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Going Green with Insulation

The purpose of this experiment was to determine what material makes the best insulator. This information is beneficial because many recyclable and alternative materials can be used for insulation, such as hay, denim, adobe and tire chips. Out of four different insulators, the tire chips will provide the best insulation.

The experimental procedures were lengthy and required prep work, such as building the boxes and frames and mixing the adobe, which was a very fun learning experience. The first step was to heat tap water to 115 degrees Fahrenheit. Water was poured in an 8 ounce cup, which was placed inside a small box, covered with a lid and thermometer inserted into hole in lid. After insulator placed inside the big box, a lid covered the big box and placed in refrigerator. Four temperature readings were taken at 30 minute intervals. A test was completed using no insulation in order to provide a base.

The data showed that the tire chips were the best insulator, hay being second, adobe being third, and denim being fourth. The data showed that when tire chips were used as an insulator, the temperature dropped from 115 Fahrenheit to 72.7 Fahrenheit, a difference of 42.3 degrees between the first and last readings. This compares to a total of 68.8 degrees drop in temperature when no insulation was used.

In conclusion, the results of the experiment concurred with the hypothesis. I learned from this experiment that recyclable materials can be very useful as insulation.