



# EMPIRIBOX

## Primary School Science

Here at Empiribox, we combine keeping our bodies fit and healthy with learning about how they work. We see the two things running parallel and give children the chance to explore how to care for themselves at the same time as learning about their eyes, ears, organs and muscles work.

In this class activity, you will learn about iron in our breakfast cereals and see if you can extract it.

Spectacular Science

Iron In Our Food

### What is in our food?

Iron is an important part of our diet as it helps with the transport of oxygen around the body and a lack of it can lead to health problems like anaemia, cold hands and feet, brittle nails and shortness of breath.

You may have seen that some foods say that they are “fortified” with iron. But did you know what that means is the iron is often added in the form of fine iron filings which are mixed into the food.

Did you also know that it’s possible to get the iron back out of the food with a magnet?

### What you will need

Magnet (as strong as possible)

Cereal (we recommend one that has the highest fortified iron content you can find, such as bran flakes)

Sealable sandwich bag (to crush the cereal in)

Something to crush the cereal with like a rolling pin

A microscope

### Activity – can you extract the iron from your cereal?

1. Put a few handfuls of cereal into the sandwich bag
2. Use a rolling pin to smash the cereal into a fine powder
3. Fill the bag with water until the cereal forms a paste
4. Take a strong magnet and fish around in the paste with the magnet for a few minutes
5. Carefully clean the magnet in a bowl of clean water and gently pat dry
6. Use a digital microscope to check the magnet for flakes of iron

### Class discussion

As a class, discuss why you think food manufacturers have added iron to these cereals and the benefits this means for people eating the cereals.

Children and pregnant women need more iron than adults, but can you work out why? Note, it has something to do with how fast they’re using up the food in their bodies.