Hand Cranked Generator

Purpose

To demonstrate how a generator works.

Location

Room 146; shelf N3

Description

This generator is great for allowing the class to see what a generator consists of. The wire coils can be clearly seen through a clear a plastic cylinder. When the handle is cranked, it can be seen that the coils also turn. There is a light bulb to show that a current is produced by the generator. Crank the generator at a fast pace with the magnets in place to show that current is induced, making the light bulb illuminate. Take the magnets off to show that, without the magnets, current is not induced. This should convince the class that magnetic fields are essential to the operation of the generator. By using only 2 magnets on each side, it can be shown by that a weaker magnetic field will result in less current flowing through the wire (i.e. The light bulb will be dimmer when the generator is cranked at the same rate).