Name: _____ Matter Study Guide

Quiz date:_____ Parent signature:_____

Sources to help you study:

- Matter packet
- Vocabulary cards
- Textbook p. 412 -415; p. 422-426;p. 446-451

I.Vocabulary – Use your packet, text, and or vocabulary cards to help you with the words. The assessment will have a fill in the blank with a word bank.

Matter- anything that has mass and takes up space

Property- a characteristic that you can observe such as color, shape, or size

Mass- amount of matter that makes up an object

Volume- how much space an object takes up

Buoyancy – upward force of a liquid or gas on an object

Solid – state of matter with a definite shape, mass, and volume; particles are packed tightly together

Liquid- state of matter that does not have a definite shape, but does have definite mass and volume; particles are less tightly packed

Gas- state of matter that does not have a definite shape or volume; particles move around freely and apart

Metric system- based on the units of ten; prefixes – kilo-, centi-, milli-

Area- describes the number of unit squares that cover a surface (l x w)

Weight- measures the amount of gravity between an object and a planet, such as earth

Density – mass of the matter in the given space; amount of mass in a unit of volume

Gravity – force of attraction that pulls between all objects

Physical change – begins and ends with the same type of matter; change of state

Chemical change – produces new matter with different properties from the original

Change of state – a physical change from one state of matter to another because of a change in energy

Evaporation- a change of a liquid into a gas without boiling

Measuring Matter–Complete the chart below.(use p. 422-426)

Measurement of matter	What does it mean?	How is it measured?	How is it Recorded? (What units?)	Example of real life measure-ment
Area	It describes the number of unit squares that cover an object	Length x width	Unit squares – Cm^2 ft^2	Block; yard; area of a room; floor, etc.
Volume	The number of cubes that fit inside an object	Length x width x height Graduated cylinder for liquid	Cubic units Cm^3 ft^3	Liquid; solid
Density	The amount of matter in a given space	Mass ÷ volume	$\frac{grams}{Cm^3}$	Density of liquids; solids – cubes; lemon; lime
Buoyancy	The upward force of a liquid or gas on an object	Floats or sinks		Wood – good buoyancy; cork

Mass	The amount of matter making up an object	balance	Grams or kilograms	Mass vs. weight experiment
Weight	The measure of the pull of gravity between the object and earth	scale	Ounces or pounds; newtons	Person; luggage; baseball bat

Chemical and physical changes – Complete the chart below.

Type of change	Definition	Evidence	Real-life examples
Physical Change	Begins and ends with the same type of matter – same substance; changes caused by heating and cooling	Change in state Liquid → gas Gas → liquid "looks different"	Water Melting chocolate Magma-rock Folding paper
Chemical Change	Begins with one kind of matter and ends with another – new matter is formed	Change is permanent – can't change back; light or heat is given off; bubbles; change in color; change	Tarnish Rust Digestion Baking Burning

		in smell	

Change of State (p.448- 449)

What happens when you add energy to a solid? The particles move faster, and this can change it from a solid to a liquid – melting.

What happens when you add energy to a liquid?

It will boil, changing it from a liquid to a gas.

What happens when you take away energy? The particles will move more slowly and condense, changing states again:

Gas → liquid or liquid → solid