Maggie Magnificent

Date 9-17-11 Period 8

So Cool :) 4

Separating Mixtures part2

Purpose (Learning Target) I will identify properties of matter that relate to seperating mixtures.

Hypothesis: How could you use a physical property to separate a mixture?

You could use a physical property such as magnetism to seperate the materials from magnetic mixtures and non-magnetic mixtures. I predict from this experiment that 70% of the material will be dirt and 30% of it will be iron shavings.

Materials:

1. Petri Dish
2. Sample Mixture (rocks, dirt, iron shavings)
3. Two paper cups
4. Scale
5. Plastic Bag

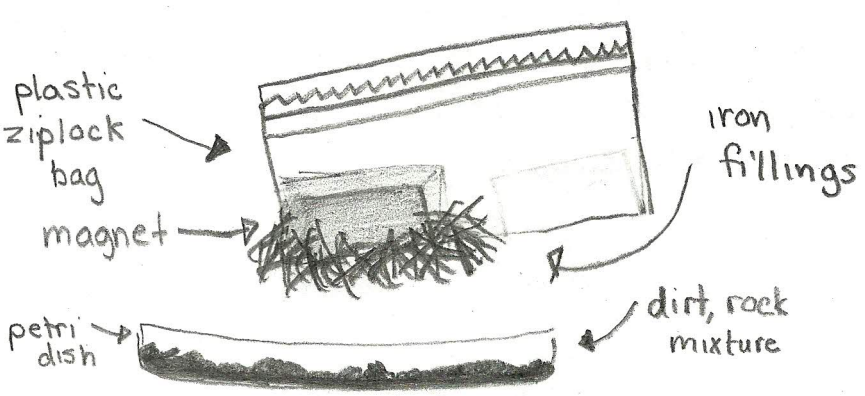
Procedure: Develop a procedure to test your hypothesis.

1. Place mixture in petri dish and measure of scale to confirm weight.
2. Place magnet in bag and go over mixture removing the iron fillings and place the fillings into one of the cups and the rest of the mixture (non-magnetic into the other cup.
3. Measure the weight of the 2 cups and record data in table and make observations or conclusions.

Data/Results/Observations: Data Table needed for analysis question 3

	Mixture	Iron Fillings
start test 1	93g.	0g.
finish test 1	76.5g.	9.8g
start test 2	73.2g	0g
finish test 2	57.9g	10.8g

- I noticed that some of the dirt was on the magnet because it got stuck in the iron filling mixture.
- Most of the iron shavings were on the points of the magnet.



Analysis (Levels 1-4 are required)

Level 1: Define Physical Property. A physical property is any characteristic of a material that you can observe without changing the identity of the substance that make up a material.

Level 2: Explain how you can use a physical property to separate mixtures.

You can use a physical mixture to seperate a mixture by using a magnet to seperate the iron shavings that are attracked to it from the dirt mixture.

Level 3: Using data you collected support why using a physical property is a good way to separate a mixture. Remember it must be tangible.

Using a physical property is a good way to seperate a mixture because it lets you take advantage. In this peticular experiment, we used a magnet. That aloud us to collect the amount of iron fillings in the mixture which in our 1ST test we collected 9.8 grams out of the mixture

Level 4 Compare in detail the results of this lab to an outside occurrence.

This lab reminded me of a thing my dad uses at his job called a Speed Swing. It goes along the tracks and picks up spikes, rails, and other metal material with a magnet so they can lay down new ties for the railroad track.

Conclusion (Required)

1. Conclusions must be written in paragraph form. Do not number or bullet a conclusion.
2. Restate the purpose / question/ problem.
3. Tell whether you accept or reject the hypothesis based on the results from this experiment.
4. What did you learn in this lab?
5. Now I wonder? (What are possible further experiments or questions that you could ask based on this experiment?)

In this lab we identified properties of matter that relate to seperating mixtures. I accept my hypothesis because we used magnets to seperate the mixture and my prediction that 70% of the material was dirt and only 30% of it was iron shavings was very close. The actual results was that 85% of the mixture being dirt and 15% of the rest being iron shavings. From this experiment I learned that using a physical property you can see characteristics (like magnetism) that cause the material to seperate from each other. I now wonder if the magnets had a stronger pull if it would cause more iron fillings to be pulled out of the mixture.