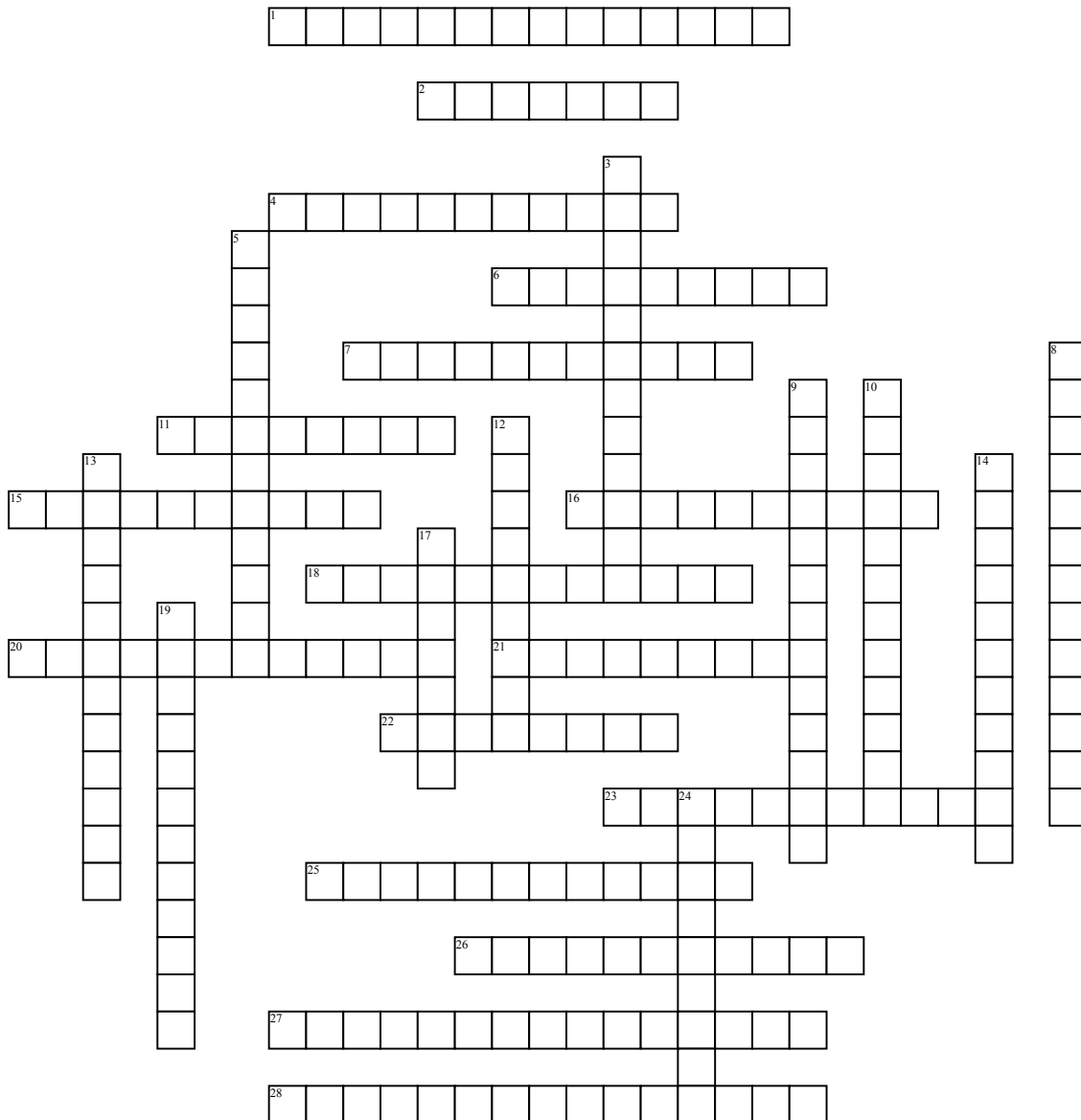


State of Matter and their Properties Crossword Puzzle



Across

1. a chemical compound (or element) in which the atoms are bonded by covalent bonds in a continuous network extending throughout the material
 2. a piece of a homogeneous solid substance having a natural geometrically regular form with symmetrically arranged plane faces.
 4. a type of phase transition, or a change in a state of matter, just like melting, freezing, and evaporation
 6. (of a substance, especially a crystalline compound) containing no water.
 7. tending to absorb moisture from the air. relating to humidity or its measurement
 11. easily evaporated at normal temperatures.
 15. occurs when molecules settle out of a solution
 16. solids composed of oppositely charged ions.
 18. the introduction of impurities into a semiconductor crystal to the defined modification of conductivity.
 20. a chemical which has water associated with its molecules, and which, when exposed to air, loses this water through evaporation
 21. each of two or more different physical forms in which an element can exist. Graphite, charcoal, and diamond are all allotropes of carbon.

22. the smallest group of atoms of a substance that has the overall symmetry of a crystal of that substance, and from which the entire lattice can be built up by repetition in three dimensions.
 23. one of the two forms of vaporization
 25. is the energy needed for one gram of a solid to melt without any change in temperature
 26. capable of crystallizing in a form similar to that of another compound or mineral, used especially of substances so closely related that they form end members of a series of solid solutions.
 27. present between any two molecules (even polar molecules) when they are almost touching
 28. inorganic salts "containing water molecules combined in a definite ratio as an integral part of the crystal" that are either bound to a metal center or that have crystallized with the metal complex

Down

3. substances that crystallize in more than one crystalline arrangement
 5. a regular, indefinitely repeated array of points in three dimensions in which the points lie at the intersections of three sets of parallel equidistant planes.
 8. the body of theory which explains the physical properties of matter in terms of the motions of its constituent particles.

9. a property of a liquid based on the strength of its intermolecular forces
 10. (of a solid) tending to absorb moisture from the air and dissolve in it.
 12. a hygroscopic substance that is used to induce or sustain a state of dryness
 13. the heat required to raise the temperature of the unit mass of a given substance by a given amount (usually one degree).
 14. a substance is the temperature and pressure at which the three phases (gas , liquid , and solid) of that substance coexist in thermodynamic equilibrium .
 17. a physical process that results in the phase transition of a substance from a solid to a liquid
 19. the process in which molecules of a gas slow down, come together, and form a liquid.
 24. without a clearly defined shape or form.