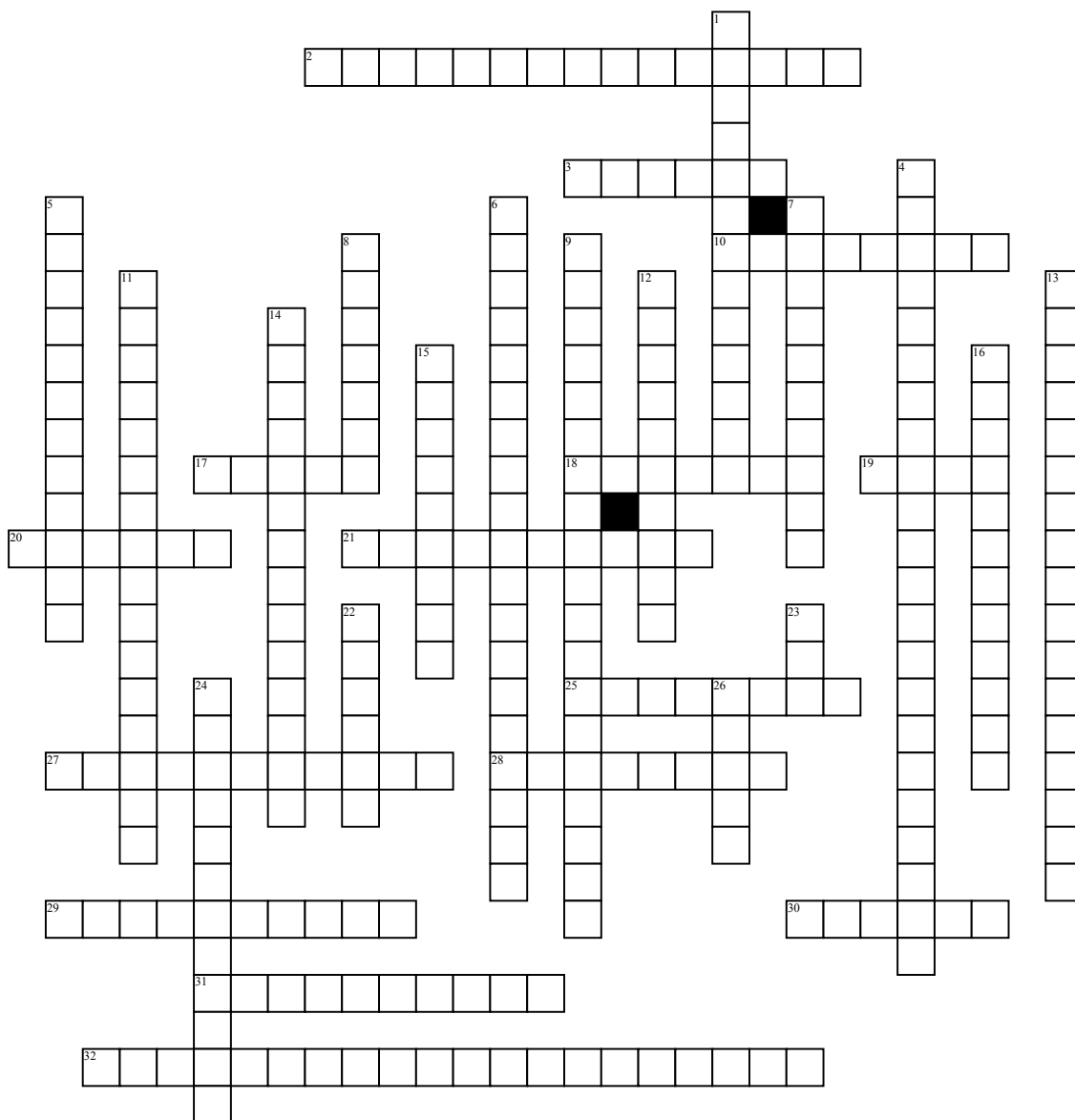


Periodic Table and Atoms



Across

2. highest occupied s sublevel and a nearby d sublevel contain electrons
 3. each horizontal row of the periodic table
 10. a radioactive form of an element
 17. negatively charged ion
 18. the tiny central core of an atom and is composed of protons and neutrons
 19. the smallest particle of an element that retains its identity in a chemical reaction
 20. positively charged ion
 21. a beam of electrons emitted from the cathode of a high-vacuum tube
 25. nonmetals of Group 7A
 27. when elements are arranged in order of increasing atomic number, there is a periodic repetition of their physical and chemical properties
 28. negatively charged subatomic particle
 29. total number of protons and neutrons in an atom

30. positively charged subatomic particle

31. generally has properties that are similar to those of metals and nonmetals

32. highest occupied s sublevel and a nearby f sublevel generally contain electrons

Down

1. an arrangement of elements in which the elements are separated into groups based on a set of repeating properties
 4. portion of the periodic table containing Groups 1A through 7A
 5. metals in Group 1A
 6. element is composed of only one kind of atom, and a compound is composed of particles that are chemical combinations of different kinds of atoms
 7. elements in Group 8A
 8. subatomic particles with no charge but with a mass nearly equal to that of a proton
 9. metals in Group 2A

11. energy required to remove an electron from an atom

12. a weighted average mass of the atoms in a naturally occurring sample of the element

13. the ability of an atom of an element to attract electrons when the atom is in a compound

14. defined as one twelfth of the mass of a carbon-12 atom

15. poor conductors of heat and electric current

16. one half of the distance between the nuclei of two atoms of the same element when the atoms are joined

22. good conductors of heat and electric current

23. an atom or group of atoms that has a positive or negative charge

24. the number of protons in the nucleus of an atom of that element

26. each vertical column of the periodic table