

## Atoms

All elements are made of atoms.

Complete all short answers in complete sentences. Include a minimum of three sentences per answer.

1. Why did atomic theory change from Dalton's to the Modern Atomic Theory?

2. Describe the discovery of the electron.

3. Describe the discovery of the nucleus.

4. Fill out the following chart:

	Charge	Mass Number	Relative Mass	Actual Mass
Proton				
Neutron				
Electron				

5. Although opposite charges typically \_\_\_\_\_, protons have a high attraction when they are

\_\_\_\_\_.

6. Compare the three subatomic particles (electrons, protons, neutrons) in terms of their ranking of mass, charge, and location within the atom.
7. Atoms of the same element have \_\_\_\_\_ protons.
8. How does an element change its number of neutrons?
9. Isotopes vary greatly in chemical behavior. (True or False)
10. Describe the two ways to write isotopes.
11. #Protons + #Neutrons = \_\_\_\_\_
12. #Protons = \_\_\_\_\_ = \_\_\_\_\_
13. Atomic# - #Protons = \_\_\_\_\_

14. Why is the AMU used?

15. How does Atomic Mass, Average Atomic Mass, and Molar Mass relate to each other?

16. Why is the unit of mole used?

17. What is Avogadro's Number?