

Ask Me About Force & Magnetism!

Today, an instructor from the Discovery Museum in Acton visited my classroom and led a hands-on program about force and magnets. We worked with all kinds of cool toys that use the force of magnetism to move. Ask me to tell you about my favorite magnet toy.

I was challenged to come up with a first iteration of my own toy design that moves by using magnetic force. I made a prototype using everyday materials. Ask me to tell you about what I used and how it worked. I might like to try a second iteration of my toy or maybe use the directions below to create a magnet maze instead. Help me collect the materials and see what I can do with them using my two ring magnets.

Magnet Maze

An “attractive” project to continue your exploration of magnets.

What you need:

- 2 ring magnets (provided by the Museum)
- a piece of stiff paper or thin cardboard
- a marker.

What you do:

1. Using the marker, draw a series of pathways and dead ends to create a maze on the surface of your cardboard or simply draw a long-spiraling or twisting path.
2. Lay one magnet on top of the cardboard at the start of a pathway and hold one magnet directly underneath it, below the cardboard.
3. Try to control the movement of the magnet on the top of the cardboard by moving the magnet underneath the cardboard. Can you complete the maze using the force of the magnet from below?
4. Now lay the first magnet on the top of the cardboard and hold the second magnet just hovering above it. Can you use the force of attraction or repulsion between the two magnets to move the magnet around the cardboard?
5. Can you stand one of the magnets on its edge and use the other magnet to make the first magnet roll around the maze on its edge? Keep playing and see if you can discover other interesting ways to move the magnets around the cardboard.

Optional: Substitute a paperclip or other magnetic material for the top magnet and try to complete the maze again using the force of the magnet. Is it easier or harder to move the paperclip?

