

Name _____

Element Builder

1. How many protons, neutrons, and electrons are in an atom of hydrogen?

Protons: _____ Electrons: _____

Neutrons: _____

2. Build an atom of hydrogen.

3. What do you need to change to build an atom of helium?

4. Build an atom of helium.

5. Add one more proton. What element have you created? _____

6. Add one more electron. Where did it go? _____

7. Build an atom of carbon-12.

8. Build an atom of carbon-14. What did you do to change your original carbon atom?

9. The gizmo tells you that carbon-14 is radioactive. What do you need to change to make your atom stable (not radioactive)?

10. Build an atom of neon. How many protons, neutrons, and electrons do you need?

Protons: _____ Electrons: _____

Neutrons: _____

11. Build a stable atom of Al. How many protons, neutrons, and electrons do you need?

Protons: _____ Electrons: _____

Neutrons: _____

Closing Questions

1. How do you know how many protons, neutrons, and electrons go with each atom?
2. What is an isotope?
3. How many protons, neutrons, and electrons are in an atom with the atomic number of 44?
What is this element?
4. What happens when you have an unequal number of protons and electrons (you may want to try this out with the gizmo)?
5. How many electrons can fit in the first orbital? the second?
6. Look on your periodic table – how many protons, neutrons and electrons are in an atom of molybdenum (Mo)?
7. Name one thing that you know now that you did not know before you came into class today.