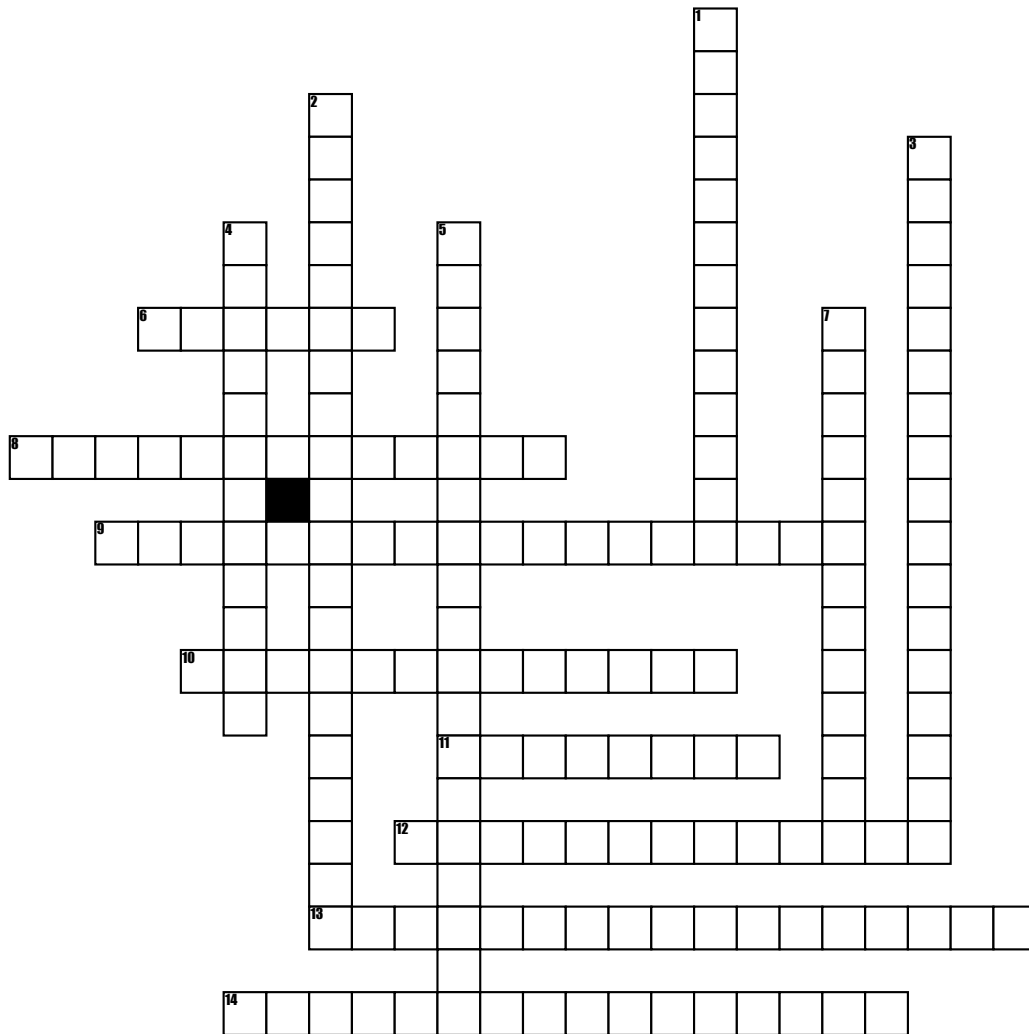


# Electricity and Magnetism



**Across**

6. is an object or a device that gives off an external magnetic field.

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

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

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

11. is a long coil of wire wrapped in many turns. When a current passes through it, it creates a nearly uniform magnetic field inside.

12. between two charged objects is directly proportional to the product of the quantity of charge on the objects and inversely proportional to the square of the separation distance between the two objects.

13. is often created when two objects that are not good electrical conductors are rubbed together, and electrons from one of the objects rub off onto the other.

14. the interaction currents of or fields and magnetic field

**Down**

1. A fundamental force in nature, the electromagnetic force acts between charged particles and is the combination of all electrical and magnetic forces

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

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

4. Either of the two ends of a magnet at which the field of the magnet is most intense.

5. is a material whose internal electric charges do not flow freely; very little electric current will flow through it under the influence of an electric field.

7. abbreviated emf (denoted and measured in volts), is the electrical intensity or "pressure" developed by a source of electrical energy such as a battery or generator.

**Word Bank**

electric force

electric motor

electric conductor

electric discharge

electromagnetism

electromagnet

electric field

magnetic force

solenoid

law of electric charges

static electricity

magnet

magnetic pole

electrical insulator