

Basic Atomic Structure and the Periodic Table

Atomic Structure:

1. What are the 3 large subatomic particles that make up atoms?
2. The neutrons and the protons in the nucleus are held together by a force called the nuclear strong force. Electrons are not held near the nucleus by the strong force. What force holds the electrons near the nucleus?
3. What are the relative sizes of neutrons, protons and electrons?
4. Do protons and neutrons have the same charge?
5. Atoms of all of the elements do not have an overall charge. What does this say about the relative sizes of the charges on the subatomic particles? Why?
6. Do isotopes of an element have differing charges?

The Periodic Table:

1. How are elements ordered in the periodic table and how does this relate to the atomic structure of the elements?
2. What property of atomic structure gives rise to the change in atomic radii seen when going from left to right across the periodic table?
3. Does the trend mentioned in question 2 make sense when you consider the increase in masses of the elements when going from left to right across the periodic table? Why?
4. What column of the periodic table contains highly reactive metals?
5. Which column contains very unreactive gases?
6. What determines the reactivity of each of these groups?

