



**CALIFORNIA SCIENCE & ENGINEERING FAIR  
2018 PROJECT SUMMARY**

<b>Name(s)</b> <b>Tyler Lee Simerson</b>	<b>Project Number</b> <b>J2116</b>
<b>Project Title</b> <b>Heavy Metal for Breakfast: How Much Non-heme Iron Is in My Breakfast Cereal?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of this project is to extract non-heme iron from breakfast cereal, and to determine if more iron can be extracted from cereals with a higher iron content. <b>Methods/Materials</b> Used a triple-beam balance and magnets to extract non-heme iron from cereal by weighing each magnet on a triple beam balance to get its starting weight, then stirred it into the cereal solution, removed it and re-weighed it to measure the amount of iron extracted from each cereal. <b>Results</b> Non-heme iron was extracted from each cereal tested. The cereals with the highest percentage of daily values of iron on their nutrition label were the ones with the most iron extracted during this project. <b>Conclusions/Discussion</b> I was able to extract iron from all of the cereals I tested. Iron is used in the body to build platelets and hemoglobin to carry oxygen to the cells. It is a very important nutrient to your body. I learned that there are two types of iron, both are magnetic. They are heme and non-heme. The difference is heme iron is found only in animals and non-heme can be found in plants and animals. It is easier for your body to use heme iron. The cereals use non-heme iron to fortify the amount of iron in the cereal. So even though some of the cereals I used have lots of iron my body might not be able to use it all. I accepted my hypothesis because I found more iron in the cereals with the higher daily value.	
<b>Summary Statement</b> Extracted and compared the amount of non-heme iron in five breakfast cereals to see if there is a correlation between how much the iron that is extracted compares to the percentage of iron listed on the Nutritional Label on the cereal.	
<b>Help Received</b> My science teacher taught me how to use, and loaned me, a triple- beam balance to use for this project.	