

Grade 6 Science NTI

Choose one activity to complete each day for eight (8) days. You may work in any order, but you must label each assignment with the choice number upon submission. You may submit pictures or upload your work to the Facebook group page or send to my email at stacy.howell@fulton.kyschools.us. If you do not have access to the group page, you may submit your work on paper upon return to school.

Choice 1	Choice 2	Choice 3
Login to IXL and complete the following Grade 6 Science skill: A1 – Identify Steps of the Scientific Method You should achieve smart score of 100 for mastery.	Login to Brainpop, click “Science,” then click “Earth System,” and complete the following: Watch video “Earth’s Atmosphere” Take the quiz included in this packet.	Complete “Wrestle with Weather” crossword puzzle on worksheet provided.
Choice 4	Choice 5	Choice 6
Login to IXL and complete the following Grade 6 Science skill: CC2 – Select Parts of Water Cycle Diagrams You should achieve smart score of 100 for mastery.	Login to Brainpop, click “Science,” then click “Earth System,” and complete the following: Watch video “Mineral Identification” Take the quiz included in this packet	Read the “Saturn” article on the worksheet provided. Fill in the blanks and find the answers in the word search. Find and record the hidden message at the bottom of the page.
Choice 7	Choice 8	Choice 9
Login to IXL and complete the following Grade 6 Science skill: DD1 – Use Data to Describe Climates You should achieve smart score of 100 for mastery.	Login to Brainpop, click “Science,” then click “Space,” and complete the following: Watch video “Seasons” Take the quiz included in this packet	Complete the Water Cycle Vocabulary Puzzle on worksheet provided. Use the code at the top of the page to identify each vocabulary word that is defined.
Choice 10	Choice 11	Choice 12
Login to IXL and complete the following Grade 6 Science skill: GG2 – Identify Phases of the Moon You should achieve smart score of 100 for mastery.	Complete Heat Transfer Hopscotch coloring activity on the worksheet provided. If you don’t have blue, yellow, and red crayons, just label each one with the correct type of heat transfer.	Complete Scientific Method Maze on the worksheet provided.



Earth's Atmosphere Quiz

Name: _____
Date: _____
Class: _____

1. What gas makes up the majority of the Earth's atmosphere?

- a. Oxygen
- b. Carbon dioxide
- c. Argon
- d. Nitrogen

2. What might happen if the earth didn't have an atmosphere?

- a. Everything would go flying off into space.
- b. We wouldn't be able to breathe.
- c. The earth's rotation would stop.
- d. The seasons would be longer.

3. Place the following atmospheric layers in sequence, from lowest to highest: A) Exosphere; B) Stratosphere; C) Troposphere

- a. A, C, B
- b. B, A, C
- c. C, B, A
- d. C, A, B

4. Why is it difficult to breathe at high altitudes?



- a. Because you are closer to the sun the higher you go.
- b. Because atmospheric gases become thinner the higher you go.
- c. Because there is more carbon dioxide the higher you go.
- d. Because there is no oxygen in the troposphere.

5. If you wanted to fly through a cloud, which atmospheric layer would you fly through?



- a. The troposphere
- b. The mesosphere
- c. The ionosphere
- d. The exosphere

6. Which of the following is a true statement about the stratosphere?

- a. The temperature gets warmer the higher you go.
- b. The temperature gets colder the higher you go.
- c. There is more oxygen the higher you go.
- d. There is more carbon dioxide the higher you go.

7. Why is the ozone layer so important?

- a. Because it traps most of the sun's heat.
- b. Because it contains most of the earth's oxygen.
- c. Because it blocks harmful ultraviolet rays.
- d. Because it allows ultraviolet rays to warm the stratosphere.

8. Which term accurately describes the mesosphere?

- a. Extremely cold
- b. Extremely warm
- c. Extremely low
- d. Extremely high up

9. In the name "thermosphere," the prefix "thermo-" refers to what?

- a. Atmospheric gases
- b. Altitude
- c. Meteors
- d. Heat

10. Which region of the atmosphere is filled with charged particles?

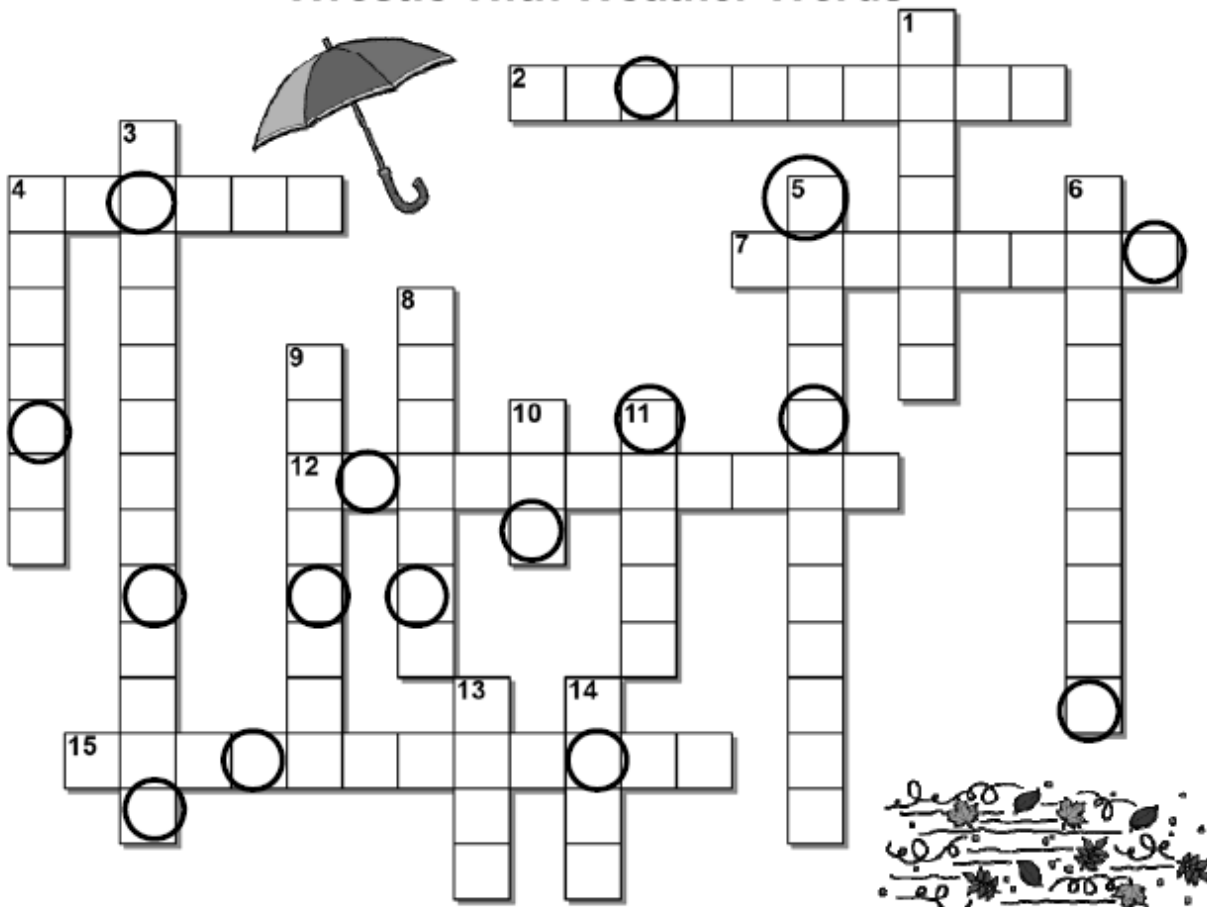
- a. The troposphere
- b. The mesosphere
- c. The ionosphere
- d. The ozone layer



Name _____

Date _____

Wrestle With Weather Words



Across:

- 2 Water freezes at 32° _____.
- 4 When you see these thin, high clouds made of ice crystals, you know the change of weather is on its way.
- 7 When _____ is high, the air feels moist.
- 12 A puddle of water dries up because of _____.
- 15 A water droplet on a cold can of Pepsi is an example of it: _____.

Down:

- 1 Water boils at 100° _____.
- 3 Water that falls to Earth as rain, snow, hail, or sleet: _____.
- 4 White, puffy clouds that look like cotton balls: _____.
- 5 Better run home when you see these clouds. They mean one thing: a storm is coming! _____.
- 6 The layer of gases surrounding the Earth: _____.
- 8 Gloomy, rainy days are often caused by these clouds: _____.
- 9 The weight of the air is called air _____.
- 10 A cloud that forms very close to the ground: _____.
- 11 Water _____ is water in the gas state: _____.
- 13 Lumps of ice falling from clouds: _____.
- 14 Air moving from one place to another: _____.

Hidden Message

E _ e _ _ _ o _ _ _ s a

_ _ l _ _ r _ i _ in _ .

The circled letters make up a hidden message. See if you can unscramble it!



Mineral Identification Quiz

Name: _____
 Date: _____
 Class: _____

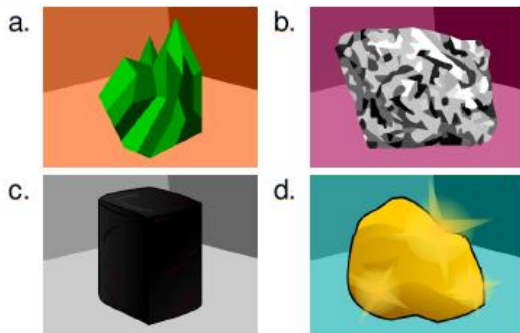
1. Which of the following is a chemical property of a mineral?

- a. Hardness
- b. Luster
- c. Atomic structure
- d. Color

2. What can you infer about graphite from the fact that you can scratch it with just your fingernail?

- a. It's not very lustrous.
- b. It's not very hard.
- c. Its streak is black-colored.
- d. It has fracture.

3. Which of the following minerals has a metallic luster?



4. What word describes the material involved in a streak test?

- a. Fractured
- b. Powdered
- c. Scratched
- d. Liquid

5. What tool would you need to discover whether a mineral has fracture?

- a. A hammer
- b. A file
- c. A grinder
- d. A harder mineral

6. Which mineral is ranked highest on the Mohs scale?

- a. Talc
- b. Calcite
- c. Quartz
- d. Diamond

7. Which physical property requires no tools, scales, or other equipment to determine?

- a. Hardness
- b. Fracture
- c. Color
- d. Cleavage

8. Why do you need to run several tests before you can identify a mineral with 100 percent certainty?

- a. Minerals all have the same chemical structure
- b. Many minerals share physical properties in common
- c. Minerals' physical properties can change very quickly
- d. A mineral can only be subjected to a few tests before it degrades

9. What property of a mineral indicates that it has cleavage?

- a. A milky-white color
- b. The ability to be scratched by a steel file
- c. The fact that it sizzles in the presence of hydrochloric acid
- d. Smooth faces

10. What term best describes the way minerals are identified?

- a. Guesswork
- b. Gimmick
- c. Procedure
- d. Trick

Name: _____

Choice 6

Date: _____

Period: _____

SATURN

STEP 1

Read the article below.

Saturn is the sixth planet from the Sun and the second largest in the Solar System. Only Jupiter, the most massive planet, is larger. The planet gets its name from the Roman god of agriculture. It is also referred to as the "Ringed Planet" as its intricate ring system is much more prominent than any other planet's.

Saturn's rings were discovered by Galileo when he pointed his telescope toward the planet. To Galileo, it appeared that Saturn had ears. As observation tools improved, an vast system of moons was discovered. Currently, scientists have observed at least 63 different moons. The largest, Titan, has a thick atmosphere and lakes of liquid methane. However, visiting Titan would not be a pleasant experience. On average, it is a chilly -179°C (-290°F)!

Saturn is about 9.5 times farther from the Sun than Earth. This means that, on average, the Saturn receives only about 1% of the Sun's energy compared to Earth. The Sun appears much smaller in the Saturnian sky compared to our view from Earth. Saturn also has massive hurricane-like storms that rage across the planet. Most interestingly, an almost-perfect hexagonal storm rages across its North Pole.

Even though Saturn is less dense than Earth, it is about 95 times more massive. Saturn is also unique because it is the only planet that is less dense than water. This is because Saturn is made of mostly Hydrogen and Helium. Interestingly, if you could fill a large enough pool with water, Saturn would float on top!

NOW: Complete the statements to the right.

STEP III

Find and circle your answers on the grid below.

Note: Words can read in any direction.

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E N T T H E P S R I N G R S O
F R O E S A O N T U R H E N A
R E U I L S O O P E C E L T A
E C U T T E L O L A H X L R P
M S T B L A S M X Y O A A V B
J B N I Y U V C D F V G M H S
W F L E Y F C R O U L O S M Z
G A Y L D G O I E P N N S I A
G J M K Z G R M R S E A P B E
D N O C E S Q E D G B L T S S
P Q G N I I E Y N M A O J I R
T N E N I M O R P E S V Z H T

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STEP IV

Now read left to right, row by row, the first 30 letters you have not circled for a hidden message about Saturn.

Write it here:

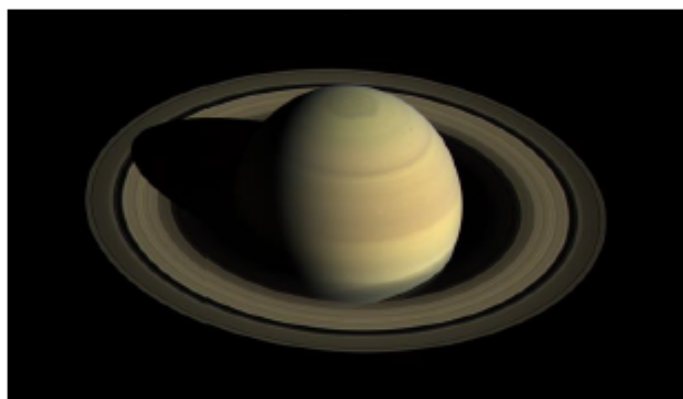


Photo Courtesy of NASA

STEP II


Write in the missing word to complete the statements below.

- Saturn's rings were discovered by _____.
- Even though Saturn is less _____ than Earth, it is about 95 times more massive.
- An almost-perfect _____ storm rages across Saturn's North Pole.
- If you could fill a large enough _____ with water, Saturn would float on top.
- Saturn's largest moon, _____, has a thick atmosphere and liquid methane lakes.
- In order to see Saturn's rings, you need to use a _____.
- Scientists have observed over 63 _____ orbiting Saturn.
- Saturn's atmosphere is mostly _____ and Helium.
- Saturn is named for the Roman god of _____.
- On average, Saturn receives only about 1% of the Sun's _____ compared to Earth.
- The Saturnian sky would look much different because the Sun would appear much _____.
- The _____ largest planet, Saturn is only smaller than Jupiter.
- While not the only planet with rings, Saturn's are the most _____.
- Saturn's moons were discovered when _____ tools improved.



Seasons Quiz

Name: _____
 Date: _____
 Class: _____

1.  Why do globes lean sideways?

- a. To allow them to spin easier.
- b. To demonstrate the tilt of Earth's axis.
- c. To demonstrate the passing of the seasons.
- d. To demonstrate the effects of gravity.

2. What causes the seasons to change?

- a. The Earth's distance from the Sun.
- b. The warming and cooling of the Earth's core.
- c. The Earth's tilt in relation to the Sun.
- d. The Earth's rotation on its axis.

3. What happens when the area in which you live tilts away from the sun?

- a. It's summer in your area.
- b. It's spring in your area.
- c. It's autumn in your area.
- d. It's winter in your area.

4. In the sentence, "Winter sunlight strikes the earth at an oblique angle," what does "oblique" mean?


- a. Direct
- b. 90-degree
- c. Indirect
- d. Acute

5. What happens when it's spring in the Southern Hemisphere?


- a. It's autumn in the Northern Hemisphere.
- b. It's spring in the Northern Hemisphere.
- c. It's summer in the Northern Hemisphere.
- d. It's winter in the Northern Hemisphere.

6. How are winters in the Northern Hemisphere different from winters in the Southern Hemisphere?

- a. Winter days are short in the Northern Hemisphere, and long in the South
- b. Northern Hemisphere winters are cold; Southern winters are hot
- c. In the Northern Hemisphere, winter lasts from December to March; in the South, it lasts from June to September
- d. In the Northern Hemisphere, winter lasts from June to September; in the South, it lasts from December to March

7.  Why does the area around the equator stay the same temperature year-round?

- a. It remains the same distance from the sun year-round
- b. It receives the same amount of direct sunlight year-round
- c. Its days are more than 18 hours long year-round
- d. The equator rotates slower than the poles

8.  Which word describes the seasons at the North and South Poles?

- a. Cold
- b. Temperate
- c. Extreme
- d. Mild

9. If you live in the Northern Hemisphere, on which day of the year will your hometown receive the most daylight?

- a. September 21
- b. December 21
- c. March 21
- d. June 21

10. Where and when would you find almost 24 hours of daylight?

- a. In South America during spring
- b. In the Arctic Circle during summer
- c. In Jamaica during the winter
- d. In the Antarctic Circle during winter

- M. རྩ་ལྗོངས་མཐུན་པའི་གྲངས་ལྡན་གྱི་ལྗོངས་
Made up of fallen snow that, over many years, compresses into large, thick ice masses

HEAT TRANSFER HOPSCOTCH

The transfer of energy (heat from one object to another) is a very important factor in creating weather in the troposphere. Radiation, conduction, and convection are the three different types of heat transfer. Electromagnetic waves that travel from our Sun to Earth is radiation. Heat that travels from one object to another by direct contact is known as conduction. And finally, convection is the heating of a liquid or gas.

Instructions: In each of the boxes below, there are different examples of heat transfers. Starting at the beginning line, read each example and color with the appropriate color. Conduction-BLUE | Radiation- RED | Convection-YELLOW

Start Here

1) Making a hot air balloon rise.

2) Ironing a shirt with an iron.

3) Ice cream melting in the sun.

4) Boiling water for a cup of tea.

5) Walking across hot sand at the beach.

6) Snowball melting in your hand.

7) Steam rising off of a hot coffee.

8) Getting a burn from hot soup.

9) Snow melting as it touches a roof.

Finish Line

17) Using a flat iron to straighten your hair.

18) Heating the inside of a car.

16) Causes weather on Earth.

14) Making scrambled eggs in a skillet.

15) Getting a sunburn at the beach.

13) Warming by a bonfire.

11) Air movement in a home.

12) Cheese melting on a burger.

10) Using a microwave to heat a snack

Half-way point! Keep going!

Scientific Method Maze

Find your way through this scientific method maze by following the correct steps in the cycle from start, coloring the path as you go.

Name _____

Date _____

