

What do magnets do?



Explore how magnets work.

Setting: Indoors

Time: < 30 minutes

Concepts: magnets, magnetic field

Skills: Predicting, observing

Subject(s):

- ✓ Physics
- ✓ Engineering

Ages:

- ✓ 3-5
- ✓ 6-8

Materials:

- 1 magnet
- Items that will attach to a magnet (paper clips, screws, items made of iron, nickel, or steel)
- Items that will not attach to a magnet (paper, plastic, aluminum foil, etc.)
- Pencil (optional)
- Piece of paper (optional)



Safety First!

Some smaller items can be choking hazards for young children. Choose appropriately sized objects.

What to do!

1. Explore the items list above to see which ones will or will not be attracted to the magnet.
2. Sort the items into 2 groups, based on the object's ability to attach to the magnet.

What's happening?

The magnetic field surrounding a magnet is a type of force. The force is the result of the magnet having a north pole at one end and a south pole at the other end. The north pole is attracted to the south pole, creating the magnetic field surrounding the magnet.

Magnets attract only objects made of iron, steel, nickel and cobalt. When a magnet comes close to an object made of these materials, the object is pulled by the magnetic force surrounding the magnet. If close enough, the object will attach to the magnet.

Why does it matter?

Magnets are used in many different things, such as televisions, trains, compasses and decorating your refrigerator!



Investigate further!

What do magnets do?

- Find other objects around your home that are attracted to the magnet. Be careful not to touch a TV or computer screen with the magnet as it could damage them.
- Create a chart of the items that are, or are not, attracted to a magnet. This could be done with pictures, words, or both.
- Test different magnets to see if some magnets are stronger than others. For example, find out how many paperclips each of the magnets can pick up. Sort your magnets from strongest to weakest.