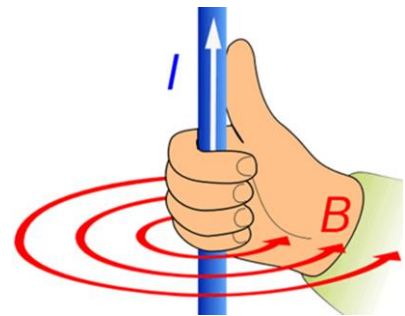


## Vocabulary: Magnetic Induction



### Vocabulary

- **Current** – the flow of electrical charge.
  - In a metal wire, current is the flow of negatively charged particles (electrons).
  - Current is measured in amperes (A).
  - In equations, the symbol for current is  $I$ .
- **Induced magnetic field** – a *magnetic field* that surrounds a current in a circuit.
- **Magnetic field** – a region in space that surrounds a magnet or moving charged particle.
  - Magnets and moving charges within the magnetic field experience a force.
  - Magnetic field lines show the direction magnetic objects such as iron filings or compass needles will align to.
  - Magnetic forces are greatest where the magnetic field lines are closest together.
  - The symbol for the strength of a magnetic field is  $B$ . It is typically measured in gauss (G).
- **Pythagorean Theorem** – a law that states that the square of the length of a right triangle's hypotenuse ( $c$ ) is equal to the sum of the squares of the lengths of the two legs ( $a$  and  $b$ ):  $a^2 + b^2 = c^2$ .
- **Right-hand rule** – a way to visualize the magnetic field produced by an electric current.
  - The thumb points in the direction of conventional (positive) current, while the fingers show the direction of the magnetic field.



Right-hand rule