Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Element Project Rubric **Due Date**\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 1: Element Research Project**

The following is a rubric for your element research project. It is a list of the items needed for your project and how many points each item is worth. Please refer to it often when completing your project. The method by which you will relay the information required will vary according to your presentation choice. You will be able to choose any element you wish to research, however you will find that certain elements have more information than others.

Project Format choices:
1. Newsletter 2. Flyer 3. Brochure/Pamphlet 4. One page information paper

\_\_\_\_\_ (2pts) element name

\_\_\_\_\_ (2pts) atomic number

\_\_\_\_\_ (2pts) atomic symbol

\_\_\_\_\_ (2pts) atomic mass (with units amu)

\_\_\_\_\_ (4pts) number of protons, neutrons, and electrons

\_\_\_\_\_ (2pts) electron configuration

\_\_\_\_\_ (2pts) when it was discovered/ first produced

\_\_\_\_\_ (2pts) who discovered/ who produced

\_\_\_\_\_ (2pts) uses for the element/ where it can be found

\_\_\_\_\_ (8pts) 4 physical descriptions: metal, non-metal, metalloid, color, texture, state of matter at room temperature, density, melting point, boiling point

\_\_\_\_\_ (10pts) how it is used- AT LEAST 5 common uses

\_\_\_\_\_ (2pts) valence electrons (electrons in the outermost shell- available for bonding)

\_\_\_\_\_ (2pts) period/ group

\_\_\_\_\_ (3pts) Pictures or drawings of element- visual aids to enhance project (at least 3)

\_\_\_\_\_ (3pts) Neatness/spelling and color/creativity

\_\_\_\_\_ (2pts) List of sources. For example books, websites, magazines, etc. (can be on separate sheet or incorporated into information sheet). Must cite sources for all images and pictures. Sources must be specific… google images or Wikipedia.com are NOT specific sources. Copy and paste complete URL’s

\_\_\_\_\_\_\_\_\_ Comments:
 **50 pts**

**Part II: Build an Atomic Model**

Your next task will be to make a model of an atom. Since atoms are hard to visualize, building a model will help us understand the behavior of atoms, Your model will be based on the Bohr model of the atom. Although the Bohr model is outdated, it still reinforces the concept that electrons are located on the various energy levels. (Modern atomic theory stats that electron regions have complex shapes, therefore it is not feasible to build an atom model based on modern atomic theory)

Your atom model should be 3-dimensional and include protons, newtrons, and electrons in the appropriate locations.

Your project does not have to be an expensive one. There should be several building materials you can find for free around your house that can be repurposed for your project. Be creative! You will be really surprised what you can find when you look through the various rooms in your house.

 -Edible projects are welcome as long as the food is non-perishable; this is not a mold experiment!

 -Please check with your parents for approval before nabbing materials from around your House!

 -Maximum dimensions: 3ft x 3ft ( I have to fit all the projects in the classroom)

Below is the rubric for your model. Refer to it often when building your model:

\_\_\_\_\_ (5pts) correct number of protons

\_\_\_\_\_ (3pts) correct placement of protons

\_\_\_\_\_ (5pts) correct number of neutrons

\_\_\_\_\_ (3pts) correct placement of neutrons

\_\_\_\_\_ (5pts) correct number of electrons

\_\_\_\_\_ (6pts) correct placement of electrons, including the correct energy levels

\_\_\_\_\_ (3pts) Relative size of particles (protons and neutrons are the same size and electrons are smaller)

\_\_\_\_\_ (3pts) Key- identifying each particle and number of each particle

\_\_\_\_\_ (10pts) Craftsmanship—project is structurally sound and will not easily fall apart or lose pieces; is attached to a base/stand or can be hung up

\_\_\_\_\_ (7pts) Creativity- well-chosen materials, color, uniqueness

\_\_\_\_\_\_\_\_\_ Comments:
 **50pts**