

## Engineering Process Template

<b>Name:</b> Sarah Wille, Stephanie Bass, Emily Prouty, Jennifer Sellner
<b>Title:</b> Building a Better Battery
<b>Problem</b> We are trying to build a better battery to spin the wheel of the motor.
<b>Requirements</b> We are to make a better battery than the one in the example. It should spin faster than the original battery.
<b>Solution</b> Our prototype was constructed using the wet cell chamber and the solution. We used copper and magnesium for our final product. This was much faster spinning than the example, and was a better battery. We doubled up the strips to make it a tad faster.
<b>Materials for Prototype</b> We need the following: Wet cell chamber, strips of the following metals: Cu, Mg, Fe, Zn, electric motor, wires, mixture of salt, hydrogen peroxide, and water, and a motor.
<b>Procedure for Building Prototype</b> <ol style="list-style-type: none"><li>1. Make the mixture</li><li>2. Pour the mixture into the wet cell chamber</li><li>3. Put the metal strips into the chambers</li><li>4. Clamp the wires to the metal strips and the other end to the motor.</li><li>5. Record the RPM and adjust as necessary.</li></ol>
<b>Test and Evaluation</b> We will try different metals and see if we can get the motor to spin faster than the example. We tried zinc and copper but it didn't work. Our best results were with the copper and the magnesium.
<b>Analysis and Results of Tests</b> At first, our motor did not spin. After tweaking the different kinds of metals, we found that copper and magnesium worked the best.

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## **Conclusion**

In conclusion, the longest lasting and strongest battery would be made of copper and magnesium. This would provide the most power and energy compared to other metals. While other metals might work, copper and magnesium were by far the best materials for the job.