

Magnets

Engage children in learning about science and math through exploration of magnets and magnetic properties.

START

- The goal of this activity is to introduce children to magnets and magnetic properties through exploration and play.
- Introduce this activity by asking if anyone would like to play with some magnets. Ask each child to pick one tray.
- Ask the children to play with and explore their magnets and objects to see what is attracted and what isn't.
- If needed, you can show the children how to hold the magnets and demonstrate that if you touch certain objects, they will stick to the magnet.

NEXT STEPS

- Ask the children What happened with the different objects? Did the magnet attract some things? Did some not stick at all? What happens if you hold more than one object up to the magnet? Why do you think some objects stick and some don't? Ask them to test how far away the different magnets and objects can be to each other and still be attracted.
- Have the children guess which other objects on the table might stick and have them try out their ideas. This will involve sharing objects. They can also try all the magnets to see if there are any differences.
- If the children want to know what magnets are, you can explain that they are a material that can be formed in nature and that attracts one particular kind of metal—iron.
- For very young children, it's fine if they just want to play with the magnets and objects and see what happens.
- For older children, challenge them to predict which objects will be attracted. They might even try to guess why the objects attract. See if any of the children discover opposite polarity on their own. If they don't, point it out to them with two magnets. Show them how some magnets repel each other.

MATERIALS

- * Assorted magnets
- * Assorted objects that do and do not have magnetic properties; for example, coins, paper clips, corks, paper, cotton balls, cloth, and keys
- * Paper plates or trays with magnets and object assortments already set up on them

Learning Guideline: Science, Technology, and Engineering: Ask and seek out answers to questions about objects and events with the assistance of interested adults.

Tip Sheets:
Explore, Experiment

(continued on side 2)



(continued from side 1)

FINISH UP

- Encourage the children to talk about their experimentation and what they experienced. Was there anything that surprised them? Confused them? Did they try more than one type of magnet or figure out a different way to use them?
- You can record the children's names and the number of objects they got to stick to one magnet on a whiteboard or flip chart.

EXPAND YOUR ACTIVITY

- Explore other objects not on the trays, such as jewelry, glasses, your body, or the table.
- Create a sorting activity by having the children sort lots of the objects onto two trays by "sticky" and "nonsticky" properties.
- Experiment with using the magnet to move an object without the magnet actually touching the object, or see if the magnet remains sticky through other things (e.g., a piece of paper or cloth).

TAKE IT HOME

- Explore all kinds of objects at home with magnets. Play a game in which your child walks through a room and guesses which objects will be attracted and then tests out his or her ideas.
- Buy refrigerator magnets to allow your child to play with magnets using numbers and letters. Leave some regular magnets on the refrigerator to encourage exploration on their own.

BOOKS

- *Sid the Science Kid: Earth Day Fun* by Jennifer Frantz
- *What Magnets Can Do* by Allan Fowler
- *The Science Book of Magnets* by Neil Ardley

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Tip Sheets:

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