

Force-full Cereal

Overview: Did you know that your cereal may be magnetic? Depending on the brand of cereal you enjoy in the morning, you'll be able to see the magnetic effects right in your bowl. You don't have to eat this experiment when you're done, but you may if you want to (this is one of the ONLY times I'm going to allow you to eat what you experiment with!) For a variation, pull out all the different boxes of cereal in your cupboard and see which has the greatest magnetic attraction.

What to Learn: Magnets can be used to make some objects move without being touched. Certain materials that contain iron are affected by magnets, like your breakfast!

Materials

- cereal
- bowl
- milk (or water)
- spoon
- magnet (1, rectangular)
- magnet (1, disk)

Lab Time

1. Fill the bowl with milk (or water).
2. Put about 20 pieces of cereal into the bowl. You want to make sure there's space for the experiment. What do you notice about the Os? Do they attract each other?
3. Stir up the bowl a little and note what happens.
4. Separate a single piece of cereal and get it a little close to a clump of cereal. What happens?
5. What happens if you bring a magnet close to the cereal? Do different magnets affect the cereal differently?

Reading

In this experiment, you'll see the cereal "O's" get close to one another as they attract each other. The closer they get, the stronger their attraction to each other and the faster they move towards each other. If you wait and watch long enough, you get a nice tight batch of cereal all clustered together in one or two big blobs. This activity is a great illustration of what is meant by the inverse square law because the attraction between "O's" was stronger the closer they got to each other.

I discovered this activity one morning as I was eating cereal. The same thing happens with bubbles when you're doing the dishes. Science is everywhere! Feel free to eat the cereal!

Exercises Answer the questions below:

1. Why do the pieces of cereal stick to each other?
2. Does the cereal move slower or faster the closer the pieces come in contact with each other?
3. What other cereals does it work for?

Answer to Exercises: Force-full Cereal

1. Why do the pieces of cereal stick to each other? (The iron in the cereal makes it act like a bunch of little magnets.)
2. Does the cereal move slower or faster the closer the pieces come in contact with each other? (Faster)
3. What other cereals does it work for? (Any cereal fortified with iron.)