon atom. Mark your key so you know what symbol/color represents protons.

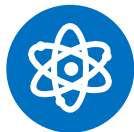


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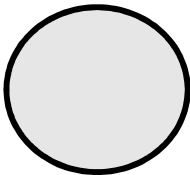
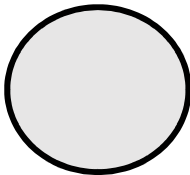
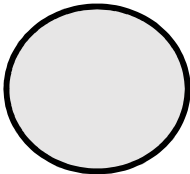
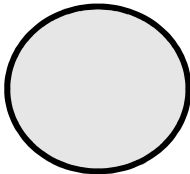
_____ Protons

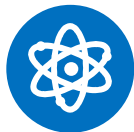
_____ Neutrons

_____ Electrons

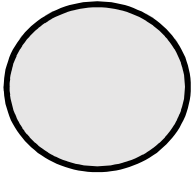
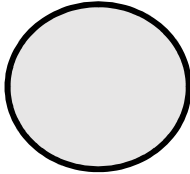
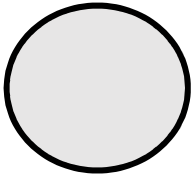
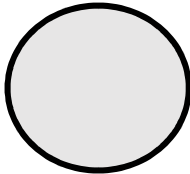


Directions: Add the correct number of electron orbitals and subatomic particles (protons, neutrons, and electrons) to these cards. Refer back to the reading if needed. You will also need to reference your periodic table. The circle in the middle represents the nucleus. Use the same symbols/colors as you did on the previous page.

H 	He 
Li 	C 



Atoms

F 	Ne 
Mg 	Al 

Look up each atom on the periodic table and record its group number (above the vertical column it is in). Then count how many electrons it has in the outermost (last) energy level.

Element	Group Number	Outer electrons	Element	Group Number	Outer electrons
Ar			Mg		
Li			F		
C			Al		



Directions: Look at your data in the table on the previous page. Do you see a relationship between group number and the number of electrons in the outermost energy level?

These outer level electrons are called valence electrons and they are responsible for bonding.

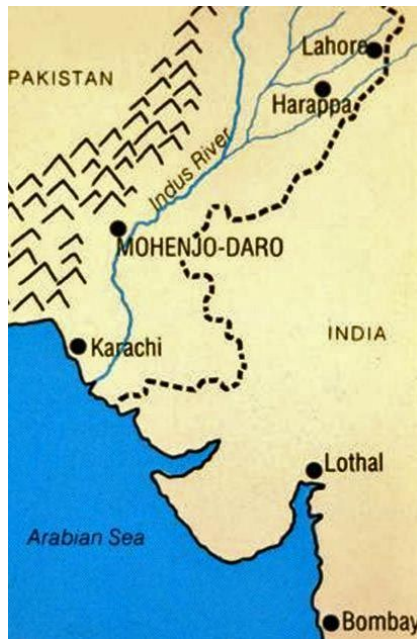
Complete as much of the table below as time allows. Use the new relationship with the group number to determine the number of outer level electrons instead of drawing the models.

Element	Protons	Neutrons	Electrons	Period	Group	Valence Electrons
K						
	20					
Sr						
	35					
			34			
				2	13	

AMI Day 1: What happened to Harappa?

Name:

SS Teacher/Hour



There were more than 1,400 towns in the Indus River valley

One of the biggest was **Harappa**. Around 80,000 people lived there.

The Indus River begins high in the **Himalayan Mountains** and flows 3,000 miles to the sea.

Farmers lived near the river because it was **fertile** for growing crops.

Based on the information above, what do you think are the advantages and disadvantages of Harappa's location?

- ☐ They carefully mapped their cities, and had streets facing north, west, east and south.
- ☐ There is no evidence of slavery, yet there are signs of cooperative, organized rule.
- ☐ Harappans collected rainwater and used wells and drains to move water.
- ☐ They traded and communicated with faraway places, like Mesopotamia.
- ☐ They invented new forms of metalwork and pottery.
- ☐ They had indoor toilets.



Harappa was one of the most advanced civilizations of the ancient world. Which of these achievements do you feel is the most important? Why?

As you read, underline details that give you clues about what happened to the Harappan civilization.

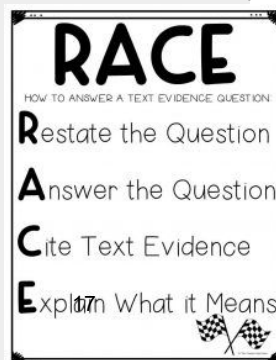
The Fall of Harappan Culture:

These cities were impressively made. The remains of their walls give us clues about what the Indus Valley people cared about.

Clay figurines of goddesses were found, and are proof that religion was important. Toys and games were discovered, showing that even in 3000 B.C., kids liked to play.

However, around 1900 B.C., this growth ended. The group unity collapsed. Soon, the civilization split up into smaller cultures. Trade, writing, and seals ended. Many believe that the Indus Valley civilization was attacked and overtaken by Aryan people from the north. This idea makes sense. The Aryans came to power in the Ganges Valley shortly after this. However, there is little proof of any attack from the Aryans. Many historians think that natural events destroyed the Indus Valley people. They say that changing river patterns disrupted the farming and trading systems and led to devastating floods. The smaller details of the early Indus Valley culture might never be fully known. Still, many pieces of the ancient puzzle have been put together. The remains of the Indus Valley cities continue to be unearthed and discussed today. With each new artifact, the story of this world becomes clearer and more interesting.

Construct a RACE paragraph that answers the question, "What happened to Harappa?" Provide one piece of evidence from the text.



A blue spiral-bound notebook with a white cover. The spiral binding is on the left side. The words "DAY" and the number "2" are printed in a dark blue, sans-serif font in the center of the cover.

DAY

2

AMI DAY #2

ELA	Reread the article, "Young Activists raise money to save rain forests." Complete the graphic organizer to plan a response to the writing prompt. Respond to the writing prompt.
Math	Complete the <i>Write, Interpret, and Explain Statements of Order for Rational Numbers</i> practice page.
Science	Read the short article about balancing chemical equations. Complete the balancing chemical equations sheets.
Social Studies	<u>How did Hatshepsut change thinking about who could be a pharaoh?</u> Study the sources on the front and respond to the prompts. Read the article on the back: "World Leaders" Respond to the writing prompt.

Young activists raise money to save rain forests

By Lela Nargi, Washington Post, The Washington Post on 05.26.21

Word Count **551**

Level **MAX**



Beckett McGrath (right) started a group called Protection of Earth. The group has hosted several events to raise money for the Rainforest Trust, including this Run for the Rainforest in 2019. Photo: Courtesy of the McGrath family

Many people are learning about climate change thanks to Greta Thunberg. The Swedish teenager started Fridays for Future in 2018 by skipping school once a week to call people's attention to our warming planet. In this case, skipping school is called a "strike." Her actions launched a movement of school strikes around the world.

Lots of other kids — even those who are much younger — have figured out ways to help save the Earth. They've gotten involved in environmental causes close to their hearts. Some of them are inspired by the "30 by 30" initiative: Fifty countries, including the United States, have promised to protect 30 percent of Earth's land and waters by 2030.

One of the kids is 11-year-old Beckett McGrath from Georgetown, Texas. He wants to help conserve endangered species. In 2019, he began working with Rainforest Trust. "I was really

interested in trying to stop climate change," he said.

Beckett's idea was to start a group called Protection of Earth. With his home-school classmates and other kids, the group organized a local Run for the Rainforest that raised more than \$700. The money helped Rainforest Trust save more than 1,000 acres of rain forest land.

When the coronavirus pandemic stopped people from gathering in person to fundraise, Beckett put together an online event called Trivia for the Rainforest: People could log on and test their knowledge of birds, endangered species and climate change. That raised \$600 for rain forest land.

Beckett says kids should remember that every effort to help the environment matters. "Even if you don't do a huge amount, it still is good to do stuff," he said. Most important, he said, "humans need to learn to be with nature."

In Los Angeles, California, 10-year-old Justin Sather is obsessed with frogs. He calls them "magical, because they come in different colors and they start out as tadpoles."

Last year he joined Rainforest Trust's Reserva: The Youth Land Trust to help protect 244 acres of Ecuador's Chocó cloud forest and its amazing frogs. Justin especially likes glass frogs, chachi tree frogs and tiger-striped leaf frogs, which he hopes to see when he visits Ecuador this summer.

Justin has been successful raising money for the land trust. He appeared on local TV news, and many people found out about his efforts. That helped him raise \$2,000 to conserve almost 3 acres of the Chocó forest. Fundraising has been a great way for him to put his frog passion to use. Many species of frogs are becoming extinct because of climate change and habitat loss, so protecting habitats protects frogs, too.

Justin hopes he can inspire other people to understand why frogs are so cool.

"Frogs are indicator species, telling us the planet needs help," he said. "If frogs are dying wherever you are, that's bad because it means the water you're drinking has pollution and pesticides."

For anyone who's still not convinced that frogs are worth protecting, Justin recites his favorite frog fact: "Their tongues are really long. If [it were in] a person instead of a frog, their tongue would go to their belly button!"



Image 1. Justin Sather, 10 years old, helped raise \$2,000 to conserve almost 3 acres of Ecuador's Chocó cloud forest, which is home to several species of frogs. Photo: Daniela Franco

Problem-Solution Worksheet

Name: _____

Date: _____ Class: _____

Directions: First identify the problems and solutions on the topic you are studying. Then reflect on the information you have gathered and record comments, questions, concerns, or predictions about the problems or the solutions. Do you think the solutions are effective? What could make them address the problem better? What might prevent the solutions from working?

Problems	Solutions	Reflections

Write Prompt

Choose a problem (and solutions) described in the text. Explain what the problem is and why it matters, using examples, facts, and details from the text. If possible, describe any solutions proposed in the text.

- 1** The thermometer at Bruce's house shows a temperature of -2°F . The thermometer at Zan's house reads -5°F .

Which inequality and statement are both **true**?

- (A) $-2 < -5$; Bruce's thermometer shows a warmer temperature.
- (B) $-2 < -5$; Zan's thermometer shows a warmer temperature.
- (C) $-2 > -5$; Bruce's thermometer shows a warmer temperature.
- (D) $-2 > -5$; Zan's thermometer shows a warmer temperature.

- 2** Marco and Randy decide to have a foot race on a local field. Marco can maintain a speed of 8 miles per hour, while Randy runs at 6 miles per hour.

Which inequality and statement are both **true**?

- (A) $8 > 6$; Marco runs faster.
- (B) $8 > 6$; Randy runs faster.
- (C) $8 < 6$; Marco runs faster.
- (D) $8 < 6$; Randy runs faster.

- 3** In a cooking class, each student needs $\frac{2}{3}$ cup of sugar for a recipe. Zach has $\frac{3}{4}$ cup of sugar at his cooking station, while Suzanne has $\frac{1}{2}$ cup at her cooking station. Who has enough sugar to make the recipe?

- (A) Zach has enough sugar.
- (B) Suzanne has enough sugar.
- (C) Zach and Suzanne both have enough sugar.
- (D) Neither Zach nor Suzanne has enough sugar.

- 4** Anthony has \$53.43 in his savings account, Maxine has \$54.78, Rodolfo has \$54.98, and Nicola has \$53.29.

Which statement is **true**?

- (A) Maxine has saved the most money, and Anthony has saved the least money.
- (B) Maxine has saved the most money, and Nicola has saved the least money.
- (C) Rodolfo has saved the most money, and Nicola has saved the least money.
- (D) Rodolfo has saved the most money, and Anthony has saved the least money.

- 5** The thermometer reads -9°F on Monday and -6°F on Tuesday. What does the inequality $-9^{\circ}\text{F} < -6^{\circ}\text{F}$ mean in this scenario?

- (A) It was colder on Monday than on Tuesday.
- (B) It was warmer on Monday than on Tuesday.
- (C) The temperature was the same both days.
- (D) There was a decrease in temperature from Monday to Tuesday.

- 6** Jack needs a piece of wood at least $\frac{13}{16}$ -inch long for some detail work on a project he is working on.

Select **all** the lengths of wood that would meet his requirements.

- (A) $\frac{1}{2}$ inch
- (B) $\frac{7}{8}$ inch
- (C) $\frac{3}{4}$ inch
- (D) $\frac{27}{32}$ inch
- (E) $\frac{5}{8}$ inch

- 7** The ingredients for a recipe are listed.

Rank the ingredients in the correct order from 1 being the LEAST to 4 being the GREATEST amount.

$\frac{2}{3}$ cup strawberries _____

$\frac{1}{4}$ cup sugar _____

$\frac{1}{2}$ cup walnuts _____

$\frac{3}{4}$ cup flour _____

- 8** Sally plants four flowers in her garden and measures their heights. One month later, she measures their heights again. She calculates the growth for each flower as follows:

Flower 1: $1\frac{13}{16}$ in.

Flower 2: $\frac{1}{2}$ in.

Flower 3: $3\frac{5}{16}$ in.

Flower 4: $1\frac{3}{16}$ in.

Rank the flowers in the correct order from 1 being the GREATEST growth to 4 being the LEAST growth.

Flower 1 _____

Flower 2 _____

Flower 3 _____

Flower 4 _____

- 9** The record low temperatures for three towns in Alaska are given in the table.

Low Temperatures

Town	Record Low
Anchorage	-34°F
Barrow	-56°F
Juneau	-22°F

Write the symbol or name from the table to correctly complete the inequalities and statement.

- Ⓐ -34°F _____ -56°F
 Ⓑ -56°F _____ -22°F
 Ⓒ -22°F _____ -34°F
 Ⓓ _____ has the highest record low.

- 10** In golf, the lower a score is, the better it is. Four golfers recorded their score compared to par.

Golf Scores

Player	Score
Alex	-4
Bart	-1
Cal	3
Deon	-2

Rank the players in the correct order from 1 having the BEST score to 4 having the WORST score.

Alex _____

Bart _____

Cal _____

Deon _____



Balancing Chemical Equations

Name: _____ Date: _____

Directions: Read the article below.

Chemical Equations

When you look at box scores from a ball game, you don't see every play made in the game. You just see a brief description of what happened and the final outcome. A chemical equation is a lot like that. It just shows the materials that are present at the beginning and end of a chemical reaction.

There is always an arrow in a chemical equation which separates the reactants from the products. The reactants are the starting materials and the products are what you end up with in the chemical reaction.

You will see numbers and letters in a chemical equation as well. The letters are chemical symbols from the periodic table. There are two different types of numbers that appear in the chemical equation.

A subscript shows how many atoms of each element are present. In the example above, there are two hydrogen atoms and one oxygen atom in each molecule of water. Anytime there is no subscript (like on the oxygen atom) it means there is one atom.

A coefficient shows how many molecules are present. In the example, there are four water molecules being represented. It could be rewritten:

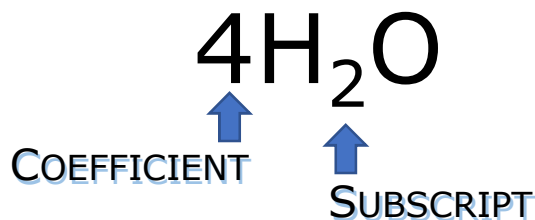


How many total hydrogen atoms are represented above? ____

How many total oxygen atoms are represented above? ____

Box Score									
Boston					Athletic				
Runs	6	0	0	0	1	Runs	5	1	0
Hits	6	0	2	2	0	Hits	5	1	3
Errors	6	2	2	4	1	Errors	6	1	2
Left on base	5	4	4	1	1	Left on base	5	2	2
Totals... 46 11 17 27 15					Totals... 46 11 17 27 15				
Game Summary: Boston, 4; Athletic, 5. Home-run—Hall. Hits—Boson, 22; Athletic, 20. First base—Boson, 8; Athletic, 5. Umpire, George White. Time 2h. 47m.									

REACTANTS → PRODUCTS





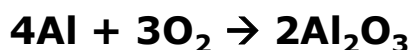
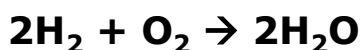
Balancing Chemical Equations

How many of total atoms of each element are represented here? $3\text{Na}_2\text{SO}_4$

Na = ____ **S** = ____ **O** = ____

What operation (+, -, x, or ÷) do you use to determine the number of atoms when there is a coefficient AND a subscript in chemical formula? Why?

Look at the two balanced chemical equations below and record your observations. What do you notice about the number of each type of atom on either side of the arrow?



Based on your observations, what is true about a balanced chemical equation?

In order for a chemical equation to be balanced, it must obey the Law of Conservation of Mass. The Law of Conservation of Mass states that matter cannot be created or destroyed.

This means that you must have the same number of atoms on each side of the arrow in a balanced chemical reaction. The two chemical equations above are balanced, but not all of the ones you will see next are balanced. You will be grouping the equation cards on the next page into balanced and unbalanced categories.



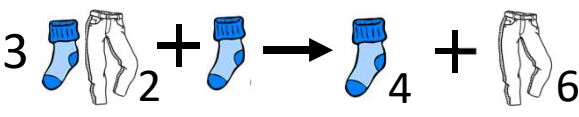
Cut out the chemical equations from the page of equation cards. Use the space under the equation to count the number of atoms on each side. Then, glue them on the next page in the correct column.



Balancing Chemical Equations

Name: _____ Date: _____

Balanced/Unbalanced: Place the number of each element on the line. Then determine if the equation is Balanced or Unbalanced.

$\text{Ba}_3\text{N}_2 + 6\text{HF} \rightarrow 3\text{BaF}_2 + 2\text{NH}_3$		$\text{NaCl} + \text{AgNO}_3 \rightarrow \text{AgCl} + \text{NaNO}_3$	
Reactants	Products	Reactants	Products
____ Ba	____ Ba	____ Na	____ Na
____ N	____ N	____ Cl	____ Cl
____ H	____ H	____ Ag	____ Ag
____ F	____ F	____ N	____ N
		____ O	____ O
$2\text{Cu}_2\text{O} + \text{C} \rightarrow \text{Cu} + \text{CO}_2$		$\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$	
Reactants	Products	Reactants	Products
____ Cu	____ Cu	____ C	____ C
____ O	____ O	____ H	____ H
____ C	____ C	____ O	____ O
			
Reactants	Products	Reactants	Products
____ jeans	____ jeans	____ jeans	____ jeans
____ socks	____ socks	____ socks	____ socks



Balancing Chemical Equations

Balance the following chemical equations:

In order to balance a chemical reaction, you can only change the coefficients. You cannot change the subscripts. If you change the subscripts, you are changing the actual chemical!

If you change the coefficient, you are changing the number of molecules needed or created in the reaction. A blank space where a coefficient would be represents the number 1, just like a blank subscript. Use the same process of counting atoms like you did on the previous pages.

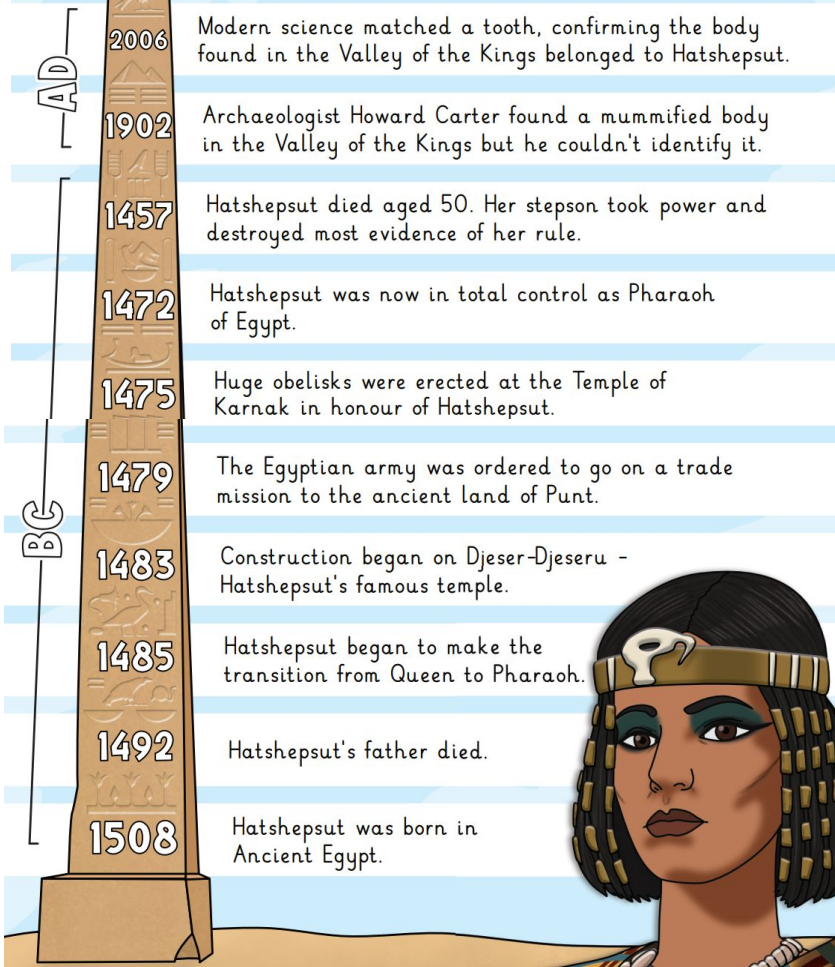
$__\text{Mg} + __\text{O}_2 \rightarrow __\text{MgO}$	$__\text{K} + __\text{O}_2 \rightarrow __\text{K}_2\text{O}$
$__\text{Ag}_2\text{O} \rightarrow __\text{Ag} + __\text{O}_2$	$__\text{N}_2 + __\text{H}_2 \rightarrow __\text{NH}_3$
$__\text{KClO}_3 \rightarrow __\text{KCl} + __\text{O}_2$	$__\text{C} + __\text{H}_2 \rightarrow __\text{CH}_4$
$__\text{Na} + __\text{Cl}_2 \rightarrow __\text{NaCl}$	$__\text{ZnS} + __\text{AlP} \rightarrow __\text{Zn}_3\text{P}_2 + __\text{Al}_2\text{S}_3$

AMI Day 2 How did Hatshepsut change thinking about who could be a pharaoh?

Name: _____

SS Teacher/Hour _____

HATSHEPSUT THE FEMALE PHARAOH



What can we learn about Hatshepsut from the timeline?

1. How long was Hatshepsut Pharaoh of Egypt?
2. How did Hatshepsut become Pharaoh?
3. What made it hard for historians to learn about Hatshepsut?

Why do you think Hatshepsut presented herself in this way?



AMI Day 2: How did Hatshepsut change thinking about who could be a pharaoh?

As you read, underline details that tell us that Hatshepsut was a successful ruler.

World Leaders: Hatshepsut

Hatshepsut was expected to be queen. After the death of her father when she was 12 years old, Hatshepsut married her half-brother Thutmose II. This was a common practice at the time meant to strengthen the royal bloodline. During the rule of Thutmose II, Hatshepsut assumed the traditional title of queen and principal wife.

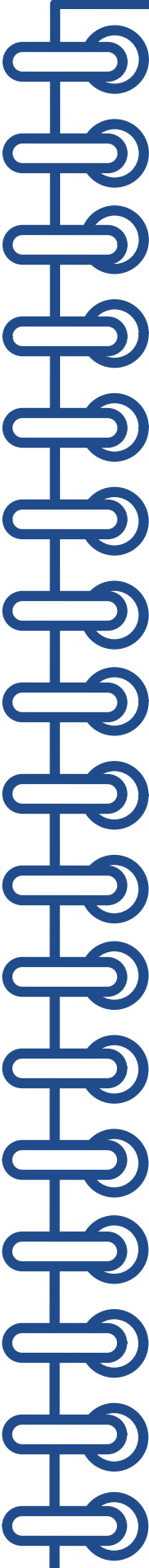
Thutmose II died after ruling for 15 years, making Hatshepsut a widow before the age of 30. They had one son but he was too young to rule without help. For reasons that are unclear, she then became Pharaoh.

She began having herself drawn in the traditional king's clothing and crown, along with a fake beard and male body. This was not to trick people into thinking she was male. Instead, it was a way of asserting her authority. There were no words or images to show a woman with this level of power.

Under Hatshepsut's rule, Egypt was prosperous. Other rulers in her dynasty had conquered new lands. She was more interested in encouraging economic growth, and building and restoring monuments throughout Egypt and Nubia.

She built the temple Djoser-djeseru ("holiest of holy places"), which was dedicated to the Egyptian god Amon. She also built a pair of red granite columns at the Temple of Amon at Karnak, one of which still stands today. Hatshepsut had one important trading expedition to the land of Punt, around northeast Africa. The ships returned with gold, ivory and myrrh trees, and the scene was immortalized on the walls of the temple.

Pretend that you are Hatshepsut. Write a paragraph explaining why you deserved to be pharaoh. Use two details from the text to support your claim.



DAY
5

AMI DAY #3

ELA

Read and annotate the article, "Peer Insights program allows kids at school to help each other." Complete the graphic organizer and identify details that support the main idea.

Math

Complete the *Describe a Ratio Relationship between Two Quantities* practice page.

Science

Read the article about the periodic table. Pick an element from the periodic table and create an informational element card. Then complete then periodic table matching assignment.

Social Studies

Why did China build an army made of clay?
Study the visual sources on the front page and answer the questions. Read the text, "Xian Tombs of the Qin Dynasty" and mark up the text as directed.

Peer Insights program allows kids at school to help each other

By Tribune Content Agency, adapted by Newsela staff on 12.09.19

Word Count **902**

Level **880L**



Peer Insights student Muna Mohamud-Karie (right) gives Hanan Sharif a push on a swing at South View Middle School in Edina, Minnesota. Photo by: Tribune Services

Each day starts with a lesson in friendship in a classroom at South View Middle School. The middle school is in Edina, Minnesota.

There are no specific directions or assignments. However, there are board games, time to talk and opportunities for kids who would once have lived separate lives at school to get to know each other.

This is South View's Peer Insights program. The program pairs students in special education with their general-education peers. The students sit side by side in the classroom and at the lunch table. They come together for special events like dance marathons or the homecoming parade. Some hang out together on the weekend.

The program is changing the school and the way students think about themselves, others and the world. The program has become a popular activity for students and has gotten the attention of other school districts. Some students are thinking about working in special education.

Eighth-grader Luke Hoekstra spends time in an advisory period with students in Aspire, the school's special education program. He said it has become a highlight of his day and has led to connections with other students.

"When I joined it, I felt it was an opportunity to help other kids, but now it doesn't feel like I'm helping. It just feels like I'm coming to advisory with my friends," he said.

Program Has 80 Student Leaders

Aspire student Filsan Sharif, also an eighth-grader, feels the same way. She smiled as she talked about befriending the Peer Insights students.

"I always see them at lunch and sit with them," Filsan said.

The program started almost 10 years ago, with an idea from teacher Jessica Cherne and a handful of students. Soon, Peer Insights attracted many eager participants. They have to fill out applications and have an interview to get into the program.

About 80 general-education students are now Peer Insights student leaders. They work with 24 special education students.

Before starting with Peer Insights, the students must go through training to widen their understanding of people with disabilities. They learn about different communication styles. After training, many of the Peer Insights students spend the first 20 minutes of their day with Aspire students in the school's special education center.

The Peer Insights students return during the day. They work with students who need help staying focused or with reading or writing.

Students Help And Encourage Each Other

One morning, an Aspire student named Jeanette Torres-Alpizar was nervous about going up to the whiteboard for an activity. Peer Insights students cheered her on. With encouragement from her peers, she stepped forward.

"You're doing great!" shouted one of the students. When Jeanette completed the activity, the room burst into applause.

Nearby, Muna Mohamud-Karie spoke with an Aspire student. Muna is an eighth-grader in Peer Insights. The student she talked to was getting upset over a lesson.

Muna had an idea. She asked if the girl would like to step out for a few minutes to spend some time in a special room nearby. The room has helpful equipment for students with sensory disorders.

A sensory disorder is when the brain has trouble processing information that comes in through the senses. Some people with sensory disorders are very sensitive to things in their environment. Common sounds can be painful or overwhelming.

The girl nodded and followed Muna.

Disabilities Are Nothing To Be Afraid Of

Muna said she's found much to enjoy about the program. She has seen that something as simple as a walk around the school can help everyone, including herself.

"Just being around these kids makes me want to interact with people with disabilities more, either to help or have a fun time and get to know them better," Muna said.

Sue Sullivan's son, Dermot, is in the special education program. Sullivan said she's seen the benefits of the program from both sides. Her older son was a Peer Insights leader before Dermot was paired with general-education students.

Even though her younger son does not speak and uses a wheelchair, he has found friends at school. Many come up and greet him when the family is out in the community.

The program teaches them that his disability is not something to be afraid of, Sullivan said. "Everybody's got differences."

Bringing Students Together

Special education teacher Jennie Schaefer has helped oversee Peer Insights for six years. She said connections between students add up. Since the program started, she said there's been a change in how almost everybody at the school thinks about special education. Special education students no longer spend the majority of their day in classrooms, separate from general-education students, without either group knowing much about the other.

"It's also shifted the mind-set of general ed teachers," she said. They see the benefit of the social ties, she said.

The integration of special education students into more of the school day and after-school activities has grown. School leaders at South View and other schools have been working to create more events and programs to bring students together.

The school has become a model for others in the state and across the country. School leaders come visit to see how Peer Insights is creating change.

Nick Cedergren works with Special Olympics Minnesota.

"I think the best part about this is that it's kind of a ripple effect," Cedergren said. "What South View Middle School is doing is spreading."



Main idea and details

Peer Insights program allows kids at school to help each other

Name _____

Class _____

Date _____

Directions

Read the article "Peer Insights program allows kids at school to help each other" and identify three key details that support the main idea noted below. Explain how each detail you selected supports the main idea.

Main Idea

Peer Insights builds friendships between special education and general education students.

90/125 characters

Detail #1

Detail #2

Detail #3

- 1 Jackson has 3 green marbles and 10 red marbles. What is the ratio of red marbles to total marbles?
- _____

- 2 Sydney bought 5 silver balloons, 6 red balloons, 4 black balloons, and 7 white balloons for the school carnival.

Complete the table to show the ratios.

Ratios of Balloons	
Silver : Black	
White : Total Balloons	

- 3 David works at a toy store. He placed 7 stuffed penguins, 8 stuffed flamingos, and 5 stuffed whales out on the store display. Which ratio can be represented by $\frac{8}{7}$?

- (A) the ratio of stuffed penguins to stuffed flamingos
- (B) the ratio of stuffed whales to stuffed flamingos
- (C) the ratio of stuffed whales to stuffed penguins
- (D) the ratio of stuffed flamingos to stuffed penguins

- 4 A restaurant worker was told to make every ham sandwich with 2 tomato slices and 3 pickle slices.

Select **all** the true statements.

- (A) A worker makes 3 ham sandwiches. Taken together, the sandwiches will have a ratio of total number of tomato slices to total number of pickle slices of 6:9.
- (B) For every ham sandwich, the ratio of tomato slices to pickle slices is 3:2.
- (C) A worker makes 5 ham sandwiches. The ratio of total number of tomato slices to total number of pickle slices is 7:8.
- (D) On every ham sandwich, the ratio of tomato slices to pickle slices is 2:3.
- (E) Once a ham sandwich is made, there will be a ratio of 2 tomato slices to 1 ham sandwich.

- 5 A rectangular room is 10 feet long by 7 feet wide. What is the ratio of the width of the room to the perimeter of the room?

- (A) 7 to 17
- (B) 7 to 34
- (C) 17 to 34
- (D) 34 to 7

- 6** Mei has 2 yellow teacups and 5 brown teacups. Which ratio compares the number of brown teacups to the total number of teacups?

Select **all** the correct answers.

- (A) 5 to 7 (D) 5:2
(B) 2 to 7 (E) $\frac{2}{5}$
(C) 5:7 (F) $\frac{5}{7}$

- 7** Steve earns \$8 per hour. His older brother earns \$2 more per hour than Steve. What is the ratio of the amount of money Steve earns in an hour to the amount of money his brother earns in an hour?

- (A) \$8 to \$2
(B) \$2 to \$8
(C) \$10 to \$8
(D) \$8 to \$10

- 8** Marco mixed 2 teaspoons of sugar and 1 teaspoon of milk into his coffee. What is the ratio of teaspoons of sugar to teaspoons of milk?

- (A) 2:1
(B) 1:2
(C) 1:3
(D) 3:2

- 9** Lily plants 2 red rosebushes, 8 pink rosebushes, and 6 yellow rosebushes. What is the ratio of pink and red rosebushes to total rosebushes?

- (A) 8:2
(B) 8:16
(C) 10:16
(D) 10:6

- 10** On a package of rice, the directions say that the ratio of cups of water to cups of uncooked rice should be $1:\frac{1}{2}$. How many cups of water should be used to cook $\frac{1}{2}$ cup of uncooked rice?

- 11** At a banquet hall there are 25 tables that seat 4 people and 30 tables that seat 6 people. There are no other tables in the banquet hall. What is the ratio of the number of tables that seat 4 people to the total number of tables in the banquet hall?

- (A) 2 : 3
(B) 2 : 5
(C) 5 : 6
(D) 5 : 11



Periodic Table

Reading: Read the information on this page and the next while looking at the Periodic Table, then answer the questions on your answer page.

1 H Hydrogen 1.008																		2 He Helium 4.003					
3 Li Lithium 6.94	4 Be Beryllium 9.012																	5 B Boron 10.81	6 C Carbon 12.011	7 N Nitrogen 14.007	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.180
11 Na Sodium 22.990	12 Mg Magnesium 24.305																	13 Al Aluminum 26.982	14 Si Silicon 28.085	15 P Phosphorus 30.974	16 S Sulfur 32.06	17 Cl Chlorine 35.45	18 Ar Argon 39.948
19 K Potassium 39.098	20 Ca Calcium 40.078																	31 Ga Gallium 69.723	32 Ge Germanium 72.630	33 As Arsenic 74.922	34 Se Selenium 78.97	35 Br Bromine 79.904	36 Kr Krypton 83.798
37 Rb Rubidium 85.468	38 Sr Strontium 87.62																	49 In Indium 114.818	50 Sn Tin 118.710	51 Sb Antimony 121.760	52 Te Tellurium 127.60	53 I Iodine 126.904	54 Xe Xenon 131.293
55 Cs Cesium 132.905	56 Ba Barium 137.327	57 - 70 *	71 Lu Lutetium 174.967	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217	78 Pt Platinum 195.084	79 Au Gold 196.967	80 Hg Mercury 200.592	81 Tl Thallium 204.38	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium [209]	85 At Astatine [210]	86 Rn Radon [222]					
87 Fr Francium [223]	88 Ra Radium [226]	89 - 102 **	103 Lr Lawrencium [262]	104 Rf Rutherfordium [267]	105 Db Dubnium [270]	106 Sg Seaborgium [269]	107 Bh Bohrium [270]	108 Hs Hassium [270]	109 Mt Meitnerium [278]	110 Ds Darmstadtium [281]	111 Rg Roentgenium [281]	112 Cn Copernicium [285]	113 Nh Nihonium [286]	114 Fl Flerovium [289]	115 Mc Moscovium [289]	116 Lv Livermorium [293]	117 Ts Tennessine [293]	118 Og Oganesson [294]					
*Lanthanide series		57 La Lanthanum 138.905	58 Ce Cerium 140.116	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.242	61 Pm Promethium [145]	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.500	67 Ho Holmium 164.930	68 Er Erbium 167.259	69 Tm Thulium 168.934	70 Yb Ytterbium 173.045								
**Actinide series		89 Ac Actinium [227]	90 Th Thorium 232.038	91 Pa Protactinium 231.036	92 U Uranium 238.029	93 Np Neptunium [237]	94 Pu Plutonium [244]	95 Am Americium [243]	96 Cm Curium [247]	97 Bk Berkelium [247]	98 Cf Californium [251]	99 Es Einsteinium [252]	100 Fm Fermium [257]	101 Md Mendelevium [258]	102 No Nobelium [259]								

There are reasons the elements are lined up certain ways.

There is a chemical symbol and numbers on each tile of the periodic table. The chemical symbol is a one- or two-letter abbreviation for the element name (sometimes based on the Latin name, not the modern one). The numbers on the tile are the atomic number and the average atomic mass.

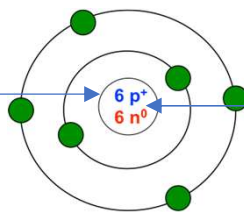
The atomic number of an element tells you how many protons that element has. When the atom is neutral (no charge), it will have the same number of electrons as it does protons.

The average atomic mass of an element can be rounded to a whole number so you can figure out how many neutrons the atom contains. The rounded mass number represents the total number of particles in an atom's nucleus. These particles are both the protons and the neutrons. Since the atomic number represents the protons and the mass number represents the protons and neutrons, you can subtract the two numbers to find out how many neutrons it contains.



Periodic Table

atomic number: only protons



atomic mass: protons and neutrons

atomic mass minus atomic number = number of neutrons

Families or Groups

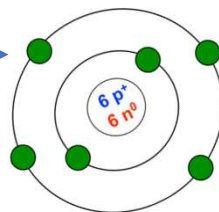
Periods

1 H Hydrogen 1.008	
3 Li Lithium 6.94	4 Be Beryllium 9.012
11 Na Sodium 22.990	12 Mg Magnesium 24.305
19 K Potassium 39.098	20 Ca Calcium 40.078
37 Rb Rubidium 85.468	38 Sr Strontium 87.62
55 Cs Cesium 132.905	56 Ba Barium 137.327
87 Fr Francium [223]	88 Ra Radium [226]

Elements are each assigned a period which is a horizontal row. These periods show how many energy levels, or orbitals, the atoms have around them which contain electrons.

There are also groups (or families) which are the vertical columns. Within these groups, elements tend to have similar properties like valence electrons and reactivity. The valence electrons are the electrons in the outer energy level; they are the ones responsible for the atoms bonding with other atoms.

valence electron



valence electron

valence electron

valence electron

What is the chemical symbol for Platinum (atomic number 79)? _____

What element has atomic number 94? _____

How many protons does Iodine have (atomic number 53)? _____

How many neutrons does barium (Ba, atomic number 56) contain? _____

Elements in the second period (row) have how many energy levels? _____

Name three other elements in the same group/family as francium (atomic number 87):

Element Book: You will be given a card with the details of one element. Complete the social networking profile on your answer page for your element. Use the information from your card as well as information from the reading to help you complete this.



Periodic Table

Name: _____ Date: _____

Directions: Pick an Element from the Periodic Table. Complete the social networking profile below for your element. Use the information from your card, as well as information from the reading, to help you complete this.

Element Book



Profile Picture

Name: _____

Nickname: _____

Number of Particles:

____ Protons

____ Neutrons

____ Electrons

My home: _____

My family members: _____

I have _____ energy levels.



Periodic Table

Name: _____ Date: _____

Draw lines to match the element names with their information.

cobalt
dubnium
europium
mercury
radium
calcium
ruthenium
hydrogen

between iron and osmium
has one proton
rounded average atomic mass 152
Co
atomic number 105
same family as barium, with one more energy level
between gold and thallium
one more proton than potassium

AMI Day 3 I Why did China build an army made of clay?

Name:

SS Teacher/Hour



With parent permission, Google "terracotta army" or watch a video on YouTube for more information.
What do you notice about the "terracotta soldiers from the picture"?
(just the details)

Timeline

260	Born 259 B.C.E
255	
250	Becomes king of Qin at 13
245	
240	Coup d'état attempted by his own mother
235	
230	Attempted assassination by messenger sent by crown Jing Ke
225	Unifies China and becomes emperor of all China
220	Begin to construct the Great Wall of China
215	The burning of the books
210	Death by Mercury poisoning, buried with terracotta army
205	Collapse of the Qin dynasty
200	

The terracotta army was created by the order of Emperor Qin Shi Huangdi. What can we learn about him from this timeline?

Xian Tombs of the Qin Dynasty

In 221 B.C., Qin Shi Huang became emperor of China. At the time, China was made up of many states. When the emperor came to power, China's states had been fighting with each other for 200 years. This was known as the Warring States Period.

Emperor Qin Shi Huang helped bring the states together. They soon united under one central government. This was the start of the Qin Dynasty. Now that states were unified, the government also had control over many workers from all over the land. With them, the government would be able to accomplish remarkable building projects.

One major project was the emperor's elaborate burial complex. It was built during his lifetime and reportedly took an estimated 700,000 workers about three decades to complete.

In 1974, peasants working in a field approximately 20 miles east of Xian stumbled upon a burial site. Excavation of the area began almost immediately.

By 1975, early digs estimated that the site spanned some 20 square miles. Cemeteries for workers who were killed were also found. Four pits were unearthed, three of which contained thousands of life-size figures, most in fragments. The fourth pit was empty, suggesting the burial site was left unfinished.

Researchers discovered roughly 8,000 soldiers made of terracotta, a type of baked clay. They had been arranged in battle formation. No two figures looked exactly the same. In addition to the soldiers, clay horses, bronze chariots, weapons and other artifacts were unearthed at the site.

The restoration process revealed how the figures originally had been made. An estimated 700,000 convicts and laborers were forced into work. Craftsmen who knew how to make terracotta drainage pipes used their skill to create the figures. They used molds and an assembly-line production system to make body parts.

Why do you think that the Chinese created such an amazing tomb for their emperor?

- ☐ Because they loved him?
- ☐ Because he made them?

Underline three reasons from the text that support your answer.
Circle the most important word in each piece of evidence.

A graphic of a spiral-bound notebook with a dark blue cover and a white page. The spiral binding is on the left side. The text "DAY 4" is written in a dark blue, sans-serif font in the center of the page.

DAY 4

AMI DAY #4

ELA

Reread the article, "Peer Insights program allows kids at school to help each other." Review the notes from your graphic organizer, and respond to the two writing prompts.

Math

Complete the *Make Tables of Equivalent Ratios and Use Tables to Compare Ratios* practice page.

Science

Read the article about kinetic and potential energy. Complete the potential and kinetic energy page, and the sketch a roller coaster showing the kinetic and potential energy.

Social Studies

What was Timbuktu?
Study the map on the front page and respond to the prompt.
Read the description about Timbuktu on the back page.
Respond to the writing prompt.

Peer Insights program allows kids at school to help each other

By Tribune Content Agency, adapted by Newsela staff on 12.09.19

Word Count **902**

Level **880L**



Peer Insights student Muna Mohamud-Karie (right) gives Hanan Sharif a push on a swing at South View Middle School in Edina, Minnesota. Photo by: Tribune Services

Each day starts with a lesson in friendship in a classroom at South View Middle School. The middle school is in Edina, Minnesota.

There are no specific directions or assignments. However, there are board games, time to talk and opportunities for kids who would once have lived separate lives at school to get to know each other.

This is South View's Peer Insights program. The program pairs students in special education with their general-education peers. The students sit side by side in the classroom and at the lunch table. They come together for special events like dance marathons or the homecoming parade. Some hang out together on the weekend.

The program is changing the school and the way students think about themselves, others and the world. The program has become a popular activity for students and has gotten the attention of other school districts. Some students are thinking about working in special education.

Eighth-grader Luke Hoekstra spends time in an advisory period with students in Aspire, the school's special education program. He said it has become a highlight of his day and has led to connections with other students.

"When I joined it, I felt it was an opportunity to help other kids, but now it doesn't feel like I'm helping. It just feels like I'm coming to advisory with my friends," he said.

Program Has 80 Student Leaders

Aspire student Filsan Sharif, also an eighth-grader, feels the same way. She smiled as she talked about befriending the Peer Insights students.

"I always see them at lunch and sit with them," Filsan said.

The program started almost 10 years ago, with an idea from teacher Jessica Cherne and a handful of students. Soon, Peer Insights attracted many eager participants. They have to fill out applications and have an interview to get into the program.

About 80 general-education students are now Peer Insights student leaders. They work with 24 special education students.

Before starting with Peer Insights, the students must go through training to widen their understanding of people with disabilities. They learn about different communication styles. After training, many of the Peer Insights students spend the first 20 minutes of their day with Aspire students in the school's special education center.

The Peer Insights students return during the day. They work with students who need help staying focused or with reading or writing.

Students Help And Encourage Each Other

One morning, an Aspire student named Jeanette Torres-Alpizar was nervous about going up to the whiteboard for an activity. Peer Insights students cheered her on. With encouragement from her peers, she stepped forward.

"You're doing great!" shouted one of the students. When Jeanette completed the activity, the room burst into applause.

Nearby, Muna Mohamud-Karie spoke with an Aspire student. Muna is an eighth-grader in Peer Insights. The student she talked to was getting upset over a lesson.

Muna had an idea. She asked if the girl would like to step out for a few minutes to spend some time in a special room nearby. The room has helpful equipment for students with sensory disorders.

A sensory disorder is when the brain has trouble processing information that comes in through the senses. Some people with sensory disorders are very sensitive to things in their environment. Common sounds can be painful or overwhelming.

The girl nodded and followed Muna.

Disabilities Are Nothing To Be Afraid Of

Muna said she's found much to enjoy about the program. She has seen that something as simple as a walk around the school can help everyone, including herself.

"Just being around these kids makes me want to interact with people with disabilities more, either to help or have a fun time and get to know them better," Muna said.

Sue Sullivan's son, Dermot, is in the special education program. Sullivan said she's seen the benefits of the program from both sides. Her older son was a Peer Insights leader before Dermot was paired with general-education students.

Even though her younger son does not speak and uses a wheelchair, he has found friends at school. Many come up and greet him when the family is out in the community.

The program teaches them that his disability is not something to be afraid of, Sullivan said. "Everybody's got differences."

Bringing Students Together

Special education teacher Jennie Schaefer has helped oversee Peer Insights for six years. She said connections between students add up. Since the program started, she said there's been a change in how almost everybody at the school thinks about special education. Special education students no longer spend the majority of their day in classrooms, separate from general-education students, without either group knowing much about the other.

"It's also shifted the mind-set of general ed teachers," she said. They see the benefit of the social ties, she said.

The integration of special education students into more of the school day and after-school activities has grown. School leaders at South View and other schools have been working to create more events and programs to bring students together.

The school has become a model for others in the state and across the country. School leaders come visit to see how Peer Insights is creating change.

Nick Cedergren works with Special Olympics Minnesota.

"I think the best part about this is that it's kind of a ripple effect," Cedergren said. "What South View Middle School is doing is spreading."

Write Prompt

Today, many people want to get their information in different ways, such as charts, pictures, or videos. How could you change this article from mostly written words to help more people learn about it? Use information in the article to support your answer.

Write Prompt

What impact can Peer Insights programs have on students and their school communities? Support your answer with evidence from the article.

- 1** The ratio of knives to forks in a drawer is $\frac{8}{12}$.

Which is an equivalent ratio of knives to forks?

- (A) 2 knives, 6 forks
(B) 16 knives, 36 forks
(C) 2 knives, 3 forks
(D) 12 knives, 8 forks

- 2** There are 3 pink notepads and 15 yellow notepads in a box.

Which ratio is equivalent to the ratio of yellow to pink notepads?

- (A) $\frac{1}{5}$ (C) $\frac{5}{1}$
(B) $\frac{5}{3}$ (D) $\frac{45}{9}$

- 3** Steel alloys are formed by mixing certain ratios of iron, carbon, and other possible elements. The table shows the amount of carbon required to make certain amounts of a particular alloy. Find the missing value for the table.

Steel (kg)	Carbon (g)
50	250
60	300
70	
80	400

- (A) 175 (C) 350
(B) 280 (D) 420

- 4** A certain paint color is obtained by mixing the correct ratio of red and blue paints. Every time a batch is made, the mixer records the amounts of each color used. One of the batches in the table was made incorrectly. Which batch should be rejected?

Batch	Red (gal)	Blue (gal)
1	4	6
2	2	3
3	12	24
4	8	12

- (A) batch 1 (C) batch 3
(B) batch 2 (D) batch 4

- 5** A student wants to buy notebooks in bulk to get ready for school. Three stores are offering packages of the type of notebook the student wants. The table shows the offers from each store.

Store	Cost	Notebooks
A	\$16.00	10
B	\$18.00	12
C	\$27.00	15

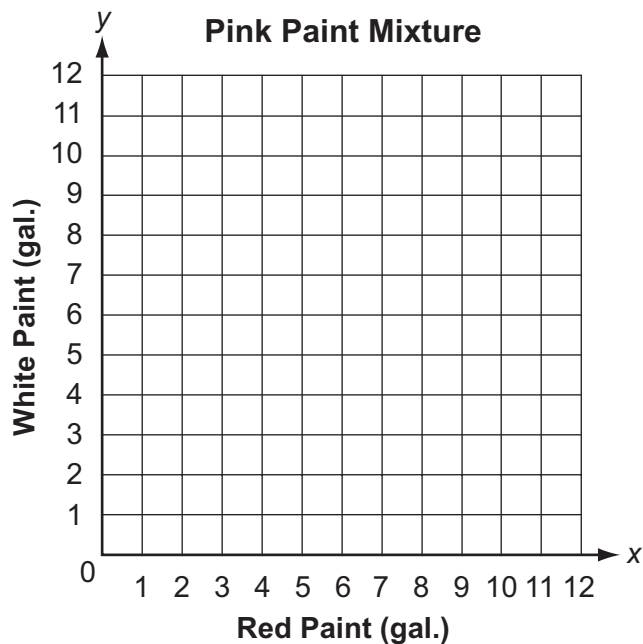
List the stores in order from the best deal to the worst deal for purchasing notebooks.

- (A) store B, store A, store C
(B) store A, store B, store C
(C) store B, store C, store A
(D) store C, store A, store B

- 6** The table shows ratios of red paint to white paint used for a pink paint mixture. Plot the ratios represented in the table on the coordinate plane.

Pink Paint Mixture

Red Paint (gal.)	White Paint (gal.)
4	2
8	4
10	5



- 7** The tables show the comparison of the amount of water to the amount of orange juice concentrate for orange juice made by 3 people.

Ana's Mixture

Water (cups)	Concentrate (cups)
6	2
9	3
12	4

Krishna's Mixture

Water (cups)	Concentrate (cups)
4	1
8	2
12	3

Tyrone's Mixture

Water (cups)	Concentrate (cups)
3	2
6	4
9	6

Fill in the blanks with the correct answers from the lists to complete the sentences.

_____ mixture has the greatest ratio of water to concentrate.

Ana's Krishna's Tyrone's

The greatest ratio of water to concentrate is _____.

3 : 1 3 : 2 4 : 1



Potential & Kinetic Energy

Name: _____ Date: _____

Directions:

Read the information below and highlight the parts that you find to be important. You will use this information throughout the activity.

The last time you shot a rubber band at a friend, did you think about energy? Energy is the ability to do work or cause change. There are many forms of energy, but this lesson will focus on mechanical energy. The two types of mechanical energy are potential energy and kinetic energy.

Potential energy is stored energy. Potential energy can be found in a rock perched at the top of a cliff ready to fall or in a rubber band stretched across someone's finger that is about to fly across the room.

The higher the cliff, or the greater the stretch, the more potential energy is stored up.

Kinetic energy is energy in motion. A falling rock and a rubber band in flight both have kinetic energy. Both velocity and mass will affect the amount of kinetic energy in an object. The faster the object is moving, the more kinetic energy it has.

Objects don't just have to have one type of energy though. The amount of potential and kinetic energy can change as an object travels. For example, that rock falling off the cliff will decrease in potential energy as it gets closer to the ground, but it will increase in kinetic energy because it will travel at a faster speed as it falls.

All energy obeys the Law of Conservation of Energy, which states that energy cannot be created or destroyed; it can only be transferred. So in order for the kinetic energy of that rock to increase as it falls, the potential energy must decrease. This is because the total amount of energy must always stay the same.

On the following pages you will categorize objects based on the types of energy they contain, as well as the amount of each type of energy as it transfers between forms. Think about the definitions for each and remember that object can contain more than one type of energy.

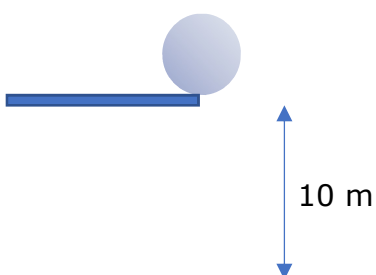
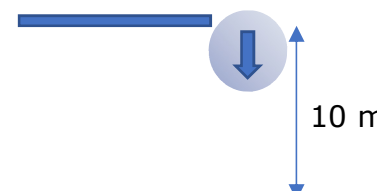
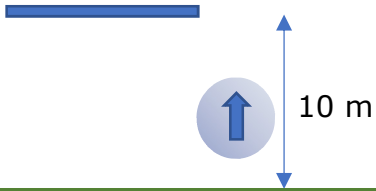
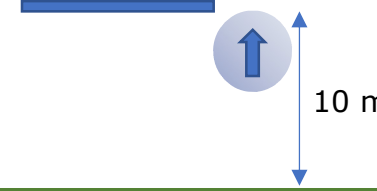
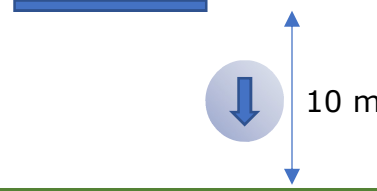




Potential & Kinetic Energy

Student Pages

Directions: Look at the series of pictures and decide if potential or kinetic energy is increasing or decreasing as the ball falls to the ground and bounces. The arrows show the direction the ball is moving. The first is done for you.

A  10 m	B  10 m	C  10 m
Maximum <u>Potential</u> Minimum <u>Kinetic</u>	Increasing _____ Decreasing _____	Maximum _____ Minimum _____
D  10 m	E  10 m	F  10 m
Increasing _____ Decreasing _____	Increasing _____ Decreasing _____	Increasing _____ Decreasing _____

The total energy of the ball must never change according to the Law of Conservation of Energy. Based on that fact, determine the amount of each type of energy the top row of pictures. (Energy is measured in joules.)

- A. Total energy = 100 joules Potential = _____ Kinetic = _____
B. Total energy = 100 joules Potential = 90 J Kinetic = _____
C. Total energy = 100 joules Potential = _____ Kinetic = 100 J

**Note: some energy is transferred to the ground on impact, which is why the ball never bounces back as high as it started.*



Potential & Kinetic Energy

Directions:

Sketch a roller coaster that connects points A and B. Make it fun!

Draw **an arrow** to label each major section where kinetic energy is **increasing** while potential energy is **decreasing**.

Draw **a star** to label each major section where potential energy is **increasing** while kinetic energy is **decreasing**.

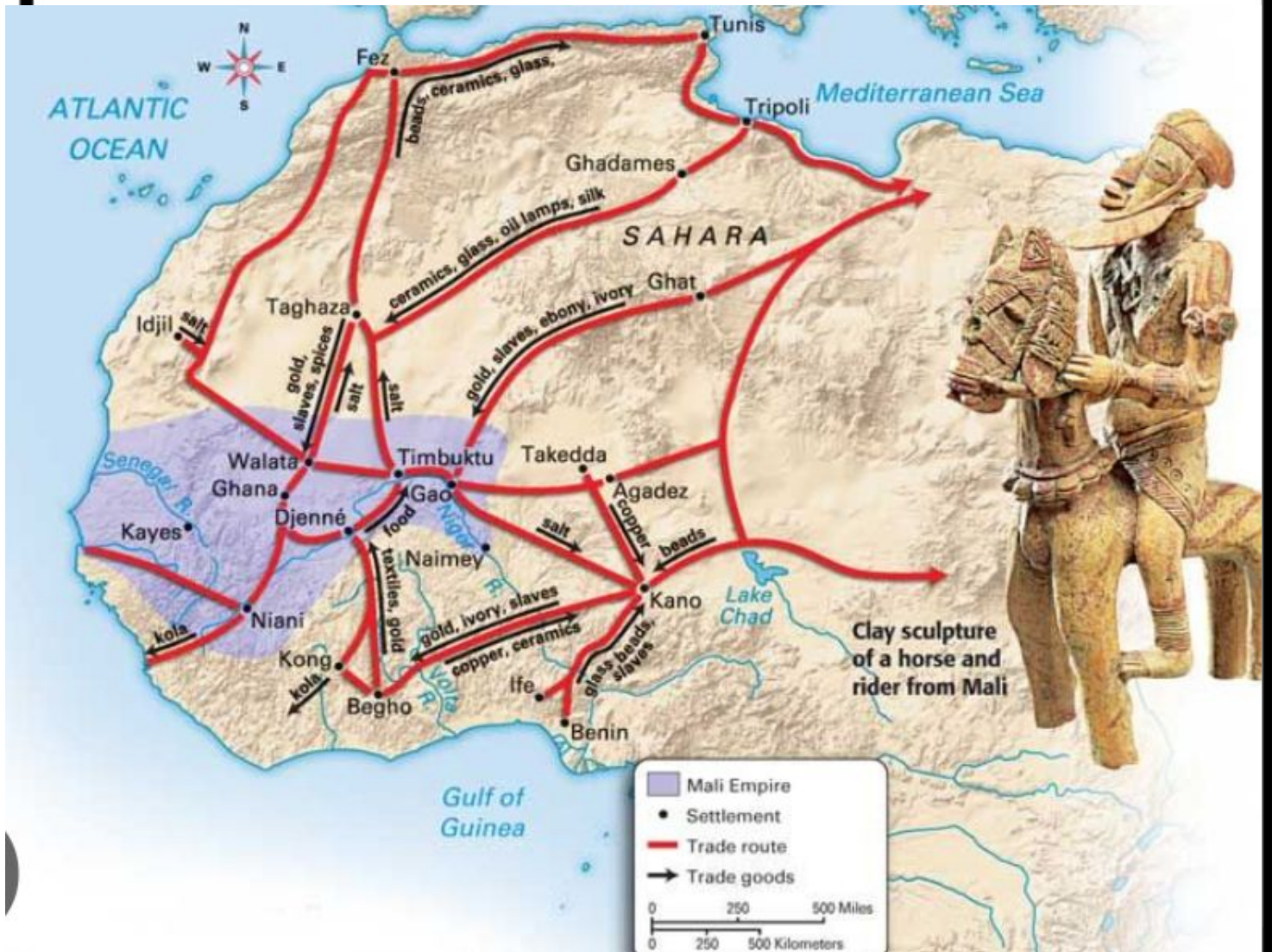
A

B

Name:

SS Teacher/Hour

"From here to Timbuktu" means a very distant or remote place. The phrase is used to describe an extremely long journey, one that is too far to begin. This saying comes from the real city of Timbuktu in Africa, which became legendary for its distance and wealth.



1. On the map above, circle all products traded in this part of Africa.
2. Using details from the map, explain why Timbuktu might have been important in this part of the world.

Timbuktu is a city in the country of Mali in western Africa. People sometimes use the word Timbuktu to mean a place that is far away and hard to get to. However, at the peak of its fame, from about 1300 to 1600, Timbuktu was easy to reach. In fact, it was one of the world's greatest cities.

Timbuktu is now a shadow of its former self. It's just a small city on the edge of the ever-growing Sahara Desert. Timbuktu often strikes its infrequent visitors as humble and run-down.

It was not always like this. Timbuktu was once a center of trade and culture. It was an important city in the Mali Empire and the Songhai Empire. In the early 1300s, Mansa Musa, the famous ruler of the Mali Empire, traveled through Timbuktu. It is believed that he built the *Djingarebeyer* and *Sankore* mosques. They still stand to remind visitors of Timbuktu's Golden Age.

These mosques were built with mud and brick. At one time, they were part of a university that had 25,000 students. Scholars studied at Timbuktu from all over Africa and the Middle East. Then they traveled and spread Islam throughout Africa.

The teachings of Islam, as well as astronomy, mathematics and medicine, were written down or collected at Timbuktu. Several hundred thousand manuscripts may still exist. They form a written record of African and Islamic history.

Trade used to make the city rich. Timbuktu sits on the edge of the Sahara desert. Many people wanted salt from the desert. Camel caravans carried salt and other trade goods such as gold and ivory. This trade made the city rich. The caravans first brought scholars to congregate at the site.

You are an explorer who just returned to Europe from Timbuktu. What would you tell your friends about this mysterious place? Write a 3-4 sentence paragraph using details from the reading.

