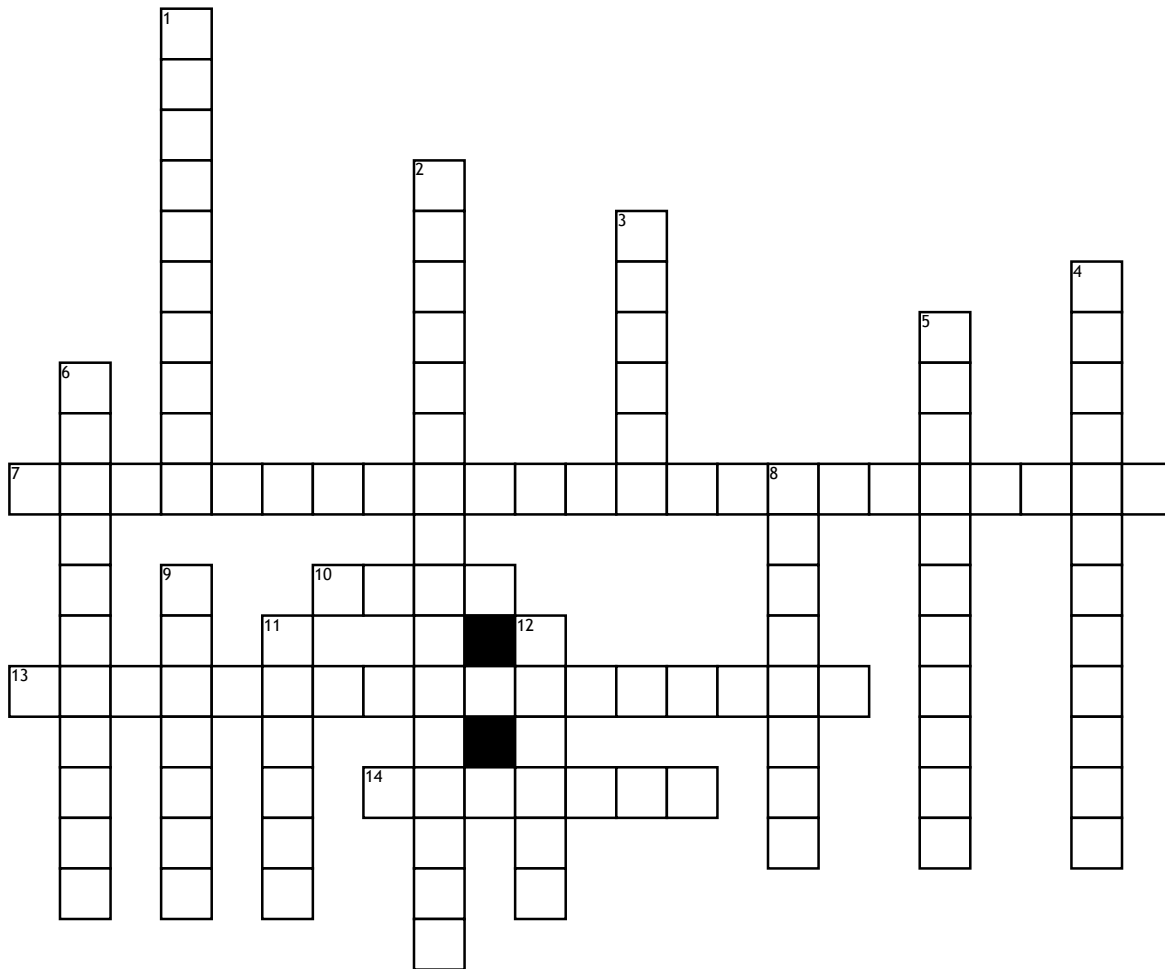


# Elements and the Periodic Table



## Across

**7.** A table in which all the known elements are arranged by properties and are represented by one or two letters, referred to as chemical symbols

**10.** The smallest particle of an element maintaining the chemical identity of that element

**13.** The tendency of an atom or group of atoms to attract electrons.

**14.** A subatomic particle of the nucleus of an atom that is without charge and contributes to the mass of an atom.

## Down

**1.** The radius of atom's ion; the radius tends to increase when an electron is gained and decrease when an electron is lost.

**2.** The energy required to remove one electron from a neutral atom of an element in the gaseous state.

**3.** Designated negative, positive, or neutral (without charge) that is found on the subatomic particles that make up all atoms.

**4.** Protons, neutrons, and electrons

**5.** The distance between the nucleus of an atom to the outermost electron orbital, usually measured in picometers or angstroms.

**6.** Volume of space where electrons are found in an atom

**8.** A negatively-charged subatomic particle of the electron cloud; involved in the formation of chemical bonds.

**9.** The tiny, very dense, positively-charged region in the center of an atom; made up of protons and neutrons.

**11.** A positively-charged subatomic particle of the nucleus of an atom and contributes to the mass of the atom

**12.** Anything that has mass and volume