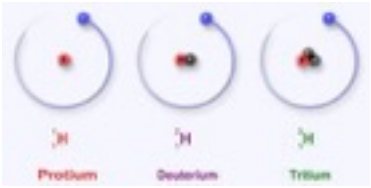
Pennium Isotope Lab

Name:_____
Period: _____ Date: _____

Enduring Understanding:
a. Atoms are composed of protons, neutrons, and electrons. Protons and neutrons are found in the nucleus of the atom. Electrons are able to leave the atom.
b. Atoms are composed of specific combinations of protons, neutrons, and electrons; different atoms have a different combinations. Isotopes of the same atom will have the same number of protons but will vary by the number of neutrons.
c. Atomic mass is a calculation of the weighted average of all known isotopes.

Isotopes . . .



Atoms of the same element can have different numbers of neutrons; the different possible versions of each element are called **isotopes**. For example, the most common isotope of hydrogen has no neutrons at all; there's also a hydrogen isotope called **deuterium**, with one neutron, and another, **tritium**, with two neutrons.

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Pennium (Pn) Isotope

1. You will calculate the "atomic mass" of the "element" Pennium.
2. You will determine the percent abundance of the two Pennium isotopes.

Procedure:

1. Develop a procedure for calculating the atomic mass of the two isotopes of Pn.
2. Create a data table that follows your procedure and includes **key numbers** used in your calculations.
3. Show all of your work.

Post Lab Questions:

1. Write the symbolic representation of the two isotopes of Pennium (Pn). Atomic number = 3

2. Calculate the number of protons, neutrons, and electrons of the two isotopes.

3. Explain why the weighted atomic mass of the element Pennium (Pn) is not equal to one of its individual isotopes.

4. Gather the average atomic mass data from the two other lab groups. Explain the differences between your data and the data obtained by other groups.

5. Why are the atomic masses on the periodic table not expressed as whole numbers like the mass number of an element?