



PHYSICS Magnetic Cereal



BIG IDEA

Use magnets to find out how much iron is in your cereal!

MATERIALS

- Cereal with high iron content
- Strong magnet
- Ziploc bag
- Water (optional)

THE SCIENCE

Foods contain many nutrients that our body needs. When we eat, our body converts the food into energy and supplies us with vitamins and minerals. Iron is one of those minerals! It's important because it helps our body transport oxygen. Iron is also magnetic, though.

A magnet creates a field around it that can attract or repel other magnets and magnetic objects. The closer a magnet gets to a magnetic object, the harder it pulls on it.

A magnet has two poles – north and south. Two north poles will repel each other, and two south poles will also repel each other. A north pole and a south pole will attract toward each other.

INSTRUCTIONS

Before doing this experiment, remember to be careful with your magnet. Strong magnets should be kept away from computers, phones and other electronic devices.

1. Put about 1 cup of cereal into your Ziploc bag and seal it well. Run your magnet across it. Does the cereal follow your magnet? Probably not, but cereal with a high enough iron content might!
2. Crush up the cereal in the bag. You can use your hands, a spoon, the bottom of a plate – anything you can find! Crush it until it's a fine powder (the finer the better).
3. Take your magnet and run it around the outside of the bag again. Does anything follow the magnet now? You might start to see small dark specks; that's the iron! You can try putting the magnet inside the bag and moving it around, too.
4. If you aren't seeing the iron flakes, dissolve the cereal powder in some warm water. Then try running the magnet around in the cereal.
5. Finally, if you still aren't finding iron flakes, you could try another type of cereal or another magnet.
6. Try this experiment out with many different cereals! You can even make a whole experiment out of it if you'd like. The amount of iron in a cereal can be found on the back of the box in the Nutritional Facts section.