

Name: _____

Worksheet Completion: _____

Teacher signature

8.1 Matter Final Review

Kahoot score: _____

Teacher signature

***Each Final Review is worth 4 points on your binder grade. Each Kahoot review is worth 2 points on your binder grade. You must complete the worksheet in the amount of time allotted by your teacher to get a teacher's signature. You must actively participate on each kahoot to get a teacher's signature. If you get 8 teacher signatures before the RISE test, you will earn ice cream. For each additional signature, you will earn toppings for the ice cream.

8.1.1 Atoms

1. Fill in the diagram of an atom to the right using the word bank provided.

Word Bank

Electron

Proton

Nucleus

Neutron

Orbitals

2. Fill in the chart below with the scientist that developed each atomic theory

<u>Scientist</u>	<u>Theory</u>
	Matter is made of particles that are different sizes, shapes and masses.
	Atoms is a solid sphere that is impossible to divide or destroy.
	Plum pudding model- positive fluid with negative electrons.
	Planetary model- center of atoms is positive, negative electrons surround the nucleus.
	Energy level model- electrons are in shells.
	2 scientists- Electron cloud model. Electrons move in waves with no exact location.

3. If the protons and neutrons of Neon were the size of a softball, how far away would the closest electron be?
- a. Kmart
 - b. The Dixie Hill
 - c. The mall
 - d. Sand Hollow Reservoir

8.1.2 Properties

4. A cube of sugar has the following properties. Mark each of the properties as a Physical Property (P) or Chemical Property (C)

<u>Properties of a cube of sugar</u>	<u>Physical (P) or Chemical (C)</u>
1. Mass = 2 grams	
2. Density = 8 g/cm ³	
3. Burns when heated	
4. Shaped like a square	

5. **Circle** Which of the following are the **chemical** properties of iron?

It can melt

It can break into pieces

It can rust

It is non-flammable

It can bend

It is orange

6. Use the words from the word bank below to fill in the table identifying the property as physical or chemical?

ability to rust	density	flammable	corrodes
combustable	taste	melting point	dissolves in water
boiling point	reacts with vinegar	shine	odor
reacts to form an acid	color	reacts with oxygen	hardness
reacts with water to form a gas	reacts with baking powder		

Physical Property	Chemical Property
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

7. List **3 Physical Properties** of a Tennis Ball.

8. Suppose you place several ice cubes in a glass of water. Describe at least two **physical** changes that might occur over a period of time.

8.1.3 Changes

9. List the **4** keys to identify a **chemical change**.

- 1-
- 2-
- 3-
- 4-

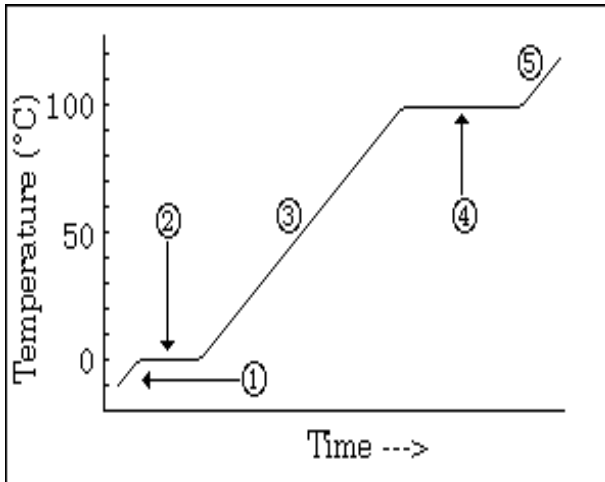
10. **Circle** all examples of common **chemical reactions**

- a. Evaporation
- b. Combustion
- c. Rust
- d. Photosynthesis
- e. Respiration
- f. Condensation

8.1.5 Particle Motion

11. Why does a liquid change to gas when heated?

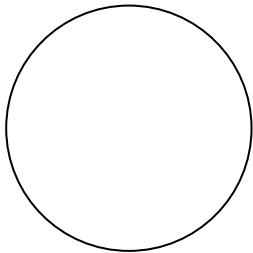
12. The diagram below is a plot of temperature vs. time. It represents the heating of what is initially ice at a near constant rate of heat transfer. Using the numbers on the graph, fill in the chart below.



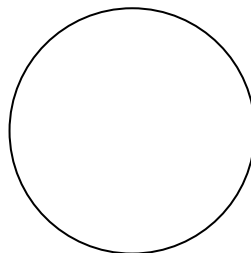
	Phase or PHASES (Solid, Liquid, Gas) There may be more than one	Phase Change (Freezing, Boiling, NONE) There may not be one
1		
2		
3		
4		
5		

13. Draw a diagram of each phase:

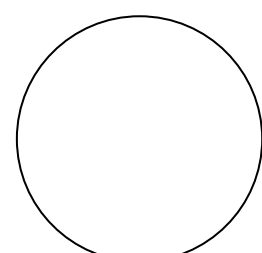
Gas



Liquid

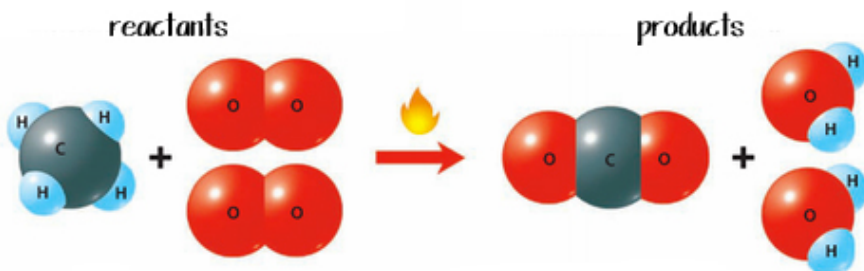


Solid



8.1.6 Conservation of Mass

Use the picture below to answer questions 12-14 :



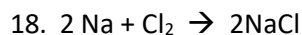
14. How many Oxygen (O) ATOMS are in the reactants? _____ products? _____

15. How many Hydrogen (H) ATOMS are in the reactants? _____ products? _____

16. How many Carbon (C) ATOMS are in the reactants? _____ products? _____

17. The **reactants** of Respiration have 6 Carbons, 12 Hydrogen and 18 Oxygens. How many atoms of Carbons, Hydrogens and Oxygens should the **product** of Respiration have? Explain the reasoning for your answer.

Identify the reactants and products in the following examples. Hint: Reactants → Products



Reactants: _____

Products: _____

19. When baking soda and vinegar are added together, water, carbon dioxide and salt are formed.

Reactants: _____

Products: _____

Solve each of the following... remember the law of conservation of mass: Mass of reactants=Mass of products

20. A 10.0 g sample of magnesium reacts with oxygen to form 16.6 g of magnesium oxide. How many grams of oxygen reacted?

21. From a laboratory process designed to separate water into hydrogen and oxygen gas, a student collected 10.0 g of hydrogen and 79.4 g of oxygen. How much water was originally involved in the process?

8.1.7 Heat Transfer

Match the definition to the correct term by drawing a line across the paper.

22. Convection

A material through which an electric current can pass.

23. Conduction

The transfer of heat through a gas or liquid in a current.

24. Radiation

The transfer of heat without direct contact. Can travel through space.

25. Insulator

The transfer of heat through direct contact.

26. Conductor

Any material that limits the movement of heat.

27. Fill in the boxes on the picture to the right, with the correct type of heat transfer.

Choose from the following:

Convection, Conduction, Radiation

