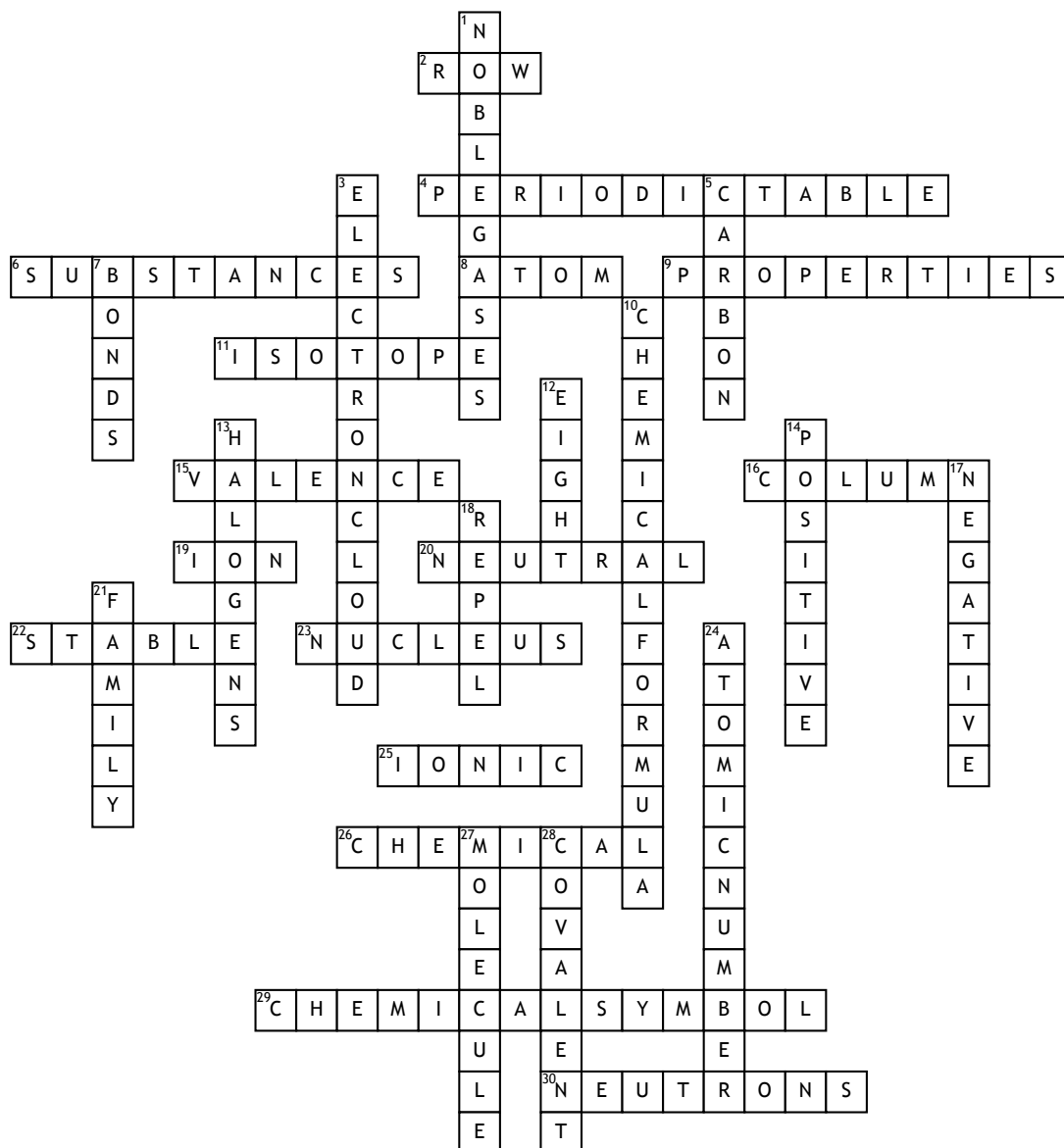


Name: \_\_\_\_\_

Date: \_\_\_\_\_

# 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.