

## Physical Science Study Guide – Elements and the Periodic Table

Can you:

- Describe the size and mass of the nucleus?
- Tell the charge of the nucleus?
- Describe electrons?
- Explain where electrons are found in atoms?
- Describe energy levels in atoms?
- Explain what the atomic mass/weight represents?
- Explain what the atomic number represents?
- Identify the person who devised the periodic table?
- Explain how elements are arranged in the table?
- Read the periodic table?
- Define isotopes?
- Describe valence electrons, and how they are related to reactivity?
- Compare and contrast periods and groups of the modern periodic table?
- Name and identify the groups of the periodic table?
- Explain how reactivity changes within a group on the periodic table?
- List the general properties of metals?
- Explain why alkali metals are so reactive?
- List the properties of alkali metals?
- Identify the nonmetals class of elements on the periodic table?
- List the properties of nonmetals?
- Explain why nonmetals vary in their reactivity and cannot conduct electricity?
- List the properties of metalloids?
- Explain why some metalloids react like metals and others react like nonmetals?
- Identify the element that is the “basis of life?”
- Identify the most abundant element in the earth’s crust?
- Identify the element that makes up 78% of our atmosphere?
- List the properties of halogens?
- List the properties of noble gases?
- Explain the non-reactivity of noble gases and how it is related to the octet rule?