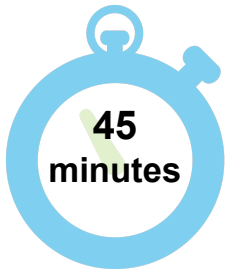


Magnet Magic

1st to 3rd Grade - STEAM Lesson



DESCRIPTION

In this lesson, students will experiment with a variety of materials to explore magnets and figure out what types of materials are magnetic.

Student Learning Goals

- Students will experiment with magnets and various materials to determine what magnetic objects have in common.

Background Information

Magnets can seem magical, but really magnets are just rocks or certain metals that have an invisible force around them. This force is called a magnetic field. A magnet's magnetic field can pull or push other magnets and magnetic materials (like paper clips and screws). While objects, like paper clips or screws, are not magnets themselves, they do get pulled into a magnetic field - which is why they connect with magnets. If a magnet is strong enough, they can magnetize certain materials like washers. Then these materials become temporary magnets.

Materials

PER CLUB

- Plastic bins
- Magnet wands
- Variety of magnet testing materials
 - Paper clips, Blocks, Marbles, Iron Washers, Pipe Cleaners, Rubber Bands, Screws, etc.

PER STUDENT

- 1 – magnet wand
- 1 – plastic bin
- 1 – set of materials

Teaching Tips

SET UP: Place magnet testing materials into the containers, one container per student.

ADAPTATION IDEAS: Have students bring items from home to test. They can set up their own testing station and invite other students to make predictions and then use magnet wands to see if their guesses were correct.

ADDITIONAL RESOURCES:

- Read "Magnetic Magic" by Terry Catasús Jennings
- Watch a [video](#) about ferrofluid, a magnetic liquid!

ENGAGE – 5 minutes

- **I wonder... What is happening?**
 - Show students the [spinning coin magnet demonstration video](#).
 - Invite students to share their ideas.
- **What makes the coins stick together?**
 - Students share ideas.
 - The magnet makes the coins into mini-magnets!

EXPLORE – 30 minutes

- **I wonder... Can we experiment with different materials to figure out what is magnetic and what is not? Let's do it!**
 - Pass out a container with magnet testing materials to each student.
 - Have students predict and sort the materials into two piles: magnetic and NOT magnetic.
 - Give students a magnet wand and have them test to see if their predictions were correct.
 - Encourage them to re-sort their piles and test other materials around the room to see what else is magnetic.
- **What do you observe?**
 - Bring the group back together for a discussion.
 - What did you notice?
 - What types of materials seem to be magnetic?
 - What other materials in the room might be magnetic?
 - Test ideas if time permits.

EXTEND – 5 minutes

- **I wonder... What do we think?**
 - Have students share their ideas about magnets and magnetism.
 - Certain types of metal materials seem to be magnetic
 - Magnets have a power (or a force) to pull or push, this force is magnetism
- **What questions do we have about magnets? How could we answer them?**
 - Encourage students to share their questions and plans to investigate.