

Middle School Science

Name:

Date:

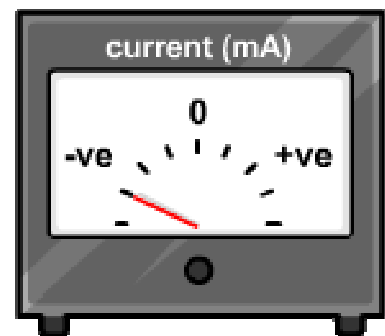
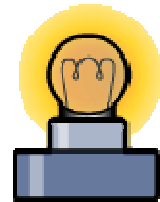
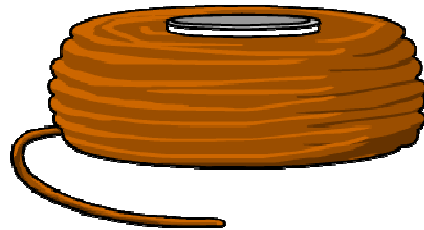
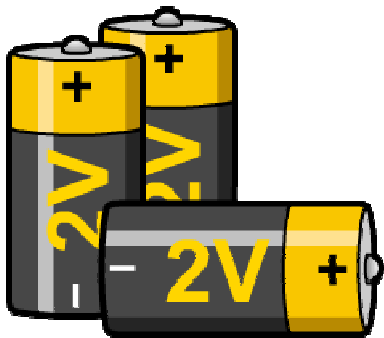
Electromagnets Worksheet

This worksheet accompanies slide 5 of *Electromagnets.ppt*

Changing the strength of an electromagnet

Design an experiment to investigate the strength of an electromagnet.

Using the following equipment, design an experiment to investigate the effects of changing the number of coils of wire and the amount of current on the strength of an electromagnet.

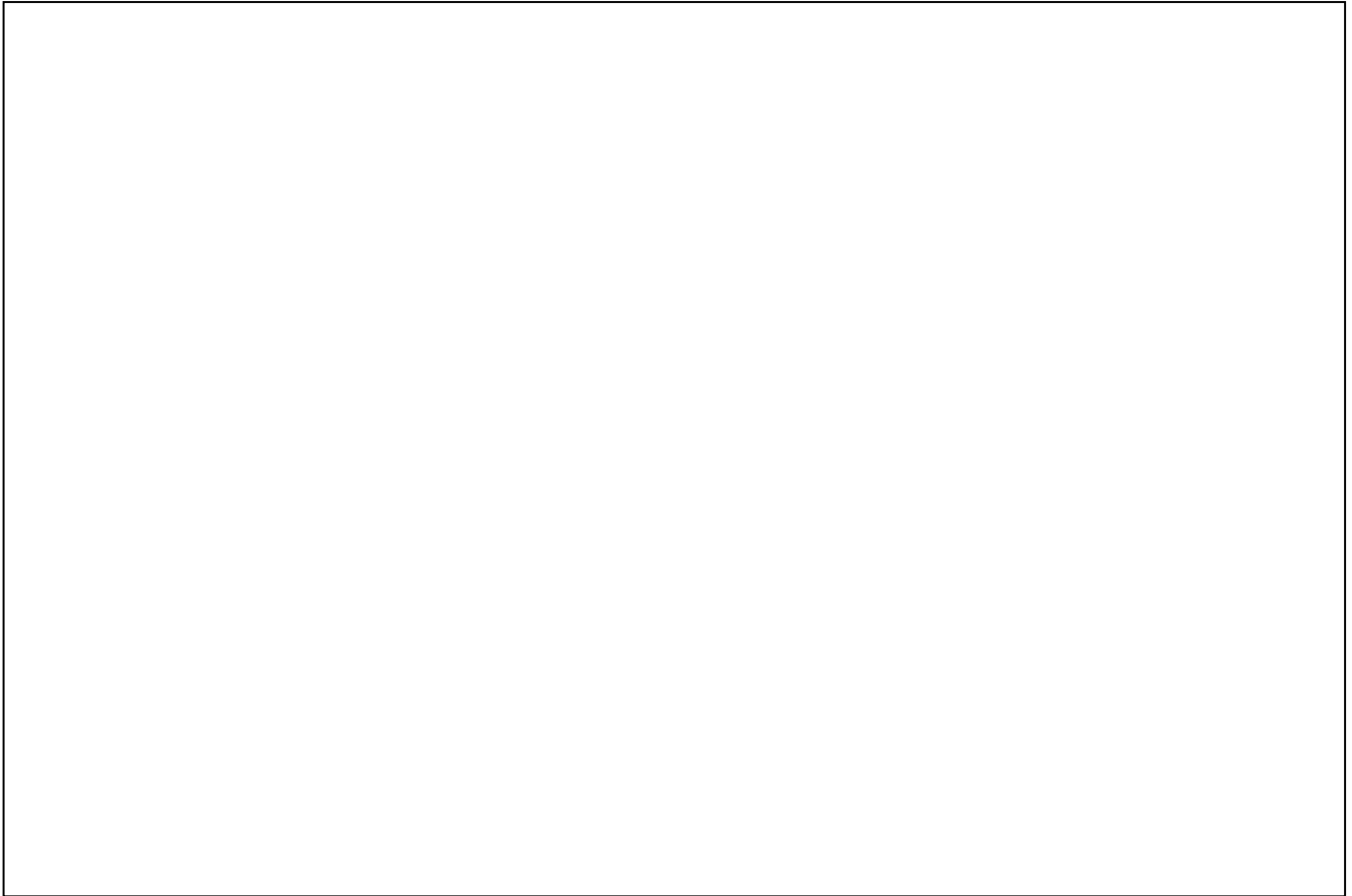


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1. Draw a diagram to show the circuit you would use during your experiment.



First, you will test the effect of changing the number of coils.

2. How many coils will you test the circuit with?

| | Number of coils |
|---------------|------------------------|
| Test 1 | |
| Test 2 | |
| Test 3 | |
| Test 4 | |
| Test 5 | |

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3. How will you measure the strength of the magnet? What will you record?

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4. How will you ensure that your results are accurate? What factors will have to be kept constant?

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Now you will test the effect of changing the current.

5. At what levels of current will you test the magnet?

| | Current (amps) |
|---------------|-----------------------|
| Test 1 | |
| Test 2 | |
| Test 3 | |
| Test 4 | |
| Test 5 | |

6. How will you ensure that your results are accurate? What factors will have to be kept constant?

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Record your results in appropriate tables.