

Magnetic Hopping

Create a toy based on the basics of magnetic repulsion

Magnetism and magnets are all around us. We live in the Earth's magnetic field. We use magnets in appliances like microwaves and toasters, motors and generators, or to simply stick something on our refrigerator.

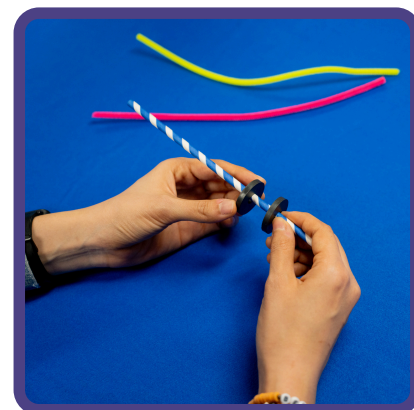
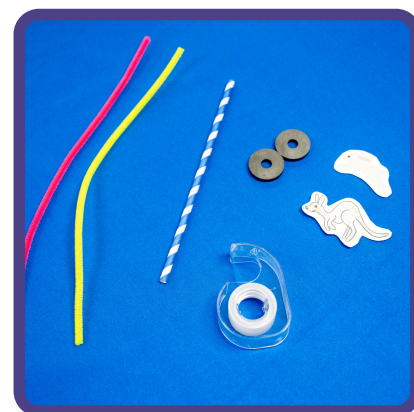
All magnetism comes from the alignment or flow of electrons, which are tiny little magnets inside every atom that makes up everything in the universe.

All magnets have two poles, north and south. Opposite poles attract each other. Like poles repel each other.

With two small permanent magnets, you can make a simple toy that shows the power of those like poles repelling each other:

What You'll Need:

- Two small donut-shaped permanent magnets. (You can buy these online or at most big-box, hardware, or craft stores.)
- A straw
- Pipe cleaner
- Glue or tape
- Hopping animal pictures (you can print out ours or make your own!)



What You'll Do:

1. Thread two donut-shaped magnets onto the straw, making sure like poles are facing so the magnets repel each other.
2. Tightly wrap pipe cleaner at each end of the straw.
3. Hold the straw upright. Notice how the top magnet is floating above the other magnet because their magnetic fields are repelling one another.
4. Attach one of the animal pictures on the top magnet with glue or tape.
5. Gently move your hand up and down to watch the animal 'jump' as the magnets repel each other.

