

Name: _____

Electromagnet Lab Activity SPH4C



Is there a magnetic field around the electromagnet if it is not connected to a power supply? Explain how you can tell.

Why does the electromagnet need to have a resistor in series with it before it can be connect to a power supply?

With the power supply turned on and the circuit working, is there a magnetic field around the electromagnet? Explain how you can tell.

Sketch the shape of the magnetic field around the electromagnet:
(The iron filings might help you with this.)

Where is the magnetic field strongest? Explain how you can tell.

What happens is the current is reversed?

What happens after the power supply is turned off?

Identify at least two advantages an electromagnet has over a permanent magnet:

Describe a specific situation in which you would want to use an electromagnet and not a permanent magnet. Explain why the electromagnet would be more useful in that situation.

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