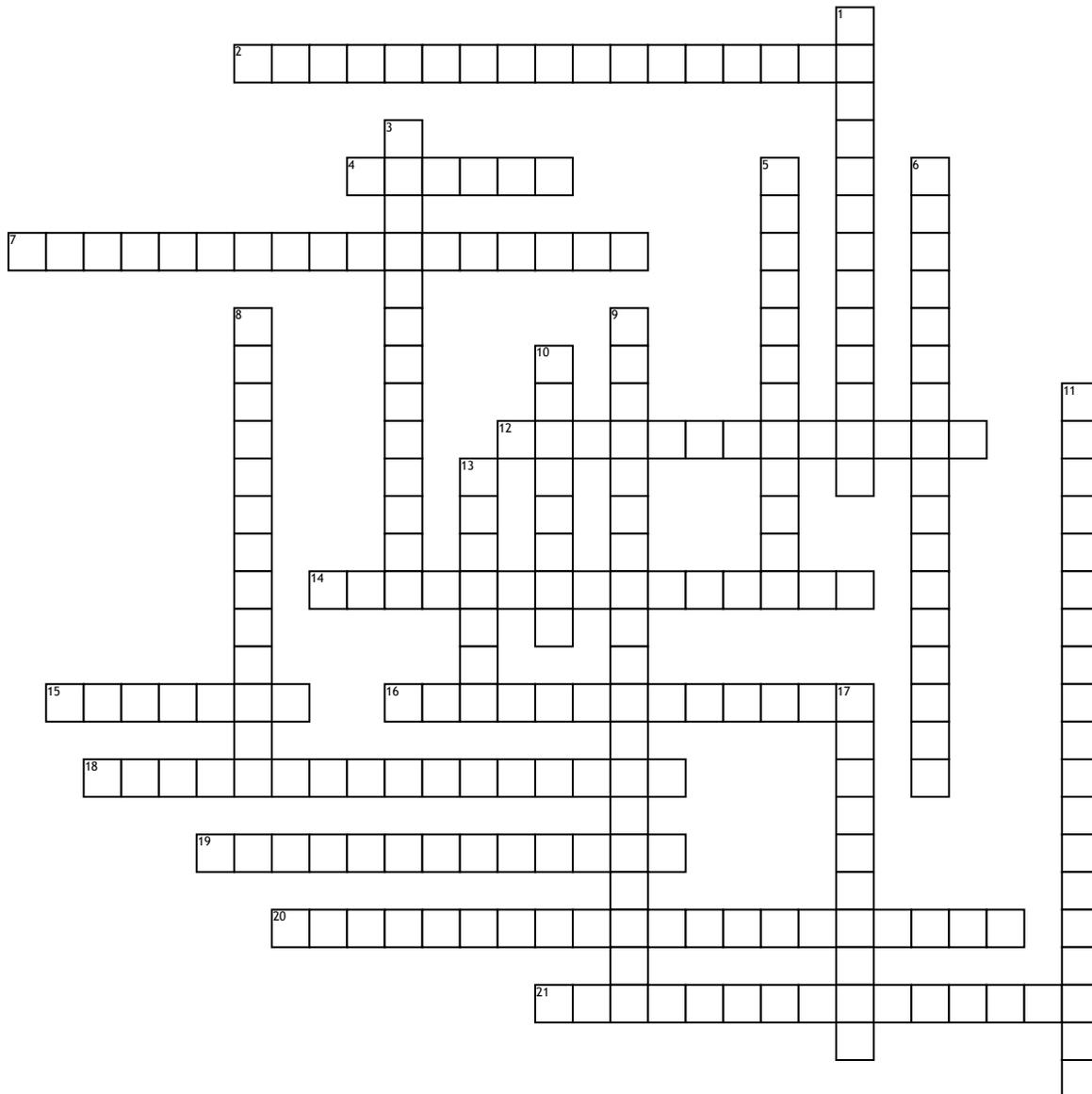


# Electricity and Magnetism



## Across

2. the release and transmission of electricity in an applied electric field through a medium such as a gas

4. a piece of iron (or an ore, alloy, or other material) that has its component atoms so ordered that the material exhibits properties of magnetism, such as attracting other iron-containing objects or aligning itself in an external magnetic field.

7. a device that converts mechanical energy to electrical energy for use in an external circuit.

12. a region around a charged particle or object within which a force would be exerted on other charged particles or objects

14. a flow of electric charge. In electric circuits this charge is often carried by moving electrons in a wire

15. a discrete region of magnetism in ferromagnetic material.

16. an electrical machine that converts electrical energy into mechanical energy

18. the interaction of electric currents or fields and magnetic fields.

19. a region around a magnetic material or a moving electric charge within which the force of magnetism acts.

20. Things that are negatively charged and things that are positively charged pull on each other. This makes electrons and protons stick together to form atoms. Things that have the same charge push each other away

21. has two or more paths for current to flow through

## Down

1. having only one path for electrons to flow

3. attraction or repulsion that arises between electrically charged particles because of their motion

5. each of the two points or regions of an artificial or natural magnet to and from which the lines of magnetic force are directed.

6. a stationary electric charge, typically produced by friction, that causes sparks or crackling or the attraction of dust or hair.

8. a soft metal core made into a magnet by the passage of electric current through a coil surrounding it.

9. used to protect us from the dangerous effects of electricity flowing through conductors. Sometimes the voltage in an electrical circuit can be quite high and dangerous.

10. a cylindrical coil of wire acting as a magnet when carrying electric current.

11. a substance in which electrical charge carriers, usually electrons, move easily from atom to atom with the application of voltage.

13. an electromotive force or potential difference expressed in volts.

17. the impeding, slowing, or stopping effect exerted by one material thing on another