Materials Needed
- Breakfast cereal that contains iron (check the label to see how much iron each serving contains – the more the better)
- Magnet
- Bowl and Spoon
- White piece of paper

Grade Range
3-5
6-8

Topics/Skills
Science: Elements; Matter; Magnetism

Learning Standards
NGSS: Matter and Its Interactions; Forces and Interactions

Duration
15 - 20 minutes

Prep Time
5 minutes

Iron Cereal – Yum?

Hidden Materials in Breakfast Cereal

Did you know that breakfast cereal and the Earth's crust have some things in common? They both have some of the same materials in them! It might seem weird to compare a bowl of cereal to a pile of dirt but this activity will help us identify one of the most common elements on Earth in cereal: iron.

Activity Challenge
Discover how much iron is in breakfast cereal.

Preparation
1. Review materials list and gather needed items.
2. Pour out one serving of cereal into an empty bowl.

To Do
1. Pass the magnet over the dry cereal. Observe what happens.
2. Crush the cereal with the back of a spoon until it becomes a fine powder.
3. Carefully pour the cereal powder onto a white piece of paper. Even out powder into a thin layer.
4. Run the magnet closely over the top of dry cereal powder. Observe what happens.

Observations
What happened to the cereal when you ran the magnet over it at first? What happened when you passed the magnet over the crushed cereal powder? How is the magnet pulling up (attracting) the cereal? Is the magnet picking up any black particles? If so, those are bits of iron! How much iron did you get out of the cereal?

Extensions
- Repeat this activity with another breakfast cereal with iron. Which brand of cereal has more iron?
- Find iron in other dry foods using the same/similar process.

The Science Behind the Activity
Iron is found in a variety of things. Alloy steels, rocks, cereal, and blood are common examples. Even though it makes up only five percent of Earth's mass, iron is one of the most frequently used metals on the planet. Iron is **magnetic** like many other metals and is attracted to other magnetic materials. Magnetic interactions such as the attraction between iron in fortified cereals and a magnet provide evidence of the existence of **magnetic fields**, models used to describe the distribution of magnetic forces in the space around and within magnetic objects.