



## Electromagnetism Vocabulary Sheet

Use this guide to master the core concepts of physics when teaching electromagnetism with rare earth magnets.

### Key Terms and Definitions

- **Electromagnetism:** The branch of physics involving the study of the electromagnetic force, which is a type of physical interaction that occurs between electrically charged particles. In simpler terms, it is the study of how electricity and magnetism work together.
- **Lenz's Law:** A law stating that the direction of an induced current is always such as to oppose the change in the magnetic field that produced it. This is why a neodymium magnet seems to "float" or slow down when dropped through a copper pipe.
- **Solenoid:** A type of electromagnet formed by a helical coil of wire whose length is substantially greater than its diameter. When an electric current is passed through the coil, it creates a controlled magnetic field.
- **Faraday's Law:** A fundamental law of electromagnetism predicting how a magnetic field will interact with an electric circuit to produce an electromotive force (EMF). This phenomenon is known as electromagnetic induction.
- **Electromotive Force (EMF):** Despite the name, this isn't a physical "force" like a push or pull. It is the electrical intensity or "pressure" (measured in volts) developed by a source, such as a battery or a changing magnetic field, that drives a current through a circuit.

