**Name: Date: 10/21/14**

**Review Day - Chemistry:**

**Vocabulary to Know: (Don’t need to define)**

Metal Valence Electrons Specific Heat Ion Molecule

Element Compound Mixture Solution Electron

Proton Neutron Physical Change Chemical Change Atomic Mass

Atomic Number Density Phase Change Matter Mass

Malleable Ductile Solute Solvent Endothermic

Exothermic Law of Conservation of Mass Product Reactant Precipitate

1. How can you tell if a chemical change has occurred?

2. What are some examples of physical changes?

3. If you were given a periodic table, how can you find the number of protons and electrons? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. What is the relationship between specific heat and how fast something heats up? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. If I create something brand new after a reaction has occurred, am I a physical or a chemical change? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. How will you know when it is a physical change?

7. Draw a diagram that shows what the particles of a solid, liquid and gas look like:

Solid

Liquid

Gas

8. What would happen to these particles if you heated them up?

9. What is a valence electron? Why is it important?

10. What are the 5 phase changes that we discussed in class? , , , , ,

11. In the space below **draw and label** a diagram of an atom.

12. Why is water considered to be the universal solvent?

13. What is the mathematical equation to find density?

14. If an object has a mass of 64g and a volume of 8mL, what is its density?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 31  Ga  Gallium  69.723 | 32  Ge  Germanium  72.61 | 33  As  Arsenic  74.922 | 34  Se  Selenium  78.96 | 35  Br  Bromine  79.904 |

15. How many fewer protons does Germanium have than Bromine?

16. What is the chemical symbol for Gallium? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. What is mass of one atom of Bromine? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18. Which of the elements above has the fewest neutrons?

19. How many electrons does Arsenic have? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. What is the nickname given to all of the elements in Group 1?

21. What do we need to know about Group 1:

22. What is the nickname given to all of the elements in Group 2?

23. What is the nickname given to all of the elements in Group 17?

24. What do we need to know about Group 17?

25. What is the nickname given to all of the elements in Group 18?

26. What do we need to know about Group 18?:

How many valence electrons are in the following groups?:

27. Group 1:

28. Group 2:

29. Group 17:

30. Group 18:

31. Why are the Noble Gases (Group 18) so unreactive?

32. What is the difference between physical and chemical changes. Give an example of each! \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

33. Contrast solute, solvent and solution.

34. In order to form ions, what number of valence electrons do we need to have?

Fill in the chart below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Element | Atomic Mass | Protons | Neutrons | Electrons |
| Tellurium |  |  |  |  |
| Sulfur |  |  |  |  |
| Oxygen |  |  |  |  |
| Hydrogen |  |  |  |  |

35. Explains what happens when you go across a period and what happens when you go down a group.

36. Contrast an element, a compound and a mixture.

37. What is the difference between a heterogeneous and a homogeneous mixture?

38. What is another name for a homogeneous mixture?

39. What is special about the elements in a group?

40. Draw a particle diagram for an element, a compound and a mixture of elements and compounds.

Element Compound Mixture

41. What are some characteristics of metals?

42. How do nonmetals compare to metals?

43. How do you calculate the atomic mass of an atom?

44. What are the three states of matter?

45. If you are traveling between any of the three states of matter, what kind of a change would it be and why?