TARWATER ELEMENTARY SCHOOL STEM LAB

Activity ID: L-4

Activity Name: What's for Breakfast?

MATERIALS:

Materials Provided in Bin:

Item:	Quantity:	Notes:
Lesson Plan	1	
Gallon Ziploc Baggies	1 per group	
Neodymium Magnet	1 per group	4 in the box
Plastic bowls	1 per group	

Materials In STEM Lab or Classroom (Common Items):

Item:	Quantity:	Notes:
Water	¾ of a gallon per group	Cereal needs to soak 1 hr.

Materials Teacher/Parents Need to Provide:

Item:	Quantity:	Notes:
Total or Wheaties Cereal (iron fortified cereal)	2+ cups per group	1 cup for bag (more than 1 cup may be better); 1 cup for bowl
Optional: Non fortified cereal	2 cups per group	1 cup for bag; 1 cup for bowl
Optional: Other items with iron in it	Varies	Raw Iron Ore is pretty cool if you can get it!

WHAT ARE WE DOING?

Discovering the iron that is added to food to provide mineral supplements human bodies need.

VIDEOS / LINKS:

http://mocomi.com/iron-in-cereal/_

https://www.cde.state.eo.us/cdelib/cerealiron

Lots of YouTube videos

SAFETY NOTES:

Water involved.

SCIENCE TERMS:

Fortified

Magnetism

Nutrition

Iron (Fe)

Hemoglobin

STEPS:

1. Take your Ziploc bag and add approximately 1 cup of flake cereal to the bag. (If you choose to compare iron

fortified to non-fortified, keep the cereals in separate baggies and bowls.

2. Fill the bag with water so that it is¾ full.
3. Let the bag sit for an hour. (Consider starting this part before recess or lunch).
4. Place another cup of cereal in a bowl.
5. Place the magnet over the bowl and see if it is able to pick up any cereal flakes.
6. Crush the cereal in the bowl into crumbs.
7. Place the magnet over the crumbs and see if anything gets picked up. If doing it with the optional non-fortified, compare the differences in what the magnet was able to pick up.
8. When the cereal has soaked for an hour, place the magnet in the palm of your hand and then lay the baggie against the magnet. Swish the bag around for 15-20 seconds with your other hand lying on top of the bag. (The baggie will be sandwiched between your two palms.)
9. Turn your hands so that you have flipped the bag and the magnet is now on top. Slowly move the magnet toward a corner of the bag. The amount of iron will be small, so they really have to pay attention to see it, but it will be black.

10. Examine what has been collected beneath the magnet. Then see if you can move it around with the magnet.

QUESTIONS TO ASK STUDENTS:

1. What did you observe?
2. Why do you think this is added to our food?
3. Why is it attracted to the magnet?

CLEAN-UP:

Into the Bin = Lesson, Ziploc bags, bowls, magnets

Back to Lab/Classroom= Bin

Trash/Recycle = used cereal and used baggies

IF RUNNING OUT OF A SUPPLY IN THE BIN, PLEASE CONTACT LAURIE JONES IN THE OFFICE (X4307)
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