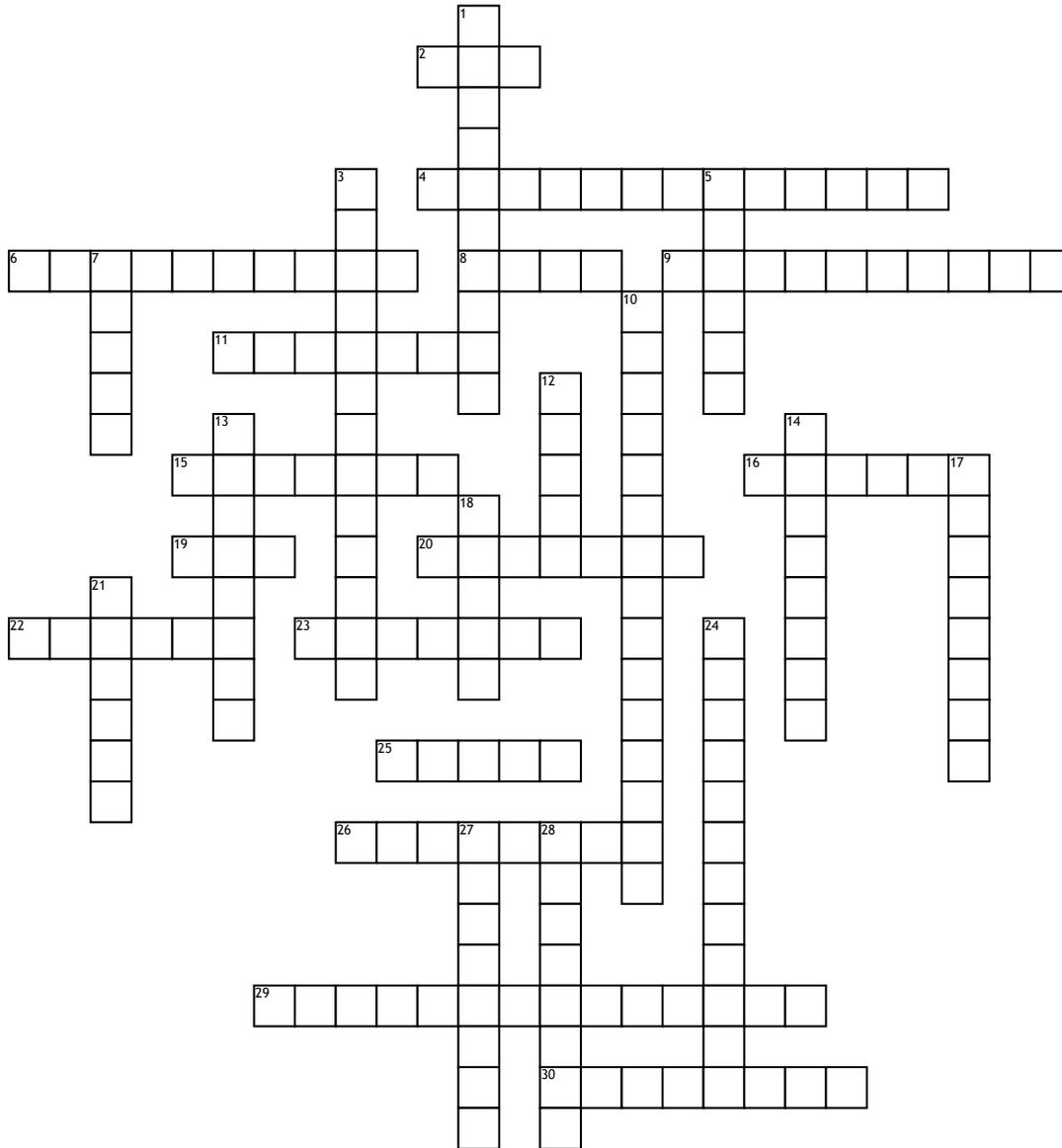


Atomic Structure and the Periodic Table



Across

2. Each _____ on the Periodic Table represents the number of "energy levels" an element has.
4. The elements are organized into this grid.
6. When elements react they form new _____.
8. The smallest unit of matter with all the properties of that substance.
9. Characteristics that are measurable or observable are called physical _____.
11. An element that can have a variable number of neutrons in its nucleus.
15. The "outer energy shell" of an atom.
16. Each _____ on the periodic table represents the number of valence electrons in an element.
19. A charged particle.
20. A neutron has a _____ charge.

22. Atoms with full outer energy shells are known to be _____.
23. The center of an atom where the protons and neutrons are located.
25. Electrons are "stolen" in this type of bond.
26. Reactivity is a _____ property.
29. An abbreviated way to name an element.
30. Subtract the atomic number from the atomic mass to find the number of _____.

Down

1. A "Family" of elements that do not typically react with other elements.
3. The location around the nucleus where electrons orbit.
5. This element is found in all organic matter and has four valence electrons.
7. The "electronic connections" between elements in a molecule.

10. NaCl is the _____ for salt.
12. Other than hydrogen and helium, the number of electrons needed to fill the valence shell.
13. The "Family" of elements that are very reactive.
14. Protons have a _____ charge.
17. Electrons have a _____ charge.
18. "Like" electric charges _____ each other.
21. A group of elements with similar properties are known as a _____.
24. This matches the number of protons in an atom.
27. A combination of one or more atoms.
28. Electrons are "shared" in this type of bond.