**Matter and Chemical Change Jeopardy**

**Elements**

200

400

600

800

1000

1200

1400

**Compounds**

200

400

600

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1000

**Chemical Reactions**

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1200

**Mixtures**

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**Elements**

200—The symbol for tin. (What is Sn?)

400—This is the name and charge for the subatomic particles.

(What is an electron which is negative, a proton which is positive and a neutron which is neutral?)

600—This is the name of the chemical family that is highly reactive-these elements gain one electron in a chemical reaction. (What is halogens?)

800—This is the atomic number of lithium. (What is 3?)

1000—The atomic number of potassium is 19 and the atomic mass is 39. The number of neutrons is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (What is 20?)

1200—Draw a Bohr model for Oxygen.

(2 electrons on inner shell and 6 electrons on second shell)

1400—These are 4 properties of metals.

(What is they are malleable, ductile, conduct heat, conduct electricity, donate electrons in a chemical reaction, all solids at room temperature except mercury?)

**Compounds**

200—This is the formula for diphosphorus tetrahydride. (What is P2H4?)

400—Magnesium loses two electrons in a chemical reaction and chlorine gains one electron in a chemical reaction. This is a dot diagram for magnesium chloride.

600—This is the name for CaCl2 (What is calcium chloride?)

800—This is the common name for vinegar. (What is acetic acid?)

1000—These are 6 differences between ionic and molecular compounds. (What is ionic compounds: formed between a metal and a non-metal, ionize in solution, conduct electricity in solution, all solids at room temperature, no prefixes in name, high melting and boiling points, strong bonds between molecules, elements gain or lose electrons to form compound?)

**Chemical and Physical Change**

200—This is an example of a physical change.

400—This is an example of a chemical change.

600—Nitrogen monoxide is formed when nitrogen and oxygen react inside an internal combustion engine. These are the reactants, products and word equation for this reaction.

(What is the reaction with the reactants nitrogen and oxygen and the product nitrogen monoxide? The word equations is nitrogen + oxygen nitrogen monoxide.)

800—These are 5 ways to increase the rate of a reaction.

(What is increase the concentration, increase the temperature, increase the surface area, agitate the chemicals, use a catalyst?)

1000— These are 7 indicators of a chemical change.

(What are: colour change, heat given off, heat taken in, light given off, reactants used up, irreversible, something with totally different properties/new substance produced, gas created, a precipitate formed?)

1200—This is the classification and balanced equation for the following reaction:

\_\_\_\_NO2(g) + \_\_\_ O2(g) \_\_\_NO3(g) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(What is 2NO2(g) + O2(g) 2NO3(g) synthesis?)

**Mixtures**

200—These are the two major divisions of mixtures.

(What are heterogeneous and homogenous mixtures?)

400—This is the purpose of an emulsifying agent.

(What is to keep an emulsion/colloid mixed together to prevent separation?)

600—These are the names and an example for each type of mixture.

(What is an ordinary mechanical mixture-a chocolate chip cookie, a suspension-dirt and water, a colloid-hair gel, a solution-salt and water?)

800—This is how you can tell the difference between a solution and a colloid.

(What is the purpose of shining a light through the samples to see whether or not it scatters?)

1000—Draw a flow chart to show the classification of matter.