atom model project

Objective: Construct a three-dimensional model of an atom and complete a fact sheet about your element.

1. Choose any element with an atomic number between 1 - 20.

My element is: _____

2. Draw a diagram, on a piece of paper, of your atom including the amount of protons, neutrons and electrons in the correct shells. You should have the element name, element symbol, atomic number and atomic mass on your paper. Add a list of materials that you plan on using to create your atom model. This rough draft will count as a separate lab grade, and we will work on it in class.

- Nucleus: You will need to have the correct number of protons and neutrons in the nucleus. <u>The protons and neutrons should be the same size but larger than the electrons.</u> The protons and neutrons should be different colors.

- Electrons: The electrons should be a different color than the protons and neutrons and also smaller in size. The correct number of electrons should be in each energy level (or ring).

3. Be creative when choosing what materials to use. Some ideas:

- For the electrons, protons and neutrons: Balls (tennis, ping pong, Styrofoam, cotton balls), pom-poms, gumdrops, jellybeans, balloons, pinecones, acorns, cookies.

- For the rings: wire hanger, pipe cleaners, electrical wire, Styrofoam, cardboard, hula hoops, thin branches. *(PLEASE NOTE: Spray paint and some glues may eat away and melt Styrofoam!)*

4. <u>Construct your model.</u> It should be unique, colorful, and attractive. Put the model together with care and quality! The model is worth half of your project grade. <u>Make sure to attach and index card to your project that lists your name, element name, atomic number, and color of protons, neutrons, and electrons.</u>

✦✦*If you are having trouble getting the supplies, please speak to Mrs. Hall* ***<u>well before</u>*** *the due date.* ✦✦

5. Complete a fact sheet about your model. You will have time in class to work on this part of your project, but some research may need to be done on your own at home or in the library after school. This fact sheet is worth half of your project grade.

Visit <u>ttmshall.weebly.com</u> and click on the Atom Model link for ideas to help you complete your fact sheet and pictures of past projects.

Your final project is due on <u>WEDNESDAY, JANUARY 27, 2016</u>

Student signature: _____

Parent signature: _____

atom model project grade sheet

Name: _____

Element: _____

Model = 50 points

Protons + 15 _____

❍ Correct number ❍ Correct position/location ❍ Correct size

Neutrons + 15 _____

❍ Correct number ❍ Correct position/location ❍ Correct size

Electrons + 15 _____

❍ Correct number ❍ Correct position/location ❍ Correct size

Correct number of rings + 5 _____

Fact Sheet = 50 points

Basic Information (2 points each) + 24 _____

❍ Name	❍ Symbol	❍ Atomic #
❍ Atomic Mass	❍ Protons	❍ Neutrons
❍ Electrons	❍ Melting Point	❍ Boiling Point
❍ Normal Phase	❍ Discoverer	❍ Date Discovered

Other Information (3 points each) + 18 _____

❍ ❍ ❍ ❍ ❍ ❍ Interesting Information/Uses

Miscellaneous + 8 _____

Complete sentences, correct spelling, neat

Total Points = _____ out of 100 = _____%

A B+ B C+ C D+ D F