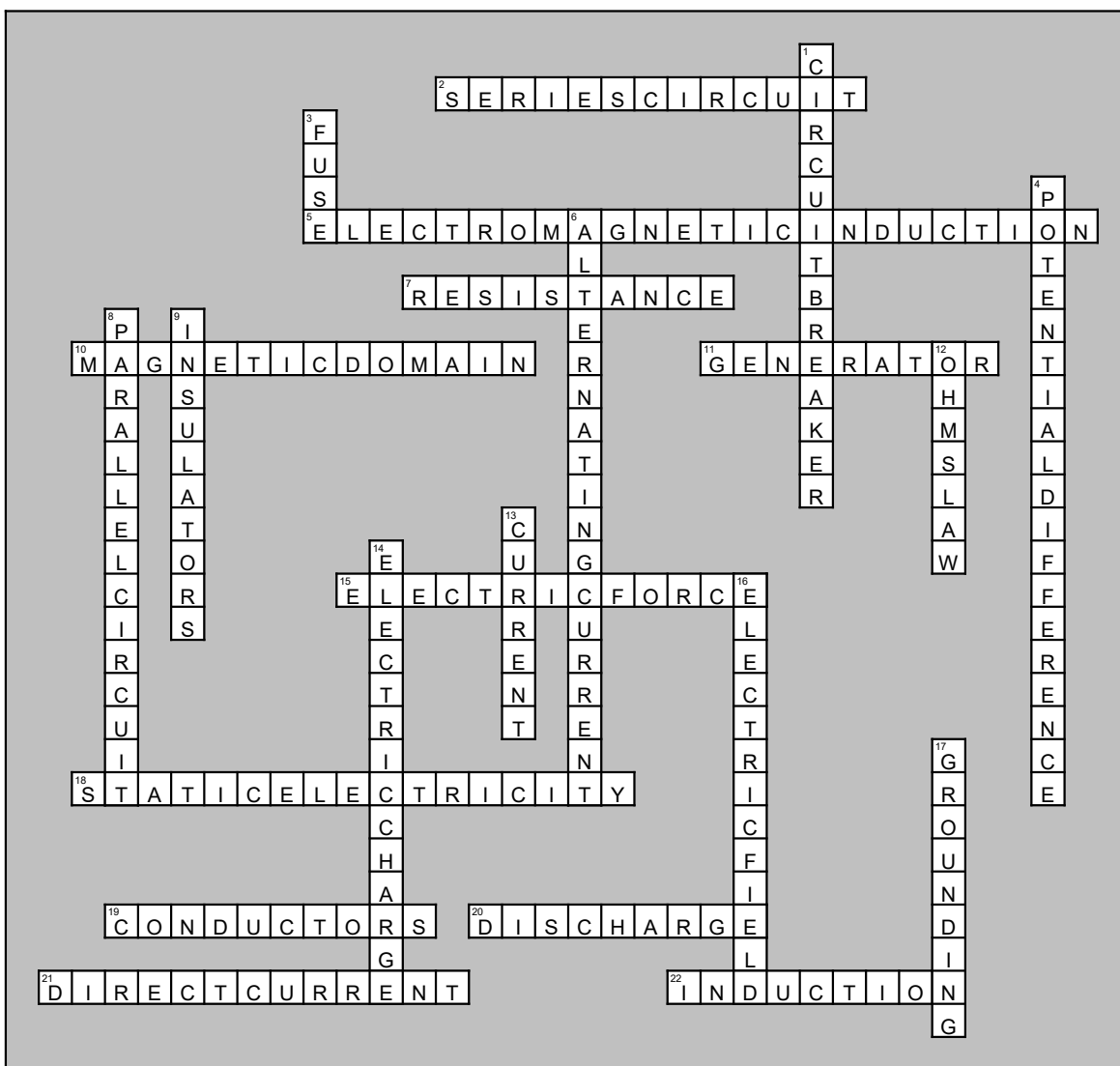


Crossword



Across

- Only has one path (loop) for current to flow. Adding resistors (bulbs) dims the circuit. Any break in the circuit will stop the flow of electricity.
- The process of generating a current by moving an electrical conductor through a magnetic field or moving a magnet in and out of a coil of wire.
- Inversely related to current, but needed for electricity to flow. The opposition to the flow of charge in a material. Measured in ohms. Thickness, length, and temperature affect it.
- A region that has a very large number of atoms with aligned magnetic fields. Iron, cobalt, nickel.
- Device that converts mechanical energy into electrical energy by rotating a coil of wire in a magnetic field. AC or DC.
- A push or pull in nature based on the electrical charges between objects. Like charges repel; unlike charges attract each other.
- The behavior of electric charges, including how charges transfer between objects. Charge can be transferred by friction, conduction (contact), and induction. Contrasted to electric current.
- Metals easily allow the flow of electricity. Copper, silver are good ones.
- Occurs when a pathway through which charges can move forms suddenly, allowing a transfer of charge. Static electricity often will _____ by induction. e.g. lightning will _____ when charges build up from friction.
- Flows in one direction. DC. Used in flashlights and battery-operated devices.
- Objects come close to each other, but do not touch, yet electric charges can be transferred.

Down

- A switch that opens when current in a circuit is too high, preventing overloading. Must be reset before the circuit can be used again.
- Prevents current overload in a circuit. A wire in the center melts if too much current passes through it, stopping the flow of current.
- The difference in voltage between two place in an electric field. Measured in volts.
- Type of current that flows in opposite directions (regularly reverses its direction). Most electrical generation produces this (AC). Used the most in our homes and industry.
- Two or more paths (loops) through which charges can flow independently. Voltage is the same throughout the circuit. If a break occurs in one loop, the other loop(s) can continue to operate since they are connected to the same potential (voltage source).
- Materials that resist the flow of electricity. Wood, plastic, rubber, air.
- $V = IR$... voltage = current x resistance. volts = amp x ohms.
- The continuous flow of electrons (contrasted to static electricity). Measured in amperes (amps).
- An excess of electrons produces a net negative _____. An deficiency of electrons produces a net positive _____.
- A force applied to or around a charged atom, molecule or object. This goes towards a negative charge and away from a positive charge.
- The transfer of excess charge through a conductor to Earth. Wires are used in outlets and wiring as an easier path for current to flow to the ground rather to our body.