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Magnetic Attraction

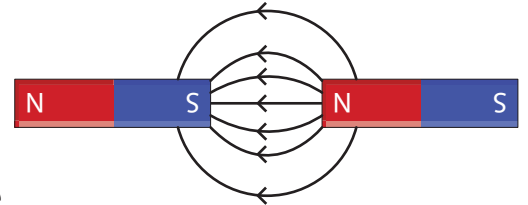
by Katie Clark

Science is full of amazing laws and processes.

These are the rules by which our world works. You have probably heard about energy, motion, or gravity.

There are laws that rule over each of these things.

There are also laws and processes that tell light, heat, and sound what to do.



Magnetism is one of these natural forces in nature. A magnet is a piece of material that emits a force. This force draws certain types of metals to it. It might also push certain types of metals away from it.

Many people have magnets in their home. They might have a magnet on their refrigerator or they might have one they use as a tool for work. These are small magnets.

In nature, naturally occurring magnets are called lodestones. People discovered these amazing rocks thousands of years ago, and they have been using them ever since.

One of the most famous types of uses for these is the compass. Using magnetic force, the compass can tell us which way is north. This is because the Earth itself has a magnetic force. Earth's magnetic force is emitted from the North Pole. It attracts the magnet inside the compass, so the compass points toward the north.

But what is a magnetic force? How does it work?

Magnetic attraction works this way. Imagine a magnet with a protective force field around it. That force is constantly moving in and out of the magnet. It moves in a steady motion. It pushes out at the north pole of the magnet. It flows in at the south pole.

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When it comes into contact with a metal that is susceptible to magnetic attraction, the force moving into the magnet pulls the metal with it. This makes the metal stick to the magnet. It can sometimes be hard to pull the magnet and metal apart.

Two magnets will stick together. They will also repel each other or push each other away. There is a reason for this! As mentioned, magnets have a north pole and a south pole. On one side the force flows in, and on the other side the force flows out.

If you put two magnets near each other on their sides which flow out, their force fields will be flowing against each other. This makes them repel each other.

If you place them with one side flowing in and the other side flowing out, their force fields will be flowing in the same direction. They can be drawn together. There is a saying that goes like this; like poles repel, unlike poles attract. This means if you put both north poles together or both south poles together your magnets will repel. But if you put one north pole and one south pole together, they will stick!

Lots of items can be affected by magnets, but metals like iron, nickel, and cobalt are the most affected. These metals can even be changed into magnets themselves when they meet a magnetic source!

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- 1) How does the author do the 'context setting' in paragraph 1 before introducing the topic of Magnetism?

- 2) Why does a compass always point toward the north?

- 3) Which of the following is not explained in detail in the passage?

- a) What magnetism means
- b) What purpose the compass serve
- c) When magnets were discovered
- d) What attraction and repulsion mean

- 4) Write briefly about how the saying "like poles repel, unlike poles attract" is reflected in human life?

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- 1) How does the author do the 'context setting' in paragraph 1 before introducing the topic of Magnetism?

The author sets the context by talking about how science is full of amazing laws and processes by which our world works. Then she leads the reader to terms like energy, motion, or gravity and mentions how these laws and processes govern light, heat, and sound.

- 2) Why does a compass always point toward the north?

This is because the Earth's magnetic force is emitted from the North Pole. This force attracts the magnet inside the compass, so the compass points toward the north.

- 3) Which of the following is not explained in detail in the passage?

- a) What magnetism means
- b) What purpose the compass serve
- c) When magnets were discovered
- d) What attraction and repulsion mean

- 4) Write briefly about how the saying "like poles repel, unlike poles attract" is reflected in human life?

People with different or opposite character traits tend to gel well with each other, and those with similar ones often don't.

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Answer key

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- 5) Make a list of 4 words related to magnets from the text and use them in sentences.

Answers may vary.
