

# Electro-Magnet Lab

You are going to make an electro-magnet by wrapping wire around a nail. In your lab notebook you should answer the following questions:

1. Draw a picture of your electro-magnet. Include the battery, nail, and wire.
2. Label the flow of the current with arrows.
3. Will there be a magnetic field? Why?
4. Wrap 10 turns around the nail.
  - a) How many paper clips can you pick up when you complete the circuit?
  - b) Any other observations you notice?
5. Wrap as many turns as you can around the nail.
  - a) How many paper clips can you pick up when you complete the circuit?
  - b) Any other observations you notice?
6. When you dis-assemble everything, is the nail still magnetic?