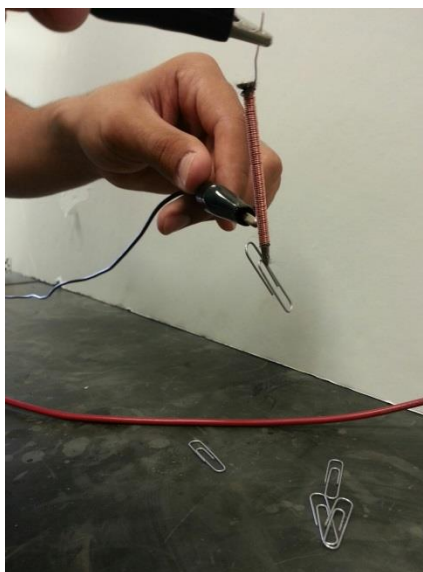




California State University of Bakersfield, Department of Chemistry

Magnetic Attraction



Standards:

HS-PS1-3. Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.

HS-PS1-4. Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.

Introduction:

Have you ever needed an easier and cooler way to pick up paper clips? With just a few simple household supplies, you can create a very powerful electromagnet of your own. By wrapping copper wire around a nail, you can create an electrical field which then in turn produces a magnetic field (right hand rule). When you complete the circuit, electrons flow through the copper wire and produce a magnetic field that allows you to pick up iron objects such as paperclips with the tip of the nail.

Materials:

- 9-V battery
- About 3 feet of thin coated copper wire

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