Chapter 2 - Review

1. What is matter?
    - Anything that has mass and volume.
2. How can you measure matter? (Hint: tools)
    - (Look at your foldable) beaker, graduated cylinder, ruler, spring scale, 3 beam balance
3. What are the SI units used to measure matter?
    - Grams, meters, liters
4. List the differences between mass and weight.
    - (Look at the Venn diagram in your notebook) The biggest difference is that mass measures the amount of atoms/molecules & weight measures how much force pushes down on those atoms/molecules.
5. What effects inertia?
    - Mass is a measure of inertia, so MASS effects the amount of inertia an object has. (Which has more inertia? A bowling ball or a marble? A: A bowling ball because it has more mass.)
6. What 2 factors affect gravitational force?
    - Mass and distance
7. Name the two different types of properties.
    - Physical and Chemical
8. Describe physical and chemical properties.
    - Physical properties tell how an element or matter can change the way it looks.
    - Chemical properties tell how an element or matter can change to something completely new.
9. List examples of physical and chemical properties.
    - Physical properties are density, conductivity, state of matter, malleability, ductility, solubility, mass
    - Chemical Properties are flammability, reactivity, oxidation, combustibility
10. What are characteristic properties?
    - Characteristic properties are properties that can only describe that one element/matter. These properties are completely unique to that material. Examples: density, boiling point, melting point, mass
11. How do you find the density of an object?
    - Mass / volume = density
12. What are the two different types of changes?
    - Physical and chemical

13. Describe the two types of changes.
    - Physical changes are changes that the element or matter are doing right now that only changes the way the element/matter looks.
    - Chemical changes are changes that the element or matter is doing right now that change the element/matter into something entirely new.
14. Give examples of the two types of changes.
    - Physical changes are tearing/cutting paper, freezing, sanding, crushing, bending, mixing
    - Chemical changes are burning, reacting, oxidizing
15. What are some clues to changes?
    - An odor is produced, a hot gas is formed, bubbles, color change, sound is created, light is created, heat is created.
16. What is the difference between changes and properties?
    - A change is what the matter is doing right now. It is changing.
    - A property is what the matter can change into.

Chapter 3 – Review

1. List the 4 states of matter.
    - Solid, liquid, gas, plasma
2. Describe each state.
    - Solid – atoms/molecules vibrates in place, very rigid and has a definite shape and volume.
    - Liquid – atoms/molecules slides or flows past one another and has a definite volume, but NO definite shape.
    - Gas- atoms/molecules are moving very rapidly all over and it has NO definite shape or volume.
    - Plasma – does have the most energy, and is often described the same has gas. Students should know plasma exits and its examples, but that is all.
3. Give an example of each state.
    - Solid – ice, desk
    - Liquid – water, soda
    - Gas – water vapor, helium
    - Plasma – fluorescent lights, lightning, Northern/Southern lights
4. What is matter made of?
    - Atoms and molecules
5. How does energy change when the state of matter changes?

- When the energy goes up the state of matter changes to the one with that amount of energy. Example: You give an ice cube energy then it changes to a liquid. You give a liquid energy, then it goes to a gas.

6. List differences between temperature and heat.
    - Temperature measures the speed of atoms/molecules, but heat just tells you that energy is transferring from one substance to another. Temperature will always be measured with a number.
7. What are the changes in state?
    - Condensation, vaporization, melting, freezing, sublimation
8. Describe each change of state and give an example.
    - Condensation – water on mirror in bathroom after a shower.
    - Vaporization - 1) boiling – boiling a liquid on the stove. It occurs throughout the entire liquid. 2) Evaporation – evaporating water puddles outside. It occurs on the surface of a liquid.