

# Magnetism

Running Time: 26 Minutes

## Nifty questions in this episode:

- What is magnetism?
- Is the Earth a magnet?
- What three things can stick to magnets?
- Where does magnetism come from?

## Awesome answers:

- Magnetism is an invisible force that comes from minerals found in the Earth.
- Yes, Earth has North and South magnetic poles due to its core of iron and nickel.
- Iron, nickel, and cobalt will stick to magnets.
- Moving electrons (electricity) are the cause of magnetism.

## Experiments shown on the video:

### FLOATING NORTH

**Objective:** To demonstrate magnetic North.

- Rub a needle over a magnet 50 times in the same direction.
- Place the needle on top of a plastic film-container cap.
- Place the cap containing the needle in a bowl of water.
- The floating needle will point North.

## More interesting stuff to do:

### PICK ME UP

**Objective:** To demonstrate magnetic attraction.


- Stack six textbooks on top of one another.
- Insert a ruler in halfway at the end of the top book.
- Loop a horseshoe magnet over the ruler so that both poles point down.
- Tie one end of a string to a paper clip.
- Tape the other end of the string to the table so that the paper clip will be attracted to the magnet, but won't be able to touch it.
- The paper clip should hang suspended.

### POINT-COUNTER POINT

**Objective:** To show how to make magnets with needles.

- Magnetize one needle at a time.
- Stroke the pointed ends of five needles 50 times in the same direction (lifting your hand each time).
- Working from the center of the needle, stroke toward the needle's point along the north pole of the magnet.
- Repeat the procedure, stroking the eye of the needle toward the magnet's south pole.
- Slice five pieces off a bottle cork.
- Push one needle into each cork with the point down.
- Place the corks in a large bowl of water with the points down; observe.
- Now, turn some corks so that their points face up; observe the reaction of the corks and needles.
- Experiment with various positions of the corks.
- Explain the needles' reactions.

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 closed-captioned



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