

Learning Target: I can describe and explain the interaction between a magnetic field and a magnetic object.

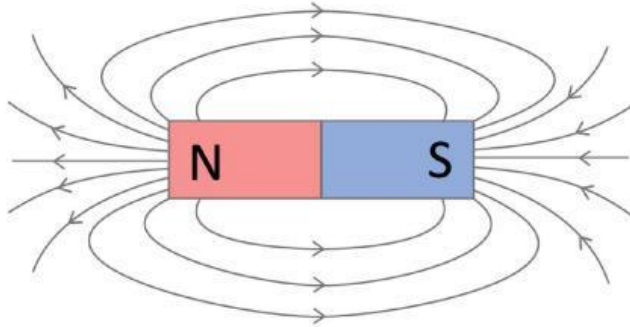
Magnetic Fields & Magnetic Objects Interactive Activity



Part 1: Understanding Magnetic Fields

1. **Study the Diagram Below**

Below is a bar magnet with its magnetic field lines drawn.



Questions:

a) Where are the magnetic field lines closest together? _____

b) What does this tell you about the strength of the magnetic field in this area? _____

2. **Experiment Simulation**

Imagine placing a compass near the north pole of the magnet in the diagram.

Question: Which direction will the compass needle point and why? _____

Part 2: Magnetic Objects

Look at the Chart Below: The table shows objects tested for magnetic properties.

Object	Attracted to Magnet (Yes/No)	Magnetic? (Yes/No)
Paperclip	Yes	Yes
Plastic Spoon	No	No
Iron Nail	Yes	Yes
Aluminum Foil	No	No
Steel Scissors	Yes	Yes

Questions:

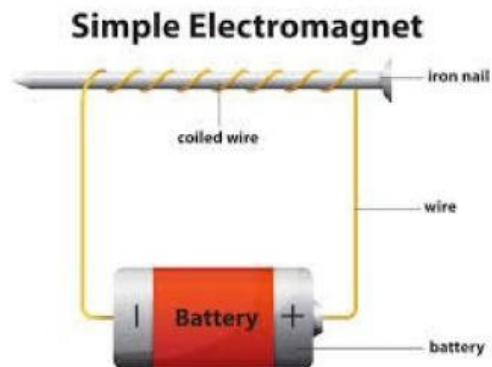
1. What material property makes an object magnetic? _____

2. Why do some objects like aluminum foil not attract to a magnet? _____

Learning Target: I can describe and explain the interaction between a magnetic field and a magnetic object.

Part 3: Explore Electromagnets

1. **Diagram:** Below is a simple electromagnet made with a battery, wire, and nail.



Questions:

1. What happens to the nail when the circuit is complete? _____
2. How can you make this electromagnet stronger? _____

Part 4: Challenge Question

Using your knowledge, explain why Earth acts like a giant magnet. _____

How does this magnetic property affect a compass? _____
