Burning Calories

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Have you ever wondered how nutritionists know how many calories a certain food contains? In this project, I used a more homemade method for measuring how much chemical energy is available in different types of food. I constructed my own calorimeter to capture the energy released by burning a small food item. It gives a new meaning to the phrase "burning calories." The purpose of this experiment was to see if the amount of chemical energy stored in peanuts, Cheetos, marshmallows, and popcorn can be determined based on measuring the heat produced with a calorimeter and which food would burn the most calories and have the most calories/gram. I predicted that the calorimeter would accurately measure the amount of energy food gives off, and the Cheetos would burn the most calories and have the most calories/gram. The steps were as followed. After building the calorimeter, I weighed each of the food items and recorded the weight, filled the smaller can with 90 grams of water, and measured the initial temperature of the water. I impaled the food item on the needle and placed the cork on a non-flammable surface. I lit the food item, and when it caught fire, placed the rest of the calorimeter on top of it. When the food burned out, I measured the final temperature of the water. These steps were repeated for each food item. The calorimeter worked, the Cheetos were the heaviest and burned the most calories, and the popcorn had the most calories per gram, making my hypothesis only partially correct.

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