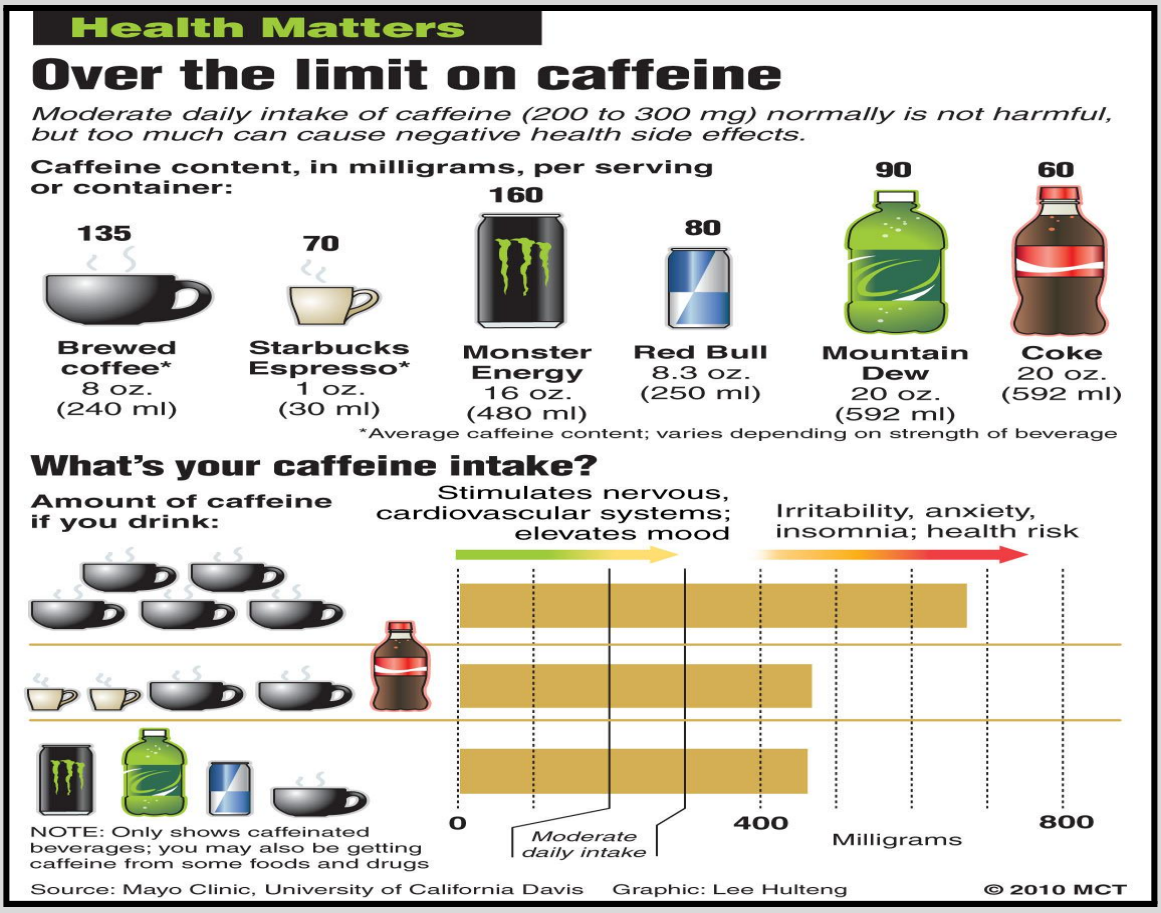
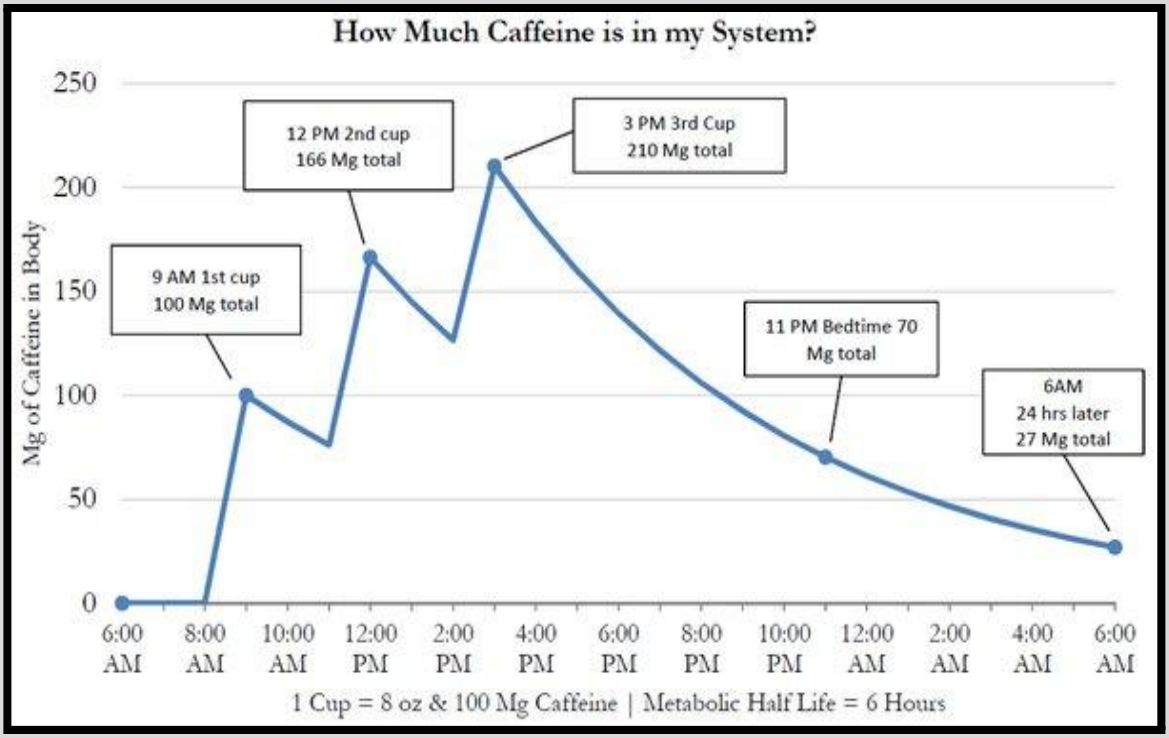
TURNER'S GRAPH OF THE WEEK

Name: **Austin Horner**

Analyze the graphs below and write about what you think the graph is communicating to you. To guide you with your response, start with some observations.





Please answer the following questions:

1-What is the topic of the graph?

Bar - caffeine content of different combinations of drinks
Line - caffeine in the body over a 24 hour period for someone who drank 3 cups of coffee.

2- What quantities are being compared?
What do the x- and y- axis represent? (Think dependent and independent variables?)
Is the scale appropriate for communicating honest data?

Bar - The graph compares the caffeine in different combinations of drinks. This graph is sideways. The x axis shows the combination of drinks. The y axis shows how much caffeine goes into the body after drinking. The scale is appropriate: the y axis starts at zero, and the drinks size icons are about the right relative size.

Line - This graph compares the caffeine level in the body at different times of day as a result of drinking 3 cups of coffee. The x-axis is the time scale, and the y-axis is the caffeine level scale. The scale is appropriate: the time axis units are evenly spaced. The caffeine level starts at zero and has an appropriate range for the data.

3-Analyzing the bar graph found above, what are some observations that you can make?

The bar graph surprised me. I drink mostly water, but I definitely guzzle Monster, Red Bull, and Gatorade. I thought drinking a bunch of energy drinks and coffee would give the most caffeine, but actually 6 cups of coffee gave the most caffeine.

(Six coffees is 6 * 8 oz = 48 oz. The energy drinks are: Monster 16 oz, Mountain Dew 20 oz, Red Bull 8.3 oz, and Coffee 8 oz: 52.3 ounces.)

4-Analyzing the line graph found above, what are some observations that you can make?

The line graph shows caffeine in the body over time. You can observe that caffeine in the body steps up, then declines a bit with each cup of coffee. After the last cup of coffee, the caffeine gradually decreases. Even 24 hours later, there is still caffeine in the body, so the next morning coffee will be added to caffeine that is already in the body. I wonder if that means it just goes up and up over time.

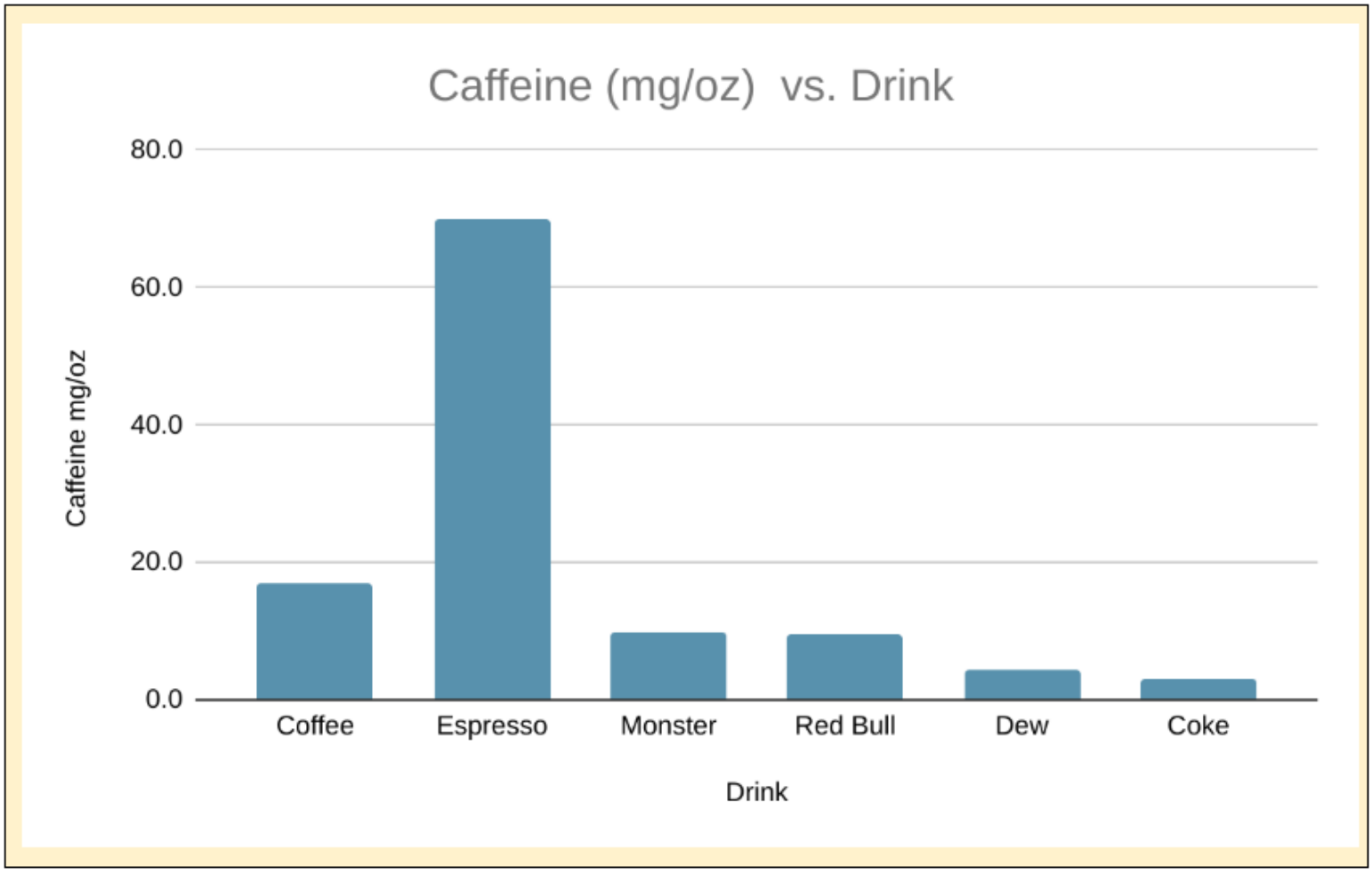
5-What do you think the graph is communicating to you? What is the intention/message? Is there any bias? Explain why or why not.

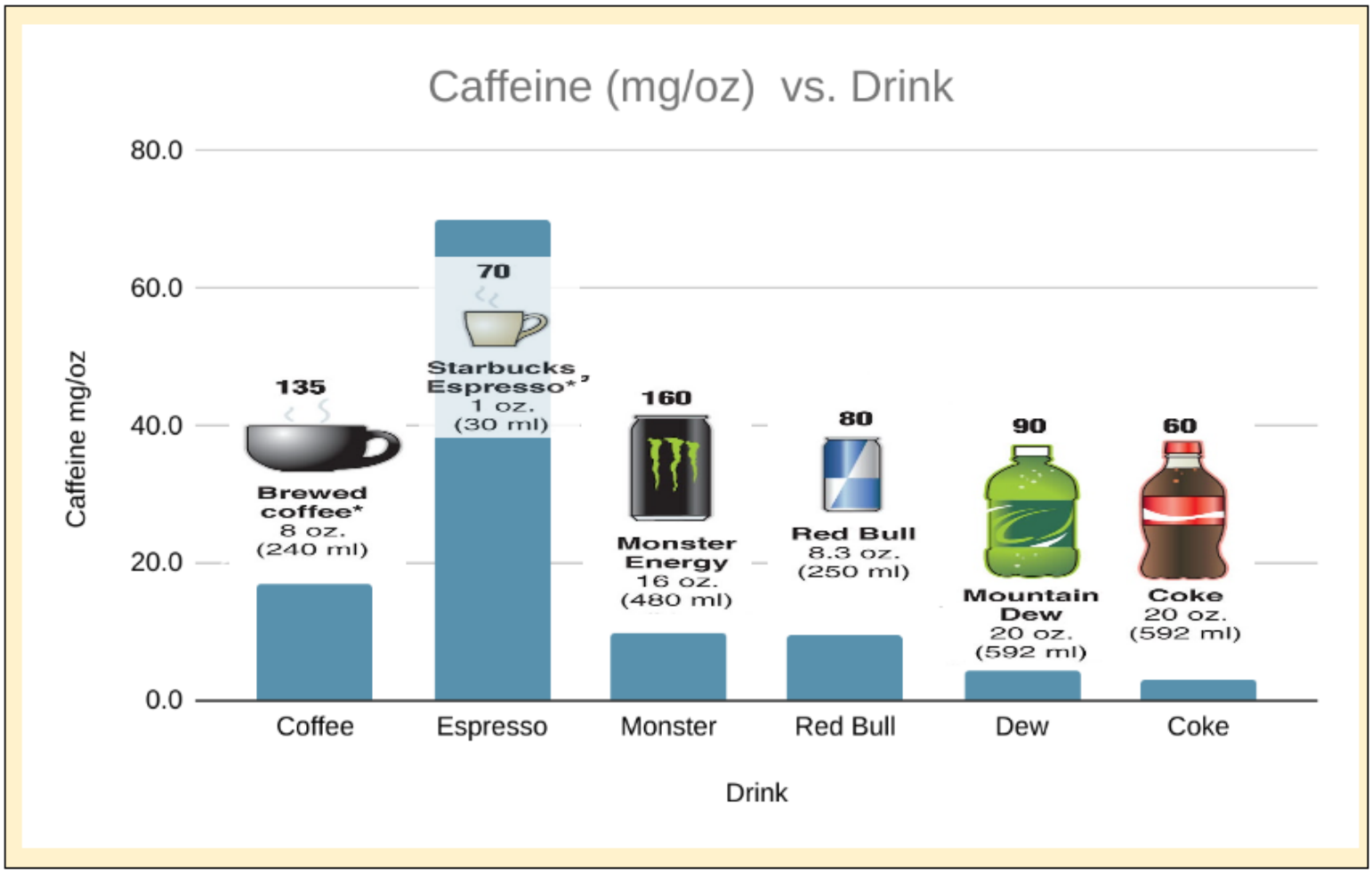
Lots of people live on coffee and energy drinks. These graphs are trying to educate people about the caffeine effects.

I don't think there is intentional bias, but the results would be more accurate if they also provided the mg of caffeine per ounce of drink. The amount of fluid in the three samples is not equal, so there is some inaccuracy.

This is important information to me, so I went ahead and did the bar graph, which I think is the most clear way to see the impact of different drinks. Mixing drinks the way the study did confuses the data. Espresso is by far the most powerful caffeine source.

Drink	Caffeine mg/oz	Caffeine (mg)	Volume (oz)
Coffee	16.9	135	8
Espresso	70.0	70	1
Monster	10.0	160	16
Red Bull	9.6	80	8.3
Dew	4.5	90	20
Coke	3.0	60	20





(This graph was made with Google Sheets and the Photopea app that Mr Higgins showed us in Game Design class)