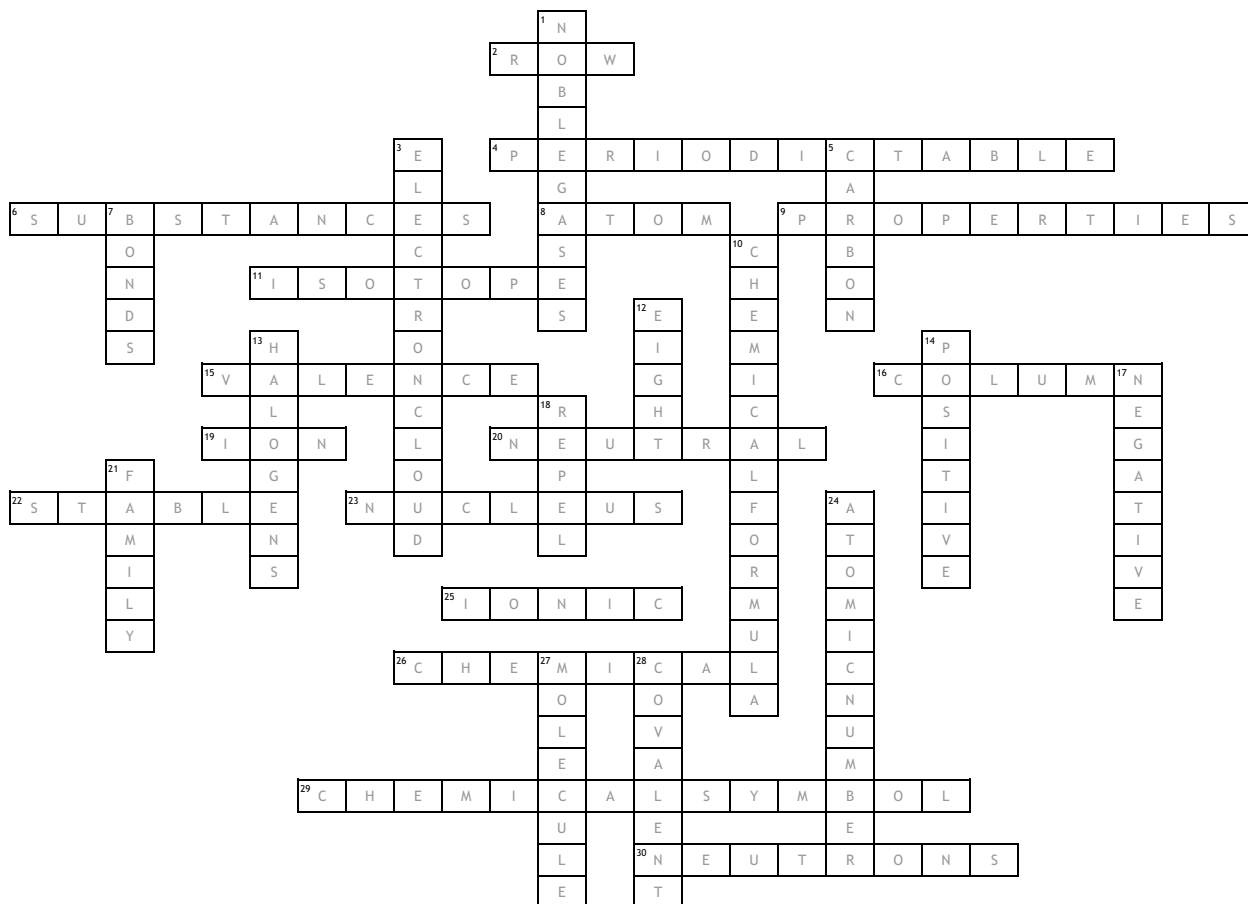


# Atomic Structure and the Periodic Table



## Across

- Each \_\_\_\_\_ on the Periodic Table represents the number of "energy levels" an element has.
- The elements are organized into this grid.
- When elements react they form new \_\_\_\_\_.
- The smallest unit of matter with all the properties of that substance.
- Characteristics that are measurable or observable are called physical \_\_\_\_\_.
- An element that can have a variable number of neutrons in its nucleus.
- The "outer energy shell" of an atom
- Each \_\_\_\_\_ on the periodic table represents the number of valence electrons in an element.
- A charged particle.
- A neutron has a \_\_\_\_\_ charge.
- Atoms with full outer energy shells are known to be \_\_\_\_\_.
- The center of an atom where the protons and neutrons are located.
- Electrons are "stolen" in this type of bond.
- Reactivity is a \_\_\_\_\_ property.
- An abbreviated way to name an element.
- Subtract the atomic number from the atomic mass to find the number of \_\_\_\_\_.

## Down

- A "Family" of elements that do not typically react with other elements.
- The location around the nucleus where electrons orbit.
- This element is found in all organic matter and has four valence electrons.
- The "electronic connections" between elements in a molecule.
- NaCl is the \_\_\_\_\_ for salt.
- Other than hydrogen and helium, the number of electrons needed to fill the valence shell.
- The "Family" of elements that are very reactive.
- Protons have a \_\_\_\_\_ charge.
- Electrons have a \_\_\_\_\_ charge.
- "Like" electric charges \_\_\_\_\_ each other.
- A group of elements with similar properties are known as a \_\_\_\_\_.
- This matches the number of protons in an atom.
- A combination of one or more atoms.
- Electrons are "shared" in this type of bond.