

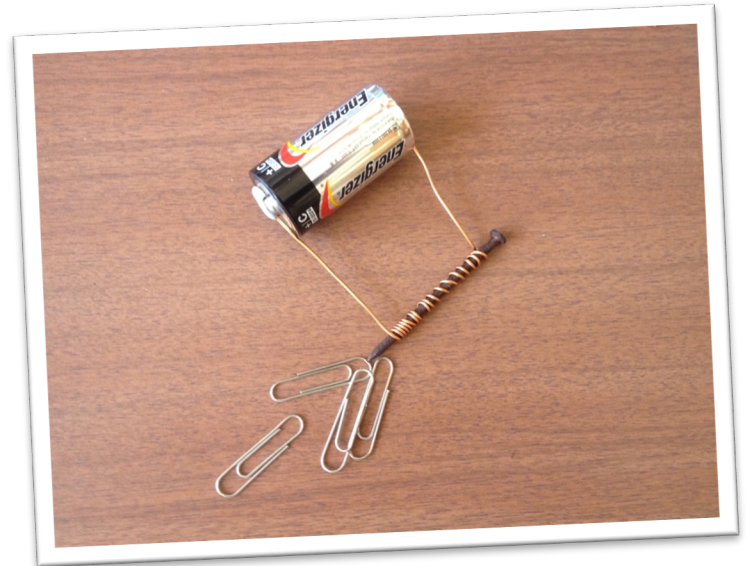
BUILD AN ELECTROMAGNET



PROFESSOR PETE'S intro...

Background Information:

You can use an electrical current to turn a large nail into a magnet. The electrical current causes the electrons in the nail to all spin the same direction, which creates magnetism. Cool, huh? Your pupils will be impressed that you can do this!



Step 1: Collect your equipment...

- a battery pack or 9v battery,
- a long piece of copper wire,
- crocodile clips,
- and a large nail.

Step 2:

- strip a small amount of the covering off each end of the copper wire.
- connect each end of the copper wire to a crocodile clip.

Step 3:

- wrap the middle of the wire tightly around the length of the nail.
- attach the two crocodile clips to the connections on your battery pack or the connections on your 9v battery.

Step 4:

- Your electromagnet will pick up paper clips, etc. Test its strength by making a chain of paper clips! (Although if you use large paper clips, it will probably only pick up one.)

PROFESSOR PETE SAYS...

Be aware that the ends of the wires will get hot! In technical terms, this is resistance. All electrical conductors oppose the flow of electricity to some degree, and some of the electricity is lost as heat. Science is pretty cool!

