

Pre-Show Activity: Metal in Your Mouth

And now... a **RIDDLE!** What's found in the ground and something that you put in your mouth? As weird as that may sound, it does have an answer: metal! Of the different metals, your body mostly needs iron although trace amounts of other metals are also necessary. Many vegetables, meats, and cereals contain iron, which helps to build blood cells and helps your cells to carry oxygen throughout your body.

Activity Objective: Students will explore the sense of touch and how the brain perceives information about an unknown object.

This activity can be done in groups of 2 through 4.

Materials

- Box(es) of Total[®] cereal or another iron-fortified cereal
- Plates
- Zip-lock bags
- Water
- A strong magnet (such as a neodymium magnet)

Teacher Preparation

Prepare before lesson begins.

1) Measure an equal amount of cereal for each group. 2 cups would be a sufficient amount per group. You can store it in the Zip-lock bags.

2) You may want to have plastic trays or tubs available for students to perform this activity over since water is involved. Or, students could do this activity outside.

To Try with Students

- Discuss the food that your students eat and ask them what foods might contain metal.
- Divide students into groups and hand out the materials to each group. There are three parts to the experiment so make sure they do not use all of their cereal on the first part.



Check it out online:

<http://www.californiasciencecenter.org/FunLab/DoItYourself/Nutrition/Iron/Iron.php>

Includes an animated demonstration!

Activity 2: Metal in Your Mouth



What to Do

- 1) Pour a small pile of Total cereal flakes onto a plate and crush them into many tiny pieces.
- 2) Spread out the pile of cereal crumbs on the plate. Bring the magnet close to the crumbs but try not to touch the cereal. Do any of the pieces move? If there's metal, the magnet might make the cereal move.
- 3) Now put the magnet onto the crushed cereal but don't move it. Lift up the magnet and see if anything stuck to the bottom. You might see little pieces stuck to the magnet. What do you think this means?
- 4) Clean off the plate and pour some water on it. Let a few cereal flakes float on the water. Hold the magnet close to a flake but don't touch it. Did any of the flakes move towards the magnet?
- 5) Measure around one (1) cup of Total cereal into a Zip-lock bag. Fill the bag at least half full with warm water and zip the bag closed. Mix the cereal and water by squeezing and squishing the bag until the cereal looks like a soup. Make sure it's all mixed together.
- 6) Put the magnet on top of the bag and shake the cereal and water inside the bag. See any metal (iron) from the cereal going to the magnet? If you see tiny black specks, that's iron!
- 7) Move the magnet around in circles. The iron will gather into a bigger clump and be easier to see. When you're finished, pour the mixture down the drain and rinse the bag. You might find iron in other cereals too. See which cereals have more iron. Try it!

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