

Aim

The aim of the experiment is to investigate the strength of an electromagnet

Introduction

An electromagnet is a coil of wire wound on a soft iron core. Unlike refrigerator or bar magnets, electromagnets use electricity to generate a magnetic field. In addition, electromagnets give us the ability to turn the magnetic field on or off as we need. To make an electromagnet, you need electricity (usually supplied by a battery or a larger power source) and something for that electricity to flow through (wire coils, for example). Sometimes, the wire of an electromagnet is wound around a metal rod to increase the magnetic field strength. The electromagnet was discovered in 1820 by a man named Oersted. He accidentally discovered that a wire with electricity running through it made a compass deflect from the Earth's North Pole. In fact, the compass needle was perpendicular to the direction of the electric flow. That meant that the electricity flowing in the wire generated its own magnetic field that was disrupting the nearby compass! Since then, scientists have found many ways to use electricity to generate magnetic fields and for magnets to make electricity. Oersted observed what we now call the "right-hand rule." The right-hand rule states that if you make a fist, when you point your right-hand thumb in the direction of electric flow, the rest of your fingers curl in the direction of the magnetic field.

Variables

The variables in this experiment are the current, resistance.

Prediction and hypothesis

My prediction is that if I increase the voltage/current the strength of the electromagnet will increase. this is