Caffeine and Sugar vs. Focus

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The purpose of this experiment was to discover if caffeine or sugar had an effect on a student's ability to focus, and if so, what this effect was. This would help students develop better strategies to maximize their ability to focus on tests and homework, allowing them to potentially improve scores. In this experiment, I gathered ten participants, all high school students. I gave three tests to take after each substance was consumed: water (control), sprite (sugar), and coffee (caffeine), with time in between tests to ensure that the effects of each substance had worn off. These tests were similar in structure and content; the majority of the questions were based on either logic or basic algebra. The data I collected leaned in favor of my hypothesis, showing a correlation between the consumption of caffeine and sugar and higher test scores/shorter times. On average, the lowest test score was produced by the control test, the sugar test produced a significantly higher score, and the caffeine test produced the highest score. Due to this data, I am able to accept my hypothesis. However, these test scores may have been partially affected by the repetition of these tests rather than the consumption of the substances. If I were to study this subject further, I would have to conduct an experiment with random test order to ensure that it was actually the caffeine and sugar causing the improvement of scores and not just getting used to the test structure.

Awards Won: