Guess The Flavor!

Introduction Paragraph

Our group wanted to do something related to "our intuitive senses"and distorting them to see how our participants respond. So with a little help, we came up with this topic: "Does the color of a drink influence the subject's perception of the drink's flavor?" What we were trying to figure out is if we use a color that is not typically associated with a particular flavor, if that will confuse the participant and their perception of the flavor. For example, if we give a subject a red drink but has the flavor blue raspberry, will this confuse them and lead them to think it is a completely different flavor? We think the color of a drink will influence the participants' minds into thinking the drink is a different flavor. We tested people privately to get their honest opinions about what they think the flavors of the drinks are. Today we are going to give you information on how this experiment worked and the logistics of this experiment.

SO ENJOY THE REST OF THIS EXPERIMENT AND INFORMATION WE GIVE YOU, HOPE YOU ENJOY!!

Background Research

Our brains use color to guess a drink or foods flavor before we even taste it. If a drink has a bright color, our brain often tricks ourselves into thinking it tastes better or has a stronger flavor. We got food coloring, and the colors we got are primary colors like red, blue, yellow, and green which tricks our brains into thinking about the flavor of the drink based on the color. Most of the time, food coloring is tasteless if only a few drops are used. However, if you use a huge amount, it can start to add a weird or slightly bitter taste to the food. Red dyes are especially known for having a "bitter" or "off" flavor when there is too much of it.

Materials List:

1) 1 pack of 5 oz cups (5 cups per participant)
2) Food coloring { Red, Green, Blue, Yellow}
3) Different flavors of soda water, Brand: Clear American
4) Flavors to get : Peach, Wild Cherry, Key Lime, Blue Raspberry, Strawberry

   (Start with any flavor you want)

Question, Hypothesis, Variables

Question : Does the color of a drink affect a person's ability to determine its flavor?

Hypothesis : We think that the color is going to affect people's ability to guess the real flavor of the drink.

Variables :

The Independent Variable: The color of the soda water.

The Dependent Variable: How many drinks people can guess correctly.

The Controlled Variable: The amount of food coloring drops in each drink.

DETAILED procedures

Step 1: Get a pack of 5 ounce cups, and take 5 cups out of that pack.

Step 2: pour 3 oz of the clear American soda water (any flavor you desire) into the first cup.

Step 3: Then add 4 drops of any food coloring and mix well.

Step 4: Repeat steps with different colors and with different soda water flavors, using the same amount of food coloring.

Step 5: Once you have 5 cups in front of your participant, ask them what the flavor is without smelling it just taste.(No telling answers)

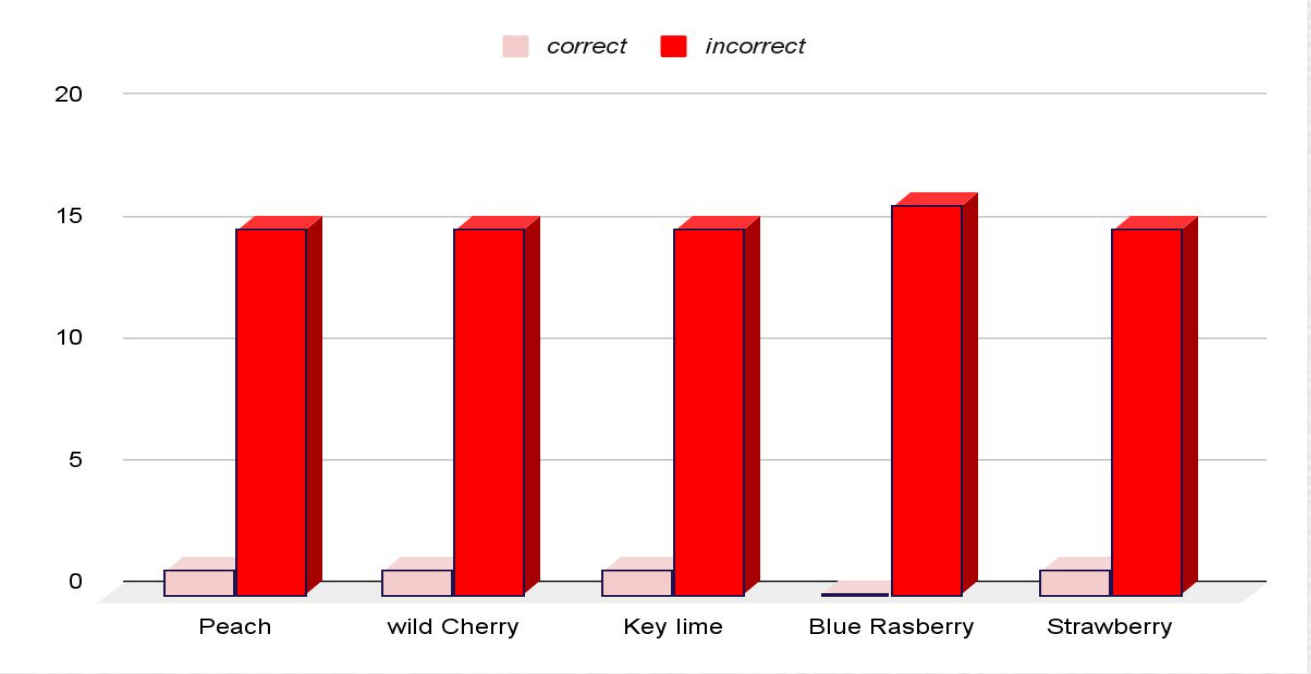
Data Table

Flavors	Colors	Correct	Incorrect
Peach	Green	1	15
Wild Cherry	Yellow	1	15
Key Lime	Purple	1	15
Blue Raspberry	Red	0	16
Strawberry	Blue	1	15

Results

- Four out of sixteen participants guessed one flavor correct.
- We tested people with all the drinks and the same colors in them.
- Participants looked very indecisive and nervous when guessing the flavor.
- No one got the red/blue raspberry correct.
- Our hypothesis was proven correct.

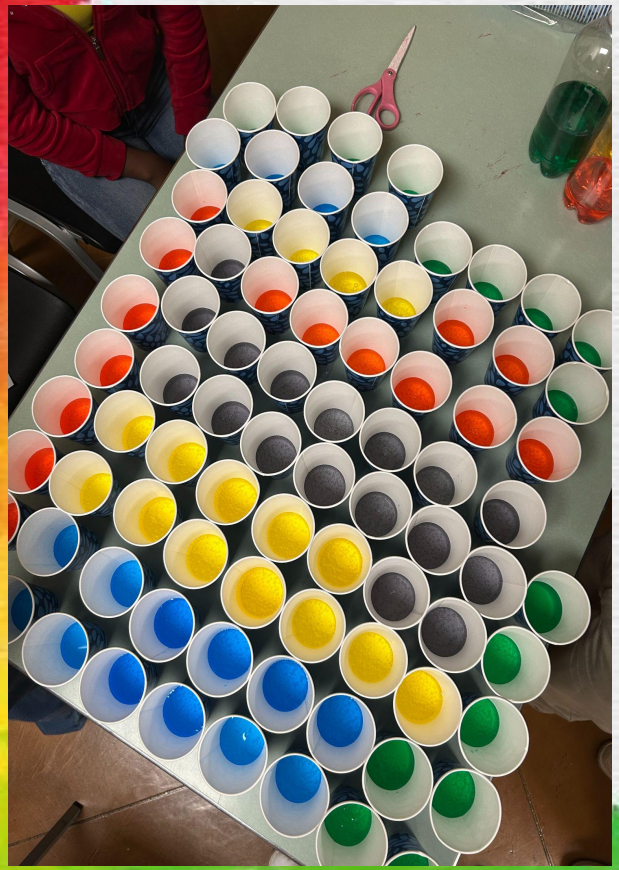
Graph


correct
incorrect
20
15
10
5
0
Peach
wild Cherry
Key lime
Blue Rasberry
Strawberry

Conclusion

After completing our experiment we learned that the color of the drinks do affect people's ability to determine its flavor. Most people that we tested got most of the drinks wrong, but were VERY indecisive when it was time to guess the flavor of a drink. Something that went wrong was we got a little distracted and put the wrong color into the wrong flavor. There was already a color in the drink and it really didn't show too much, but we would be more careful when it comes to putting in the color in the future. Something we were considering for the future if we tried this experiment again would be to substitute artificial flavors for the natural flavors and see if people can still identify the flavor based on being natural or artificial. We would be curious to see how this experiment would go.

Pictures



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THANKS FOR READING OUR SCIENCE EXPERIMENT!!

Citations

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