



## The magic of magnets

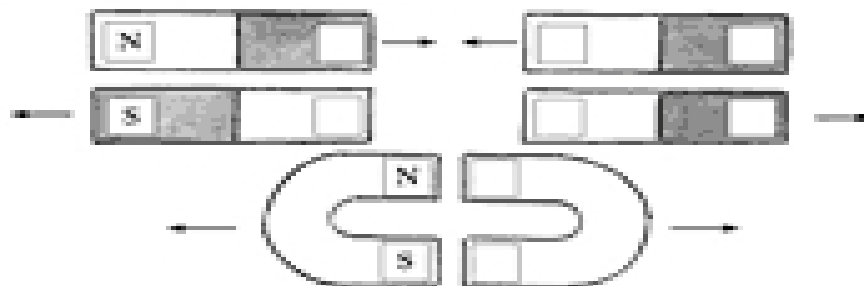
### Background knowledge

Every magnet has a *north pole* and a *south pole*. When like poles are placed near one another, they will *repel* or push each other away. When unlike poles are placed near one another, they will *attract*, or pull toward, each other. This is also known as the *Law of Poles*: "Like poles repel; unlike poles attract."

### Science activity

Donna told her friends that she could perform magic. She took out a magnet, placed it near a closed shoebox, and said "Abracadabra, move away now!" To the amazement of her friends, the box began to move. What did Donna know that her friends did not?

The diagrams below show pairs of magnets. The arrows show the direction in which the magnets move when placed near each other. In the boxes on each magnet, write the symbol (N or S) to show the correct pole.



### Science investigation

A compass is a device with a magnetized needle. Take a needle and stroke it several times with a magnet in one direction. Place the needle on a thin piece of cork. Float the cork in water. Before you float the cork, predict what you think will happen. Explain all of your observations. You may also want to try to design a different type of compass and test it out.

