# Which Cereal Has The Most Iron

## 1st Grade

# Testable Question:

What breakfast cereals at my house has the most iron?
- Rice Crispies
- Frosted Flakes
- Frosted Mini Wheat

How can we measure it?

# Prediction:
I think based on the content of iron on the box:

- Frosted Mini Wheat
- Rice Crispies
- Frosted Flakes

# Procedure: 5pts - Describe the step-by-step process you have planned in a way that someone else could repeat the same process. Be detailed and as clear as possible. Use as many or as few steps as you need.

1. Pour cereal into blender
2. Put 1.5 cups of water
3. Blend for 30 seconds
4. Pour into labeled containers
5. Weigh magnet
6. Record weight
7. Put magnet into mixture
8. Wait 30 minutes
9. Remove magnet
10. Weigh magnet again
11. Record weight
12. Repeat three times for each cereal

# Background: 5 pts - Describe why this project was selected and share what you found out in your research. Explain why this project is important.

I chose this project because I like cereal and I want to understand how it helps my body

In my research I found out that iron is important for my growth and development. One thing iron does is help move oxygen from my lungs to the rest of my body.

This project is important because I learned about the importance of iron in my diet. I also learned about taking measurements, magnets, and scales.

# Constant Conditions: 10 pts - Identify your independent variable, dependent variable, and constant conditions. Be sure to measure in metric measurements.

Independent Variable: On each experiment, I changed the type of cereal.

Dependent Variable: The weight of the magnet before and after I added the magnet to the water and cereal mixture

Constant Conditions:
- Same amount of cereal each time
- Same amount of water each time
- Blended each mixture for 30 seconds each time
- Let it sit for 30 minutes each time

# Data and Trials: 15 pts & 5 pts - Use photos, charts, graphs, or illustrations to show your data. Be sure to label your data and add information clearly. At least 3 trials or observations should be shown. No faces should be shown in photographs. Use additional pages if needed.

## Materials

- Cereal
- Magnets
- Plastic Containers
- Scales
- Blender

# Data and Trials: 15 pts & 5 pts - Use photos, charts, graphs, or illustrations to show your data. Be sure to label your data and add information clearly. At least 3 trials or observations should be shown. No faces should be shown in photographs. Use additional pages if needed.

## Experiment In Progress:

# Data and Trials: 15 pts & 5 pts - Use photos, charts, graphs, or illustrations to show your data. Be sure to label your data and add information clearly. At least 3 trials or observations should be shown. No faces should be shown in photographs. Use additional pages if needed.

# Results:

1. Measurements are all in grams
2. Experiments were repeated 3 times

| | Frost MiniWheat | Rice Krispies | Frosted Flakes |
|---|---|---|---|
| | Before | Before | Before |
| 1 | 65.51 | 67.58 | 69.58 |
| 2 | 68.19 | 68.4 | 67.81 |
| 3 | 66.97 | 67.03 | 72.55 |
| | | | |
| | After | After | After |
| 1 | 65.7 | 68.99 | 71.48 |
| 2 | 69.17 | 68.72 | 69.66 |
| 3 | 68.38 | 67.15 | 73.21 |
| | | | |
| | Difference | Difference | Difference |
| 1 | 0.19 | 1.41 | 1.9 |
| 2 | 0.98 | 0.32 | 1.85 |
| 3 | 1.41 | 0.12 | 0.66 |
| | | | |
| | Actual Results | Actual Results | Actual Results |
| 1 | 3 | 2 | 1 |
| 2 | 2 | 3 | 1 |
| 3 | 1 | 3 | 2 |
| | | | |
| | Expected Results | Expected Results | Expected Results |
| 1 | 1 | 2 | 3 |
| 2 | 1 | 2 | 3 |
| 3 | 1 | 2 | 3 |

# Conclusion and Reflection: 10 pts - Share what you learned. Were there any surprises? What would you do differently or to continue the project?

I found out that my results did not match my expectations.  The Frosted Flakes which I expected to be last, often showed up first.  The other two cereals had mixed results.

I was surprised that results were so different than I expected

If I did this project again:
- I would use different colors of magnets because the magnet and the iron were the same color and it was hard to see the iron.
- I would also get stronger magnets.
- I would use more cereals
- I would find a better way to weigh magnets because sometimes the magnets messed with the scales