**Question 1: Are Jelly Belly flavors really that different?**

There are 50 different flavors of Jelly Belly’s. According to Jelly Belly’s website, “Jelly Belly beans expand the flavor horizons with the largest collection of flavors on the planet, each a delicious delight to the taste buds.” If each Jelly Belly is truly a unique and delicious delight to the taste buds, we should be able to tell the flavors apart. Evaluate whether the average consumer can correctly identify different flavors of Jelly Belly better than just guessing.

**Question 2: Can soda drinkers really tell Coke and Pepsi apart?**

Coke is currently winning the soda war: they own 17% of the American market for soda, compared with Pepsi’s 8.9%. Yet, according to Pepsi, their product wins out in every taste test. In fact, in 1975, Pepsi spent $4 million conducting taste tests to convince the public that Pepsi was preferred by the average American consumer. Your TA thinks this is all a waste of money because Coke and Pepsi taste the exact same. Can non-soda drinkers tell the difference between the two? Do people who routinely drink soda have a more discriminating palate?

**Running the experiments**

**[Instructions from 2019]**

*Rotate around the class until you have collected data for both experiments. You will use both datasets in your lab assignment.*

**Question #1: Are Jelly Belly flavors really that different?**

**Directions:** You will test whether our class can tell the difference among different flavors of Jelly Belly’s, and whether we are better at guessing than random chance. There are 6 flavors available for testing. In your group you will each take a turn being the blind taster. While the taster is closing his/her eyes, the non-taster will roll a dice (or sample using R), and then select the matching flavor:

1 = Verry Blue (blue)

2 = Raspberry or Cinnamon (red)

3 = Pina Colada or Pineapple (yellow)

4 = Baja Margarita or Pear (green)

5 = Boyesenberry (purple)

6 = Mango (orange)

The taster will try one jelly bean and guess which of the six flavors (they are allowed to know which 6 are available, so you may remind them). Record a 1 on the spreadsheet if the guess was correct and a 0 if it was not. Repeat so all members of the group guess once.

Think about what statistical test is appropriate for analyzing this data.

**Question 2: Can soda drinkers tell Coke and Pepsi apart better than non-soda drinkers?**

There are 3 types, marked A, B, and C. Drink a small amount of each and record on a piece of paper which of the three you believe is Coke. Also record how often you drink soda. Give paper to TA. Think about what statistical test is appropriate for analyzing this data.