

## Activity 6: Interaction Between a Magnet and an Electric Current

Name \_\_\_\_\_

Date \_\_\_\_\_

Class \_\_\_\_\_

### Key Question

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### Learning the Ideas

1. What happens to the magnetic compass needle when the switch is closed?

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2. What evidence is there that there is an electric current in the circuit? (After all, you cannot *see* the electric current flowing in the wires.)

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As the number of batteries in the circuit is changed, record the corresponding values for the electric current and the compass deflection in the following table.

<b>Table: Compass Deflection versus Amount of Current</b>		
<b>Number of Batteries</b>	<b>Electric Current (mA)</b>	<b>Compass Deflection (Number of Degrees)</b>
1		
2		
3		
4		

3. What is the relationship between the compass deflection and the amount of electric current in the circuit?

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**What We Have Learned**

The key question for this activity is:



**How does the electromagnetic interaction help explain how motors and meters work?**

Write the answer to the key question.

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