

Are you looking for something to do to keep your brain active and engaged? We're here to help with Science at Home! You can do these fun science activities using commonly found items. You can also visit us at the Museum's [Science at Home](#) page for additional resources.

Iron in Fortified Foods

What does "fortified" indicate when we see it on a nutrition label? This experiment lets you test the amount of iron in your fortified cereal!



Nutrition Facts	
Protein 5g	
Vitamin D 0mcg	0%
Calcium 20mg	2%
Iron 16.8mg	90%
Potassium 220mg	4%
Thiamin	35%
Riboflavin	25%
Niacin	30%
Vitamin B ₆	30%
Folate 360mcg DFE	90%



Materials Needed:

Magnet (*as strong as possible*).

Piece of white paper

Resealable zip-top bag

Water

Bowl and spoon

Different types of breakfast cereals that contain iron, such as fortified corn flakes or shredded wheat (*check the label to see how much iron each serving contains – the more the better!*)

Instructions:

1. Pour out one serving of dry cereal into a bowl.
2. Hold the magnet over a whole flake or piece of cereal. Did the magnet lift it?
3. Crush the cereal with the back of a spoon or other firm kitchen utensil. Keep crushing it until it becomes a fine powder (*the finer you can get it, the easier it will be to separate out the iron particles*).
4. Test the magnet over dry, crushed cereal. Did any cereal or iron cling to the magnet?
5. Carefully pour the cereal into the resealable bag.
6. Fill the bag halfway full of water.
7. Carefully seal the bag and gently swish the liquid around until the cereal powder has dissolved.
8. Gently run the magnet on the outside of the bag, running it over the cereal particles, then slowly bring it to the water's surface. If your magnet does not have a handle, you can drop it in the bag and reseal it.
9. Examine the magnet's surface. Were you able to collect any iron? (*The iron looks like small black specks*).

Extra Experiments:

Try this activity with different types of cereals and see whether you collect more or less iron. Compare your findings with the nutrition facts labels on the boxes. Are there any other fortified foods that may contain added iron?

What We've Learned

Breakfast cereals and other grain products that are fortified have vitamins and minerals like iron, zinc and calcium added during processing. That is a good thing! Although we all would like to eat only whole grains and foods, modern life does not always permit us to do so. The added minerals in food are a benefit, things our bodies need, so it's best to get them in when you can.

As it is in Earth's rocks and soil, like the red soil and clay here in North Carolina, the iron in your breakfast cereal is attached to the other substances around it. When you crush cereal, it helps to free up the iron particles, so they can be picked up by the magnet.

Having Fun?

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