Chocolate Milk Study

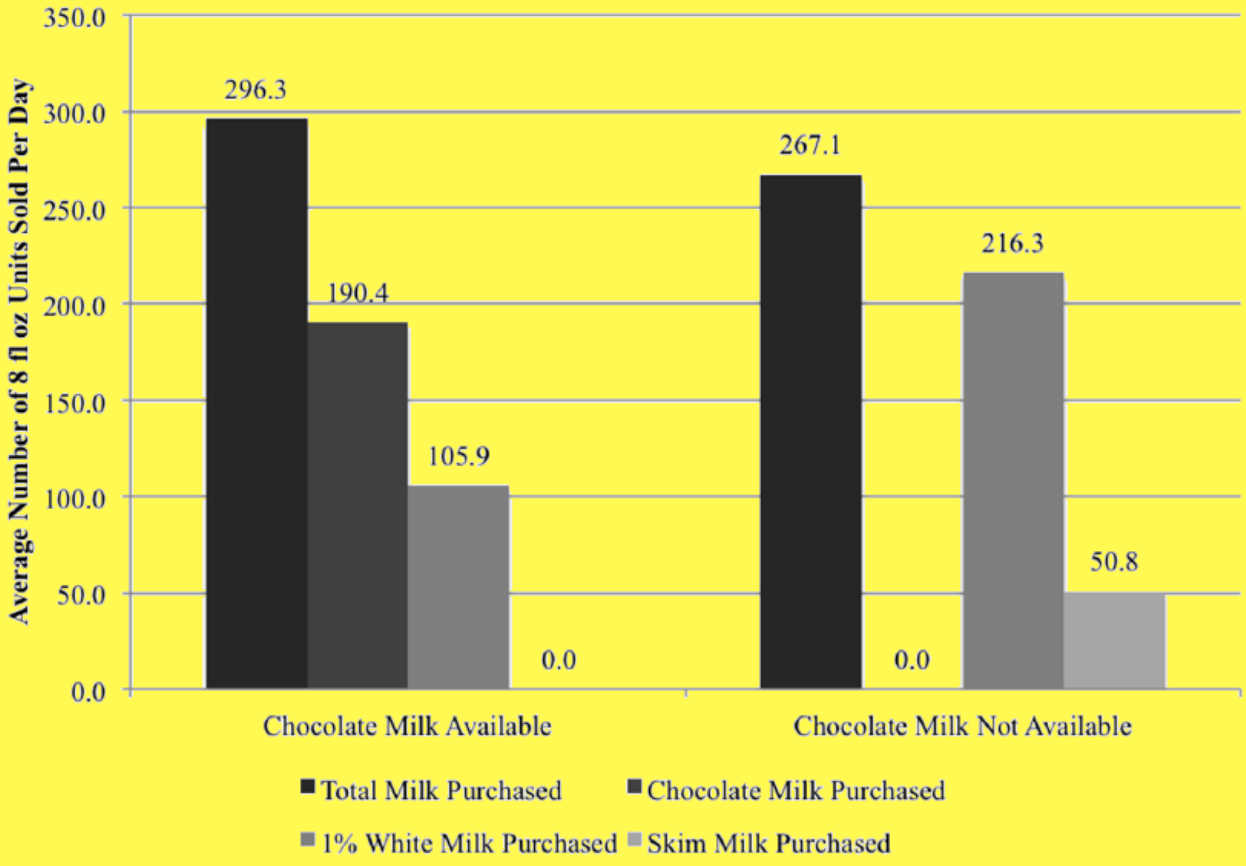
Research Question:

Chocolate milk can have up to two times more sugar than white milk and, as a result, removing chocolate milk from school cafeterias has been debated as a way to reduce childhood obesity. Researchers studied the effect of removing chocolate milk from cafeterias on milk selection and consumption.

Experimental Design:

Researchers recorded how much milk was sold at 11 elementary schools in September and October of 2011, when chocolate milk was available for purchase in the cafeteria (chocolate, 1%, and skim were the only milks available for sale). In September and October of 2012, chocolate milk was no longer available for purchase in the cafeteria, and researchers again recorded how much milk was sold for the same 11 schools.

Results:



TV + Snacking Study

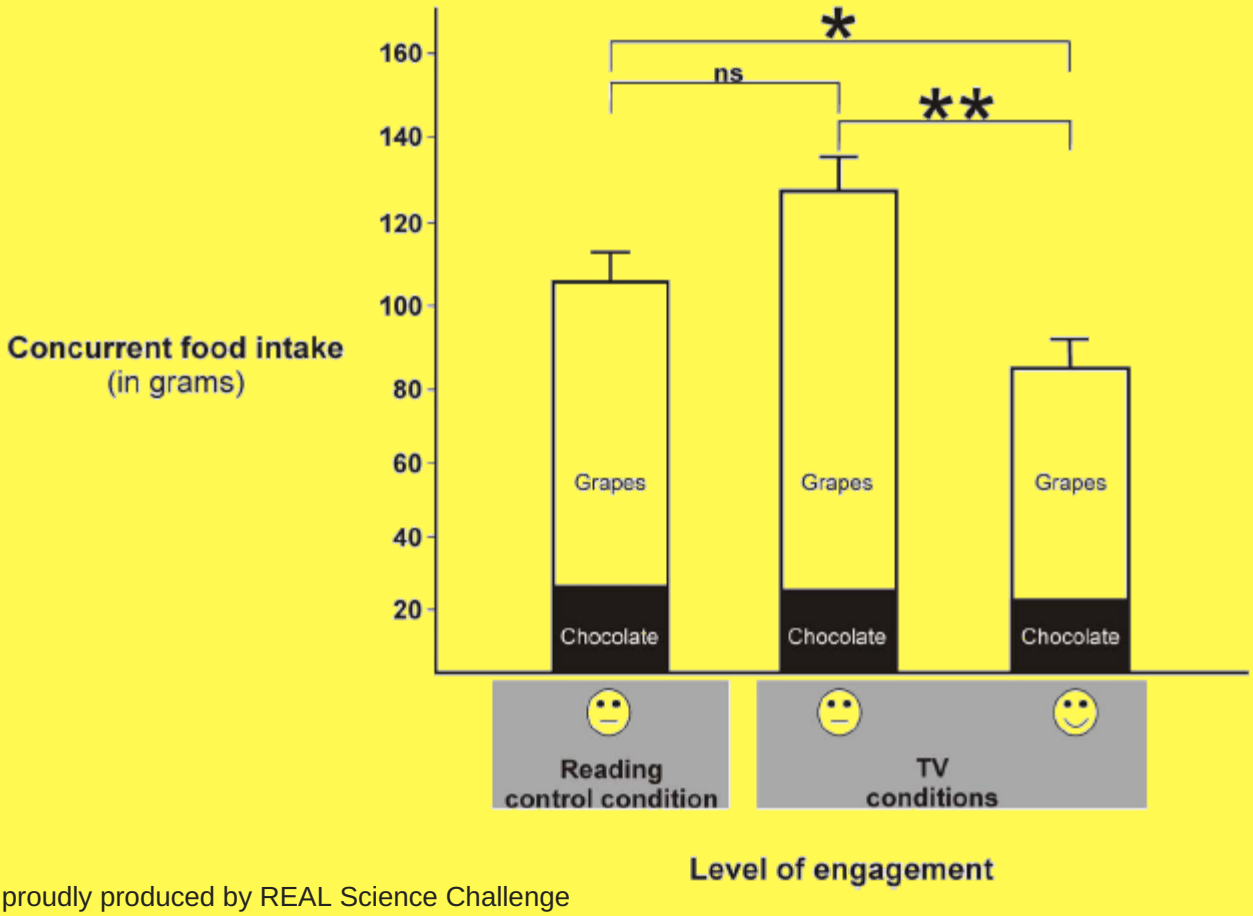
Research Question:

Obesity rates have more than doubled since 1980. There are variety of lifestyle factors that have contributed to this increase. For example, in some studies, researchers have linked watching TV to increases in food intake and, as a result, weight gain.
In a study, researchers in Sweden studied the impact of television content has on food consumption.

Experimental Design:

Researchers had 18 female participants do three activities: read for 30 minutes of non-engaging text (ie. a text on insects living in Sweden); watch 30 minutes of television with boring, unengaging content (ie. an art lecture on public Swedish television), and watch 30 minutes of television with exciting, engaging content (ie. a popular Swedish comedy sitcom). Researchers also provided participants with food (grapes and chocolate). As participants were doing each activity, researchers measured how much food was consumed by each participant.

Results:



REAL Cheat Sheet

1. Identify what the graph represents.

- Does the graph has a title. If it does, it may help to determine the purpose of the graph.
- Identify the variable or element plotted on the x-axis (the horizontal axis of the graph). Do the same for the y-axis (the vertical axis of the graph).
- Identify what the graph represents by filling in the blanks: “The graph shows the effect of <variable x> on <variable y>”.

2. Check the units and scales on both x- and y- axis.

- What is the unit of measurement of both x- and y- axis? Are measurements in metres, seconds, kg (or another unit)?
- How much is one line worth? If the x- or y- variable increases one step, how much is that worth?

3. For one value of x, find its corresponding value for y. Repeat for each value of x.

- n other words, for each condition along the x-axis, see what the result of that condition is along the y-axis.

4. Compare values of y.

Depending on the experimental design, one can either:

A. Compare values of y for each value of x against each other. This is useful to determine which value of x has the greatest (or lowest) value of y.

B. Compare values of y for each value of x against the control. A control is typically an experimental trial that is identical to other trials with one exception: it lacks a “treatment” of X. For example, say we want to set up an experiment to see how well a new brand of dish soap cleans dishes. First, I run a trial where I soak dishes in just plain water. This is the control.. Then, I do the same thing but I add the dish soap into the water. In both cases, say I measure how well the grease washes off the plate after soaking. If we compare the results of both trials, then we can determine if the dish soap works at all to remove grease. If the results are the same between the control and experimental condition, then the dish soap works as well as water (ie. It doesn't work) to remove grease from dishes.