5th Grade Science Enrichment Lessons

Parents, please use the plans below at your discretion to keep your child engaged with grade-appropriate content. The lessons listed are strictly reviewing skills that have already been taught in the classroom. We miss seeing our students daily and are truly ready for everything to return to normal. Until then, we will continue to provide resources for our students. Stay safe! Be well! - 5th Grade Science Teachers

How to log on to STEMscopes: Go to STEMscopes.com Click on "Log In" in the top right hand corner. Student's user ID is their **lunch number**. Their password is **learn**. Click on "Learning Resources" at the top. Click on the assigned SCOPE for the day.

Day 1	Review Standard: Photosynthesis • Go to www.stemscopes.com and read the Scope on Photosynthesis. Complete the "Try This" at the end of the page. • Watch video on photosynthesis https://www.youtube.com/watch?v=3pD68uxRLkM • Complete Photosynthesis crossword puzzle and fill in the blank paragraphs worksheet
Day 2	Review Standard: Food Webs • Go to www.stemscopes.com and read the Scope on Food Webs. Complete the "Try This" at the end of the page. • Watch video on food webs and energy pyramids https://www.youtube.com/watch?v=lUjsDHJA3I4 • Watch video on biomes http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/biomes.htm • Complete "Ecosystems Quiz" worksheet
Day 3	Review Standard: Properties of Matter • Go to www.stemscopes.com and read the Scope on Properties of Matter. Complete the "Try This" at the end of the page. • Watch video on Properties of Matter https://www.youtube.com/watch?v=YCQXDegwnoE • Watch video on Density https://www.youtube.com/watch?v=vSXTBnnx4OA • Complete "Properties of Matter" worksheet
Day 4	Review Standard: Mixtures • Go to www.stemscopes.com and read the Scope on Mixtures. Complete the "Try This" at the end of the page. • Watch song/video on mixtures https://www.youtube.com/watch?v=-3HI-7oCxgc • Complete "Mixtures and Solutions Assessment" worksheet and "Mixtures and Solutions" worksheet.

Day 5	Review Standard: **Chemical** and Physical Changes • Go to www.stemscopes.com and read the Scope on Chemical and Physical Changes. Complete the "Try This" at the end of the page. • Watch video on chemical changes https://www.youtube.com/watch?v=cY8R_DB3wal • Complete "Chemical Changes" worksheet
Day 6	Review Standard: Chemical and **Physical** Changes • Go to www.stemscopes.com and read the Scope on Chemical and Physical Changes. Complete the "Try This" at the end of the page. • Watch video on physical and chemical changes https://www.youtube.com/watch?v=gSmW8YiJWfw • Complete "Physical and Chemical Changes" worksheet
Day 7	Review Standard: Astronomy • Go to www.stemscopes.com and read the Scope on Astronomy. Complete the "Try This" at the end of the page. • Watch video on the universe http://studyjams.scholastic.com/studyjams/jams/science/solar-system/universe.htm • Watch video on stars https://www.youtube.com/watch?v=Zo-sKzMWYFA • Complete "Astronomy Review" worksheet
Day 8	Review Standard: Earth, Moon, and Sun • Go to www.stemscopes.com and read the Scope on Earth, Moon, and Sun. Complete the "Try This" at the end of the page. • Watch video on the moon https://www.youtube.com/watch?v=fW4EpHfUQvo • Watch video on seasons https://www.youtube.com/watch?v=vjNgyAOgp70 • Compete "Earth Motions & Seasons Quiz"
Day 9	Review Standard: Newton's Laws of Motion • Go to www.stemscopes.com and read the Scope on Newton's Laws of Motion. Complete the "Try This" at the end of the page. • Watch video on Newton's 1st law of motion https://www.youtube.com/watch?v=3TJZX6JY3JA • Watch video on Newton's 2nd law of motion http://studyjams.scholastic.com/studyjams/jams/science/forces-and-motion/acceleration.htm • Watch video on Newton's 3rd law of motion part 1 https://www.youtube.com/watch?v=ekUsvLlZWZQ • Watch video on Newton's 3rd law of motion part 2

	https://www.youtube.com/watch?v=9QrfY0x-qDQ • Complete "Force and Motion" worksheet and "Balanced or Unbalanced?" worksheet
Day 10	Review Standard: Human Interaction with Earth • Go to www.stemscopes.com and read the Scope on Human Interaction with Earth. Complete the "Try This" at the end of the page. • Watch video on human changes on earth https://www.youtube.com/watch?v=CyE4_D6Fb_w • Complete "Impact on the 4 spheres"

** STEMscopes also has science games students can play. Just click on the "Games" tab at the top and choose a game.

** Students may also still log on to https://www.legendsoflearning.com to play science games assigned by their teacher.

**Brainpop is giving free subscriptions to families while school is closed. Brainpop has tons of science videos as well as videos from all other content areas. Parents can sign up with the following link:

https://go.brainpop.com/COVID19?utm_source=covidhub&utm_medium=hero&utm_campaign=coronavirus&utm_content=free-access

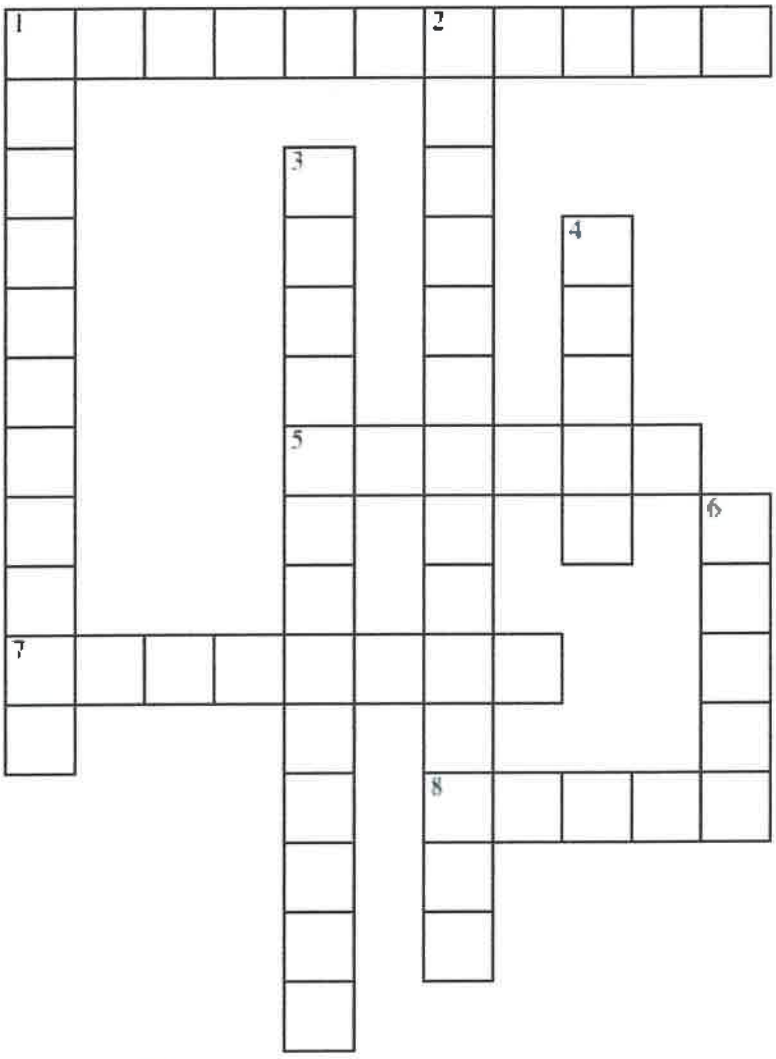
Photosynthesis

Day 1

mplete the crossword puzzle using what you know about the subject. Refer to the word bank if you need help.

Word Bank

oxygen
carbon dioxide
sugar
green
water
sunlight
chloroplast
chlorophyll
photosynthesis



Across

1. Part of a plant cell gathers light energy

5. Waste product of photosynthesis

7. Photosynthesis uses this form of energy to drive the process

8. Compound produced by photosynthesis

Down

1. Part of a plant cell that contains chlorophyll

2. Name of the entire process in which a plant produces its own food

3. One of the two compounds converted during photosynthesis; two words

4. Chlorophyll gives plant life this color

6. Other compound converted during photosynthesis; one word

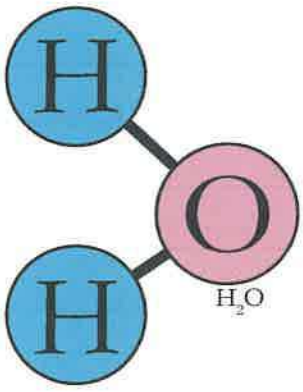
Photosynthesis

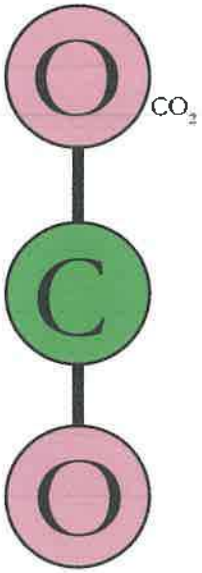
Day 1

Use the word bank below to fill in the empty spaces in the paragraph to the right.

WORD BANK

CARBON DIOXIDE
CHLOROPHYLL
GLUCOSE
FOOD
LIGHT
BREATHING
WATER





Photosynthesis is a process where plants create their own _____ using sunlight.

Plant leaves absorb red and blue _____ into their leaves, reflecting green light. This is why most plants are green in color. A chemical called _____ is found inside most plant cells. This is the substance that absorbs sunlight.

Meanwhile, plants are absorbing _____ (H_2O) through their roots and storing it within their cells. When the sunlight hits the water molecules, the water breaks apart into hydrogen and oxygen.

Plants also take _____ (CO_2) in through holes in their leaves, called stomata. This is a plant's way of _____. When the carbon dioxide combines with hydrogen, a type of sugar called _____ is formed. This is a plant's food, and it uses this energy to live and grow. The extra oxygen molecules are released back into the atmosphere.

Ecosystems Quiz

Day 2

Herbivores	Terrestrial	Consumers	Food web
Prey	Aquatic	Producers	Carnivores
Decomposers	Predators	Food chain	Omnivores

Part One: Using the word bank above, fill in the blank with the correct term.

1. Animals who cannot make their own food are _____ in the food chain.
2. Cows are typically _____, meaning they only eat plants.
3. The series of plants and animals in which each organism is a source of food for the next is known as a _____.
4. Animals that are _____ are hunted by other animals as food.
5. _____ speed up the decaying process and release nutrients back into the food chain.
6. Plants are called _____ because they are able to use light energy from the sun to produce food from carbon dioxide in the air and water.
7. If an animal eats only meat, it is known as a _____.
8. Animals that kill and hunt other animals for food are known as _____.
9. _____ ecosystems are areas such as grasslands, forests and savannas.
10. Oceans, ponds, and rivers are _____ types of ecosystems.
11. Plants and animals that are consumed by multiple organisms are part of a _____.
12. Human beings are known as _____ because they eat both meat and plants.

Part Two: Give an example of a food chain. Include at least 4 links on the food chain. If you do an illustration, make sure it is labeled.

_____

_____

_____

_____

Name: _____ Date Given: _____ Due Date: _____ Day3

Matter Part I Vocabulary

Match the following terms with their definitions.

_____1. Matter

_____2. Solid

_____3. Liquid

_____4. Gas

_____5. Mass

_____6. Volume

_____7. Density

_____8. Physical Property

_____9. Chemical Property

A. Measurement of the amount of matter in an object.

B. State of matter with definite volume but not definite shape.

C. Amount of matter contained in a given volume.

D. A characteristic that is observed when a substance reacts with another substance.

E. Amount of space an object occupies.

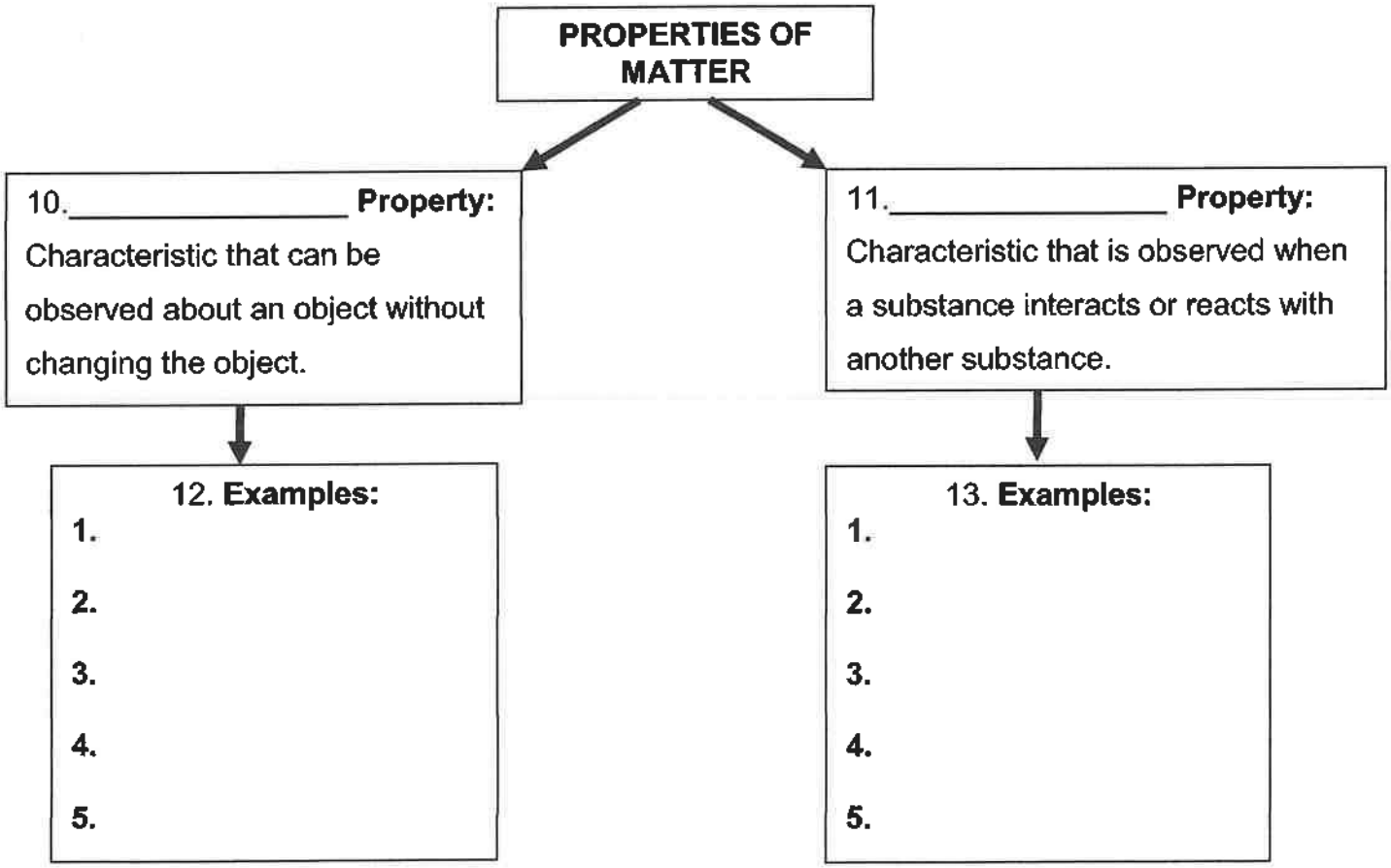
F. State of matter that does not have a definite shape of volume.

G. A characteristic of a substance that can be observed without changing the substance into anything new.

H. Anything that has mass, volume and is made of atoms.

I. State of matter with definite shape and volume.

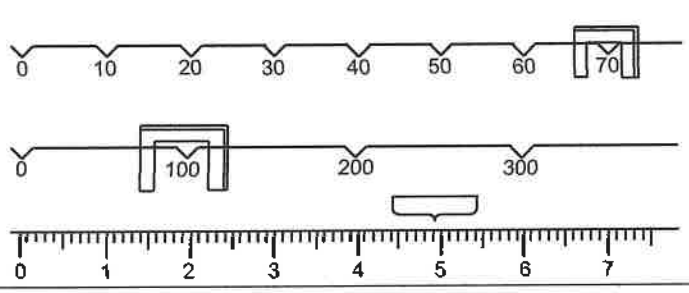
Complete the diagram below



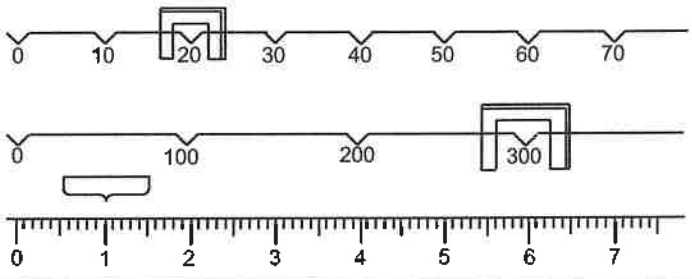
14. Draw a picture in the boxes below of the molecules in the **three states of matter.**

SOLID	LIQUID	GAS

Determine the measurements on the triple beam balance.

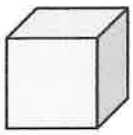
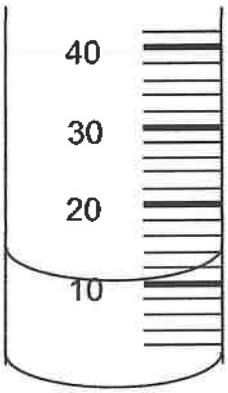
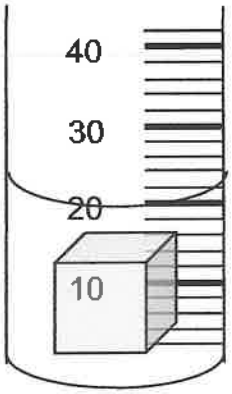


15. Triple Beam Balance Reading = _____



16. Triple Beam Balance Reading = _____

*Determine the **volume** and **density** of the objects below.*

Mass of Object	**Initial Volume**	**Final Volume**	**Volume of Object**	**Density of Object D = m/v**
17. **2 grams** 				

Name: _____ Day 4

Mixtures and Solutions Assessment

Word Bank:

Matter Mixture Solvent Solution
Physical change Solute Chemical change

1. Solutions have two parts, a _____ and a _____.

2. A combination of two or more substances that keep their identities is a _____.

3. A _____ is a mixture in which all parts are evenly mixed.

4. Creating a mixture is causing a _____.

True or False:

5. Mixtures cannot be separated physically. _____

6. A solution is always a mixture. _____

7. A cup of coffee with cream and sugar is a mixture. _____

8. Sand and water and salt and water are both solutions. _____

Real Life Examples:

9. Give two examples of solutions you see in everyday life. Explain your answer._____
_____
_____

10. Give two examples of mixtures you see in everyday life. Explain your answer._____
_____
_____

Name_____#__

Mixtures and Solutions

Day 4

MIXTURES

Mixtures are composed of two or more substances that are mixed together but can be separated from each other. Mixtures can be made from various combinations of solids, liquids, or gases. The substances in a mixture do not permanently change in the mixture, but they keep their separate properties. Some examples of mixtures are cereal with milk, trail mix, or salad.

One type of mixture is a ***solution***. Solutions are mixtures that are composed of substances that mix so completely (by dissolving) that they cannot be distinguished as separate substances. They can, however, be separated back into the separate substances. One example of a solution is a mixture of a solid that dissolves completely in a liquid, for example salt or sugar in water.

1. What are mixtures? _____

_____

_____

2. What is an example of a mixture? _____
3. The substances in a mixture keep their _____ properties.
4. What are solutions? _____

_____

_____

5. What is an example of a solution? _____

SOLUTIONS AND CONCENTRATION

Solutions are types of mixtures and they are defined by the particles in them. The substance in a solution that is in the greatest amount is the ***solvent***. It is usually the liquid. Water is a good solvent. It is sometimes called the "universal solvent" because so many things will dissolve in it. The substance in a solution that is in the least amount is the ***solute***. It is usually the solid.

The relationship of the amount of solute to solvent determines the ***concentration*** of a solution. A solution is more concentrated when there is more solute compared to the amount of solvent. In order to make a solution more concentrated, more solute is added. To make a solution less concentrated, more solvent is added.

6. Which substance in a solution is usually the least amount? _____
7. Which substance in a solution is usually the greatest amount? _____
8. What substance is known as the "universal solvent?" _____ Why is it called this? _____

_____

9. What does the word **concentration** mean in a solution? _____

_____

10. How do you make a solution **more** concentrated? _____

_____

PROCESSES TO SEPARATE A MIXTURE

Filtration is used to separate solid particles from a liquid. For example, pouring the mixture through a filter paper in a funnel will trap the solid particles and only allow the particles of the liquid to pass through. This method is used in water treatment plants as part of the process for separating dirt and other solid particles from water to produce clean drinking water.

Sifting is used to separate smaller solid particles from larger solid particles. For example, the mixture of different sized solid particles can be put into a container that has a screen material at the bottom with certain sized holes in it. When the mixture is shaken, the smaller particles go through the screen leaving the larger particles in the container. Cooks, for example, sift flour to get a small particle size for baking leaving larger particles of flour in the sifter above the screen. Sand and gravel companies, for example, separate rocks into different sized particles for road building and other construction projects using this method.

Magnetic attraction is used to separating magnetic material from a mixture of other substances. When a magnet is stirred through the mixture, it pulls out the magnetic material from the mixture. A cow magnet, for example, is given to a cow to swallow. It stays in the first stomach of the cow keeping magnetic materials like wire and other harmful materials that cows swallow from going into the rest of their digestive system.

Evaporation is used to separate a solid that has dissolved in a liquid solution. The solution is heated or left uncovered until all the liquid turns to a gas (evaporates) leaving the solid behind. Salt in salt water or ocean water, for example, is separated by heating the solution until all the water evaporates leaving the solid salt in the container.

Chromatography is used to separate and analyze the solutes in a solution. For example, a small amount (2-3 drops) of the solution is put on a piece of filter paper, which is put in a solvent.
The substances in the solution that dissolve most easily travel the furthest; and substances that do not dissolve easily do not travel very far. The bands of color that are formed allow scientists to identify the substances in the solution by comparing them to the location of known substances forming bands of color on different filter papers.

Floatation is used to separate solids that float from the remaining liquid in a mixture. The solids are stirred and when they float to the top, they are skimmed off the surface of the liquid and put into a different container. This method is used, for example, in some water purification plants.

Use the bold words from the text above to match each description.

11. _____ is used to separate and analyze the solutes in a solution. Bands of color form on filter paper to show the different substances in the solution.

12. _____ is used to separate magnetic material from a mixture of other substances.

13. _____ is used to separate solid particles from larger particles in a mixture. Filter paper is used in a funnel to trap solids so that the liquids will pass through.

14. _____ is used to separate solids that float from the remaining solids and other items that remain in a liquid mixture. The solids float to the top on their own or when stirred, and are then skimmed off the surface of the liquid.

15. _____ is used to separate smaller solid particles from larger solid particles. A mixture of different sized solids is put into a container that has a screen material at the bottom with certain sized holed in it. The smaller particles go through the screen and the larger ones do not.

16. _____ is used to separate a solid that has dissolved in a liquid solution. The solution is heated or left uncovered until the liquid turns to gas and leaved the solid behind.

Day 5

Name: _____ Date: _____

Chemical Changes Review

Q1: Read the passage again to answer the following question.

Will and Zach came home from school and were hungry. They decided to fix a snack but soon realized that they had eaten all the snacks, so now they had to cook! They found a box of white cake mix and all the ingredients. Zach cracked two eggs in the bowl. Will tore open the box of cake mix. After pouring all the ingredients in the bowl, the new mixture was stirred 50 times. Last, they poured the white cake mix into the pan.

The oven was heated up, and the boys put the cake in the oven. Will and Zach went to play video games and almost forgot about the cake until they heard the timer got off. They pulled the cake out of the oven. The cake is a golden brown. However, the edges were just a little bit burned. The burned edges made the house smell. The boys struck a match to light a candle. They did not want the house to smell bad.

After the cake cooled off, the boys cut slices of the cake to eat. The boys ate and digested the cake until they were full. Zach was thirsty so he went to the kitchen. He placed ice into his cup and poured the Sprite. Zach could not drink it at first. The Sprite always fizzes too much. They cleaned up their mess using Clorox wipes. Then, the boys took their drinks outside. After playing basketball they noticed that their drinks did not taste as good as before. The ice in their drinks had melted.

Which of the following are evidence of a chemical change?
Choose 3.

- **A** Zach cracked two eggs in the bowl.
- **B** The boys ate and digested the cake.
- **C** However, the edges were a little burned.
- **D** The boys struck a match to light a candle.
- **E** They poured the white cake mix into a pan.

Q2: Answer each Part in order.

Part A

In order for a chemical change to happen there must be changes to

(A) physical changes only

(B) chemical changes only

(C) both chemical and physical changes

Part B

Which of the following examples is a chemical change?

(A) boiling water

(B) ripping paper

(C) baking a cake

(D) cracking an egg

Part C

Which of the following would be the evidence of a chemical change for the example chosen in part B?

(A) Boiling water created steam.

(B) A cracked egg is still an egg.

(C) Baking a cake cannot be reversed.

(D) Ripping changed the size of the paper.

Q3: The diagram shows what happens when wood is burned.

Burning Wood

wood + oxygen gas = ashes + carbon dioxide gas + water

starting materials (before burning) — ending materials (after burning)

Which statement **best** explains the change that occurs when wood is burned?

(A) This is a physical change because the products can be changed back into wood.

(B) This is a physical change because the products are different from the starting materials.

(C) This is a chemical change because the products can be changed back into wood.

(D) This is a chemical change because the products are different from the starting materials.

Q4: Maggie is baking cookies. When she takes the cookies out of the oven Maggie notices that the chocolate chips have melted and the cookie is darker after it has been cooked.

The melting of the chocolate chips is a [a] change, while the cookie color being darker is a [b] change.

a.
- ◯ physical
- ◯ chemical

b.
- ◯ physical
- ◯ chemical

Q5: [a] is a creation of a solid in a liquid or inside another solid during a chemical reaction; when the reaction occurs in a liquid, the solid forms.

a.
- ◯ Chemical Property
- ◯ Production of a Gas
- ◯ Production of a precipitate
- ◯ Production of Heat or Light

Q6: a increase or decrease of heat energy in a substance; may be evidence of a new substance being formed during a chemical change.

a.
- Physical Property
- Chemical Property
- Temperature Change
- Production of Heat or Light

Q7: a sign that a new substance is being formed from a chemical change; usually seen as bubbles.

a.
- Production of Gas
- Production of Liquid
- Production of Precipitate
- Production of Heat or Light

Q8: a property that can be observed only when the matter changes as a result of a chemical reaction

(A) Physical Property

(B) Chemical Property

(C) Production of a Gas

(D) Production of a Precipitate

Day 6

Name_____Class_____Date_____

Directions:

- Read the following information about Physical and Chemical changes.
- Decide whether each substance has had a Physical or Chemical change.
- In the appropriate box, write the evidence of the change.

Physical and Chemical Changes

A **physical change** in a substance **doesn't change** what the substance is.
Physical changes include changes in **shape**, **size**, **location**, and **state of matter** (Solid, Liquid, Gas)
Paper is still paper if it is ripped in half or crumpled up. Water is still water if it is frozen.

In a **chemical change** where there is a **chemical reaction**, a new substance is formed and energy is either given off or absorbed.

Evidence of a **chemical change** includes a **change in odor** (smell), a **change in color**, the **formation of bubbles**, **light** or **heat** given off, creation of **cold**, formation of a **precipitate** (a powder that forms when two liquids are mixed together), **rotting**, and change in **composition** (paper turns to ash when burned).

Substance	Physical Change	Chemical Change
Torn Paper	**Ex: Change in size/shape**	
Spoiled Milk		**Ex: Rotting**
Baking Soda & Vinegar		
Bent Metal		
Thrown Rocks		
Alka-Seltzer Tablet in H_2O		
Burning Wood		
Sliced Apple		
Rusted Iron Nail		
Salt Dissolved in H_2O		
Frozen water		
Lit Candle		
Melted Iron		
Activated Instant Ice Pack		
Kool-Aid Dissolved in H_2O		
Lit Fluorescent Light Bulb		
Two Liquids combine and a powder forms		
Instant Hot Pack		
Lighting a Match		
Meat that smells bad		

Day 7

Name: _____ Date: _____

Astronomy Review

Q1:

Star Data

Star Name	Distance from Earth (light-years)	Distance across Star (million km)	Apparent Brightness Rank (1 = brightest)
Vega	25	4	3
Polaris	434	70	4
Arcturus	37	36	2
Sun	<1	1.4	1

Circle one word or phrase in each set of parentheses to explain a reason for the brightness data shown.

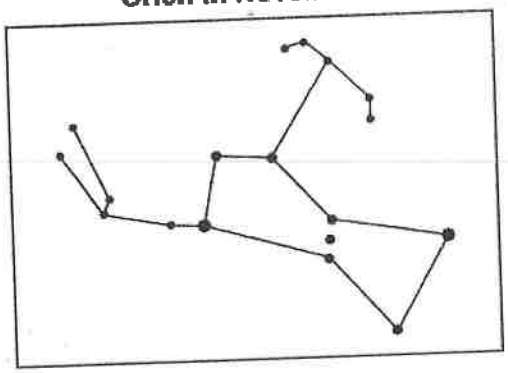
The sun appears [a] than the other stars because it is [b]

a.
- dimmer
- brighter
- Enter Value

b.
- closer to Earth
- farther from Earth
- larger
- smaller

Q2: From November to February, the constellation Orion is clearly visible in the night sky from Mississippi. Orion appears to rise from the east and set in the west. The stars do not actually move through the sky. They appear to change positions due to the Earth's movement.

Orion in November



What factor is responsible for the changes in Orion's position when viewed during the winter months?

(A) the rotation of the Sun

(B) the rotation of Earth on its axis

(C) the revolution of the Sun around the Earth

(D) the revolution of the moon around the Sun

Q3: Why does the sun appear to move across the sky?

(A) The sun orbits Earth.

(B) The Earth tilts on its axis.

(C) The sun rotates on its axis.

(D) The Earth rotates on its axis.

Q4: **From Earth, we see the sun in the day sky and other stars in the night sky. Nighttime stars look like tiny points of light.**

Which statement explains why nighttime stars appear so much smaller than the sun?

(A) The stars are much smaller.

(B) The sky is much darker at night.

(C) The stars are much farther away

(D) The moon blocks out most starlight

Q5: Match each description to the facts about revolution and rotation. Answers will only be used once in each column.

	rotation	revolution
causes day and night		
go around; orbit		
takes 1 year		
causes seasons		
spin or turn		
sun appears to move across the sky		
takes 1 day or 24 hours		

Day 8

Name _____ Date _____ Period _____

Earth Motions & Seasons Quiz

Part 1: Match the vocabulary word with the definition. Write the CAPITAL letter on the line.

_____1. Axis	A. the degree to which a planet's axis is slanted
_____2. Equinox	B. the imaginary line that goes through the north & south poles of a planet
_____3. Orbit	C. the movement of a planet around the sun resulting in the yearly cycle
_____4. Revolve	D. the movement a planet makes around its axis resulting in the day/night cycle
_____5. Rotate	E. the path a planet takes as it revolves around the sun
_____6. Solstice	F. when the sun is at its highest or lowest point in the sky causing the longest and shortest daylight hours
_____7. Tilt	G. when the sun is directly over the equator causing equal daylight and night hours

Part 2: Answer the question in complete sentences.

8.If the Earth's axis was not tilted, how would that impact seasons?

_____

_____

_____

9. Describe what seasons are like near the equator.

_____

_____

_____

10. Explain why we have a leap year.

_____

_____

_____

Name _____ Date _____ Day 9

Force and Motion

Directions: Use the words in the word bank to complete a summary about Force and Motion. Use each word only once.

speed	reference	direction	velocity	acceleration
forces	motion	position	friction	gravity

You can describe the _____ of an object by saying it is moving in a straight line or is curved around another object. You can also describe where an object is by its _____ in relation to another object. The second object acts as a _____ point. When an object changes position, you know it has motion.

Motion can also be described by finding an object's _____, or how fast or slow it moves in a certain amount of time. In addition, you can describe the object's speed AND direction together. This is called _____.

There are some ways objects in motion are affected. _____, or pushes and pulls, affect the motion of an object. _____ is a force that pulls objects down to Earth. _____ is a force that slows things down or can even make them stop.

Did you know acceleration means more than the increase of an object's speed? It also describes an object that is slowing down or changing _____. Since acceleration is a change in speed or direction, that means, _____ is a change in velocity!

Day 9

Balanced or Unbalanced?

Write the definition of net force: _____

_____

Balanced force = _____

Unbalanced force = _____

Directions: Find the net force of each problem by drawing it out and using math skills. Then, write whether the situation would cause a balanced or an unbalanced force. Explain your answer.

1. The music teacher asks you and a friend to move a piano. You pull one end with a force of 20 N and your friend pushes the other end in the same direction as you with a force of 25 N.

What is the net force of you and your friend? _____

Is this a balanced or unbalanced force? Explain how you know. _____

_____

2. Our class and Mrs. Thomas's class go up against each other in tug-of-war at field day. Our class pulls our end of the rope with a force of 100 N and Mrs. Thomas's class pulls their end of the rope with a force of 95 N.

What is the net force of the two classes? _____

Is this a balanced or unbalanced force? Explain how you know. _____

_____

3. Two dogs pull a rope in opposite directions. One dog pulls the rope with a force of 15 N and the other dog also pulls the rope with a force of 15 N.

What is the net force of the two dogs? _____

Is this a balanced or unbalanced force? Explain how you know. _____

_____

4. Miss M. asks Anna and Liv to push the laptop cart to Mr. R.'s room. Liv pulls one end of the cart with a force of 12 N and Anna pushes the other end in the same direction with a force of 14 N.

What is the net force of the two girls? _____

Is this a balanced or unbalanced force? Explain how you know. _____

_____

5. Gravity pulls a ceiling lamp to the grand with a force of 9.8 N. The ceiling pulls on the lamp in the opposite direction with a force of 9.8 N.

What is the net force of gravity and the ceiling? _____

Is this a balanced or unbalanced force? Explain how you know. _____

_____

Day 10

Impact on the 4 Spheres of Earth (CER)
Created by: *The Innovative Chic*

Background: Our Earth is divided into 4 spheres that are impacted every day by human decisions. The *biosphere* is all the living organisms while the *geosphere* includes non-living things. The *atmosphere* includes not only the air we breathe, but also the clouds. Finally, the *hydrosphere* is water including precipitation. When humans don't make conscious effort to reduce impact, it plays a toll on our earth.

Your Task: In the image above many human decisions are impacting earth's spheres. You must determine how each of the 4 spheres are being impacted and provide evidence and reasoning to support your claims. After you determine how they are impacted, you must provide reasonable solutions to reduce the human impact then reflect on what you will do to change your human footprint.

Question: How are each of earth's 4 spheres being impacted in the image provided?

CLAIM(s): *(do not explain your claim but just answer the question)*

Sphere	Claim
Atmosphere	
Hydrosphere	
Geosphere	
Biosphere	

EVIDENCE: (observations and facts)

REASONING: (the science behind your claim/evidence)

Impact on the 4 Spheres of Earth (CER)
Created by: *The Innovative Chic*

SOLUTIONS:

ISSUE	Sphere Impacted	Solution	How will it reduce the impact?

Reflection: Now that you have investigated human impact on the 4 spheres, what changes will you make to reduce your human footprint?