

Explore Magnets

Explore how magnetism is connected to the aurora!



The Earth acts a giant magnet. Energy from the Sun combines with the Earth's magnetic field and atmosphere to produce the aurora!

Left: UAF photo by Todd Paris, 2015.

Materials Needed:

Magnets in a variety of shapes and sizes, paper clips, small metal objects.

Optional: Small container with a lid.

Caution: Closely supervise children during this activity. Recommended for ages 3 and older. Magnets are choking hazards, and can be dangerous if swallowed.

Instructions:

Try different experiments with the magnets to explore how they work! Remember to keep the magnets away from electronic objects such as cell phones.

Hint: For young children, place a magnet inside a container with a lid so they can explore its effects without accessing it directly.

Challenges to Try:

- x What's Magnetic?: Use a magnet to find both magnetic and non-magnetic metals.
- x Powerful Magnets: How many paper clips can you pick up with one magnet?
- x Magnet Shapes: Try picking up objects with differently shaped magnets. Does a magnet's shape affect its strength?
- x Magnetic Poles: What happens when two similar poles are put together? Two opposite poles? Try stacking magnets with like poles together.
- x Combining Magnets: Try to make a one long magnet using two smaller magnets. How many poles does it have?

The Earth acts a giant magnet! Just like smaller magnets, it has North and South magnetic poles.

- The magnetic field is created by the movement of molten iron and nickel within its outer core. The magnetic field is strongest near the poles.

Right: