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Neuro 430
Model Project
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Slow and Steady Wins the Race

Purpose: To show how the type of food ingested can impact one's physical and mental endurance.

Materials Needed: Jelly Beans, M&Ms, bananas, peanut butter & jelly sandwiches on whole wheat bread, etc. For the relay race: math problem, nerf ball, jump rope, mini-trampoline.

Experiment: We will begin with reminding the children about the “Tortoise and the Hare” fable. We will explain that before the race, the tortoise ate a balanced meal of healthy protein and fat, as well as whole grain bread and vegetables. The hare, however, stopped at a fast-food restaurant and had some French fries and a large pop, followed by some candy. Then, a short introduction about food will instruct the students about the different types of macromolecules in food, and how they are absorbed in the digestive tract. Students will be asked how they feel (physically and mentally) after eating certain types of food. Also, they will be asked if they know why a certain food might make them feel tired, or excited, etc. Fifth graders will be assigned a food to eat by drawing pieces of paper from a hat. The pieces of paper will also have a number (i.e., 1, 2 or 3) that will instruct them to form a team with others having that number. Once the food and groups are assigned, they will receive a list of instructions regarding what stations to go to, and in what order. Students instructed to eat foods that are quickly digested (e.g., simple sugars) will be told to go to only the first station, where they will jump around on a mini-trampoline for 30 seconds and then sit down for the rest of the experiment. The tasks will increase in difficulty and endurance as the type of food becomes more complex (i.e., healthy). The team with the most complex food groups ingested will finish first, as teams with a member eating a simple sugar will have to go back to a previous task. After the course is finished, the students will be asked questions regarding types of food, and more discussion will occur regarding why it is important for your body and brain's physical stamina and health to eat a variety of healthy foods.