M&M Survival Challenge

Second Grade

Reminders:

*Students should email safety plans to Mrs. Hwande and obtain approval **before** starting their project. chrishwande@claytonschools.net

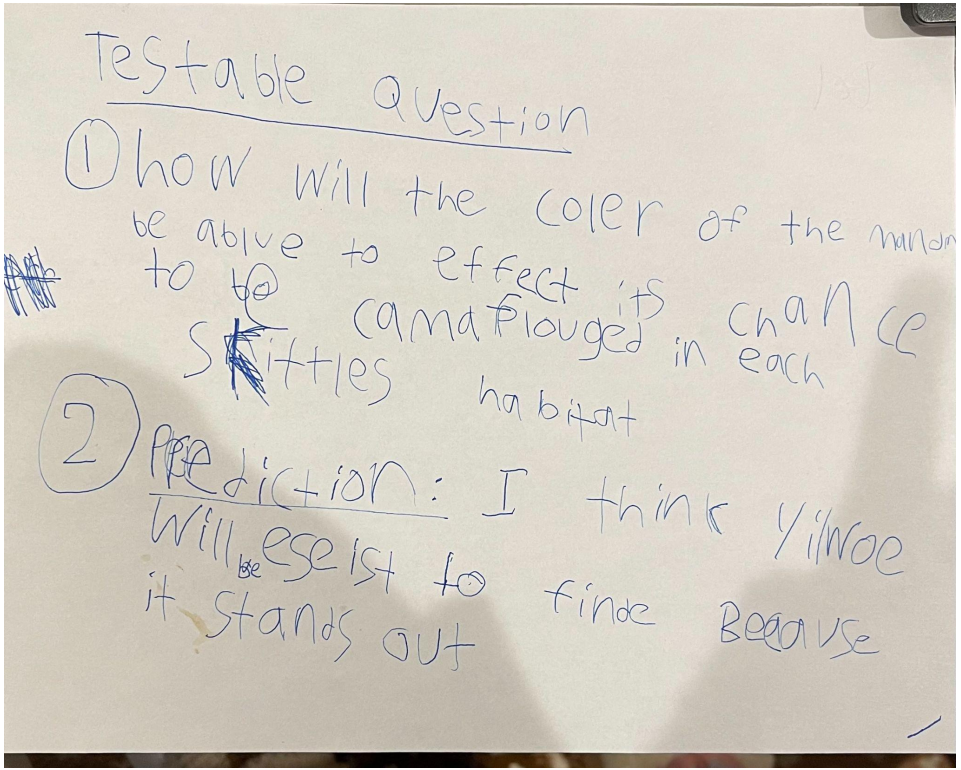
*Students should write/type a dated entry in their logbook EVERY time they work on their project. This is a separate document.

Testable Question:

How will the color of the M&M be able to effect it's chance of being camouflage in each Skittle Habitat?

Prediction:

I think that the yellow M&M will be the easiest to find because it will stand out the most.

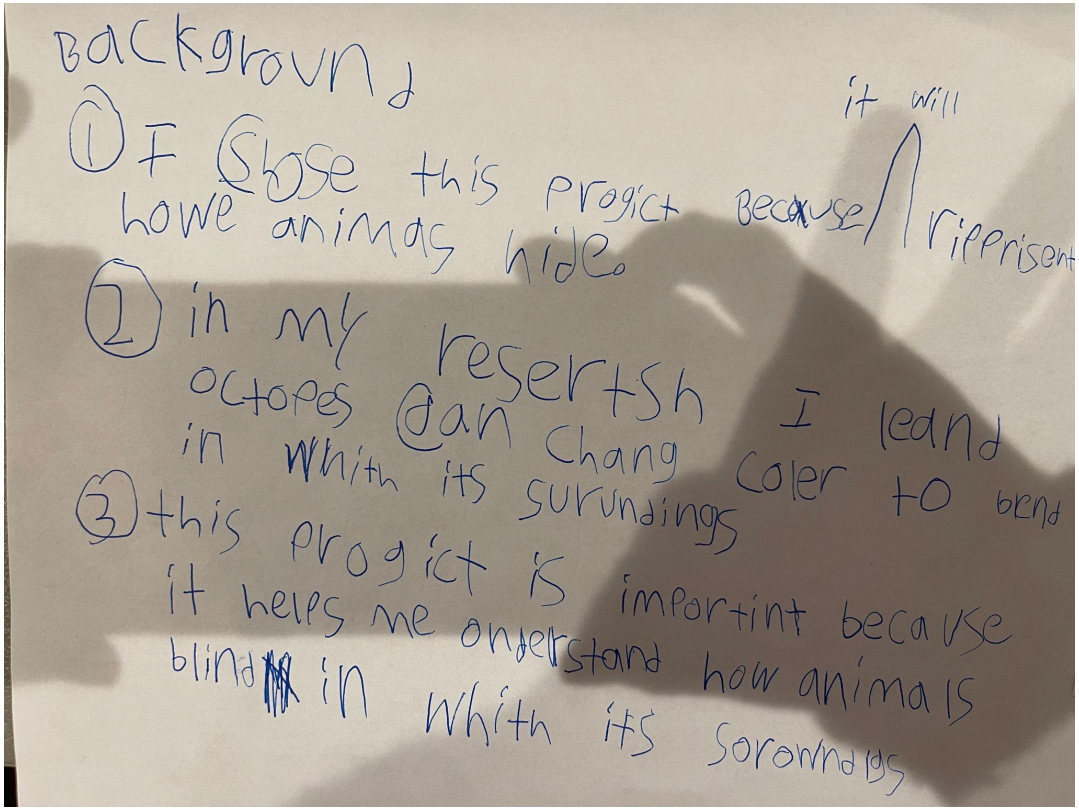


Procedure:

1. I’m going to take one plastic bag and fill it with 10 M&Ms of each color: Blue, Green, Orange, Red, Brown and Yellow. There will be sixty M&Ms total.
2. Next I will fill five plastic bags with sixty skittles each. Each bag will have a different color skittle. There will be bags with these colors: Orange, Yellow, Green, Red, and Purple.
3. Now time for the project. I will dump my M&M bag and the bag of orange skittles onto a paper plate.
4. Next, my mom will set a timer for twenty seconds. My brother and I will use our pointer and thumb fingers to gather as many M&Ms and no Skittles (if possible) during this time.
5. Next, we will count the different color M&Ms and Skittles and record them on a chart.
6. After we complete this habitat, we will do the same thing four more times. The bag of M&Ms and a new bag of skittles each time.
7. Once the project is complete I will look at the different data collected to see how M&Ms hide in different Skittle environments.

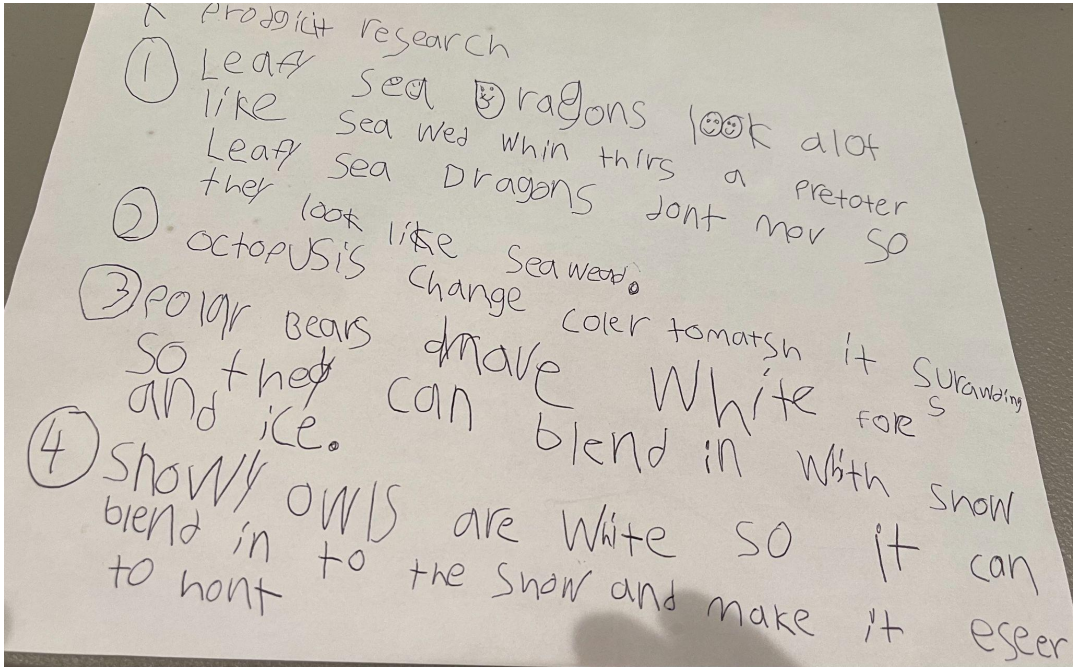
Background:

I chose this project because it will represent how animals hide in different habitats.
In my research I learned that Octopuses can change color to blend in with their surroundings.
This project is important because it helps me to understand how animals blend in with their surroundings.



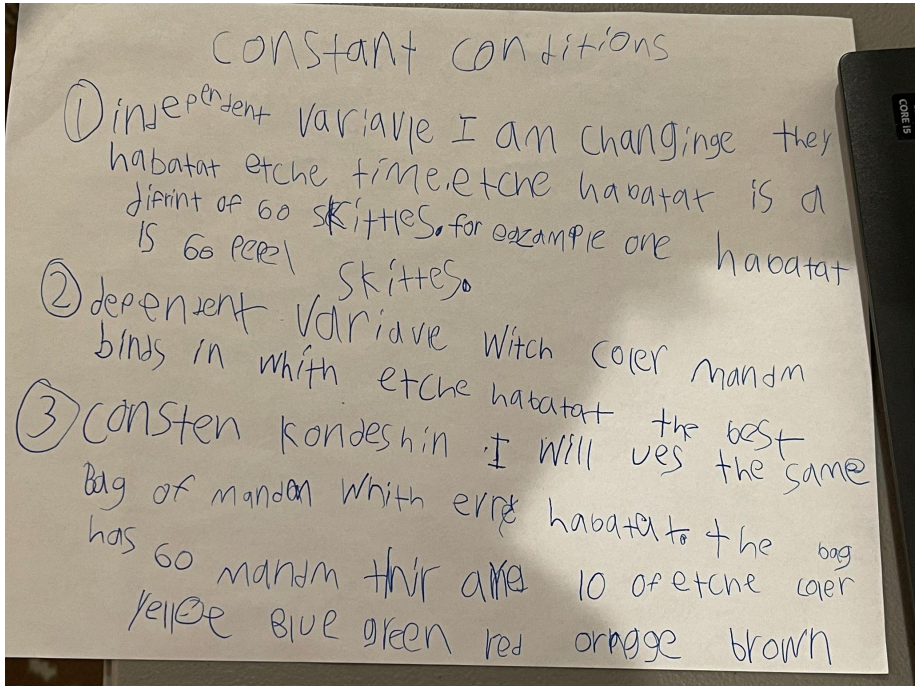
Project Research:

1. Leafy Sea Dragons look a lot like seaweed when there is a predator. Leafy Sea Dragon don't move so they look like seaweed.
2. Octopus change colors to match their surroundings.
3. Polar Bears have white fur so that they can blend in with snow and ice.
4. Snowy Owls are white so that they an blend in to the snow and make it easier to hunt.



Constant Conditions:

1. Independent Variable: I am changing the habitat each time that I run the experiment. The habitat consists of sixty Skittles of a single color. The different habitats are Orange Skittles, Yellow Skittles, Green Skittles, Red Skittles and Purple Skittles.
2. Dependent Variable: I am measuring which color M&M blends in the best with each habitat.
3. Constant Conditions: I will use the same bag of M&Ms with each habitat. The bag that I am using has sixty M&Ms. There are ten of each of the following colors: Yellow, Blue, Green, Red, Orange and Brown.



Data and Trials:

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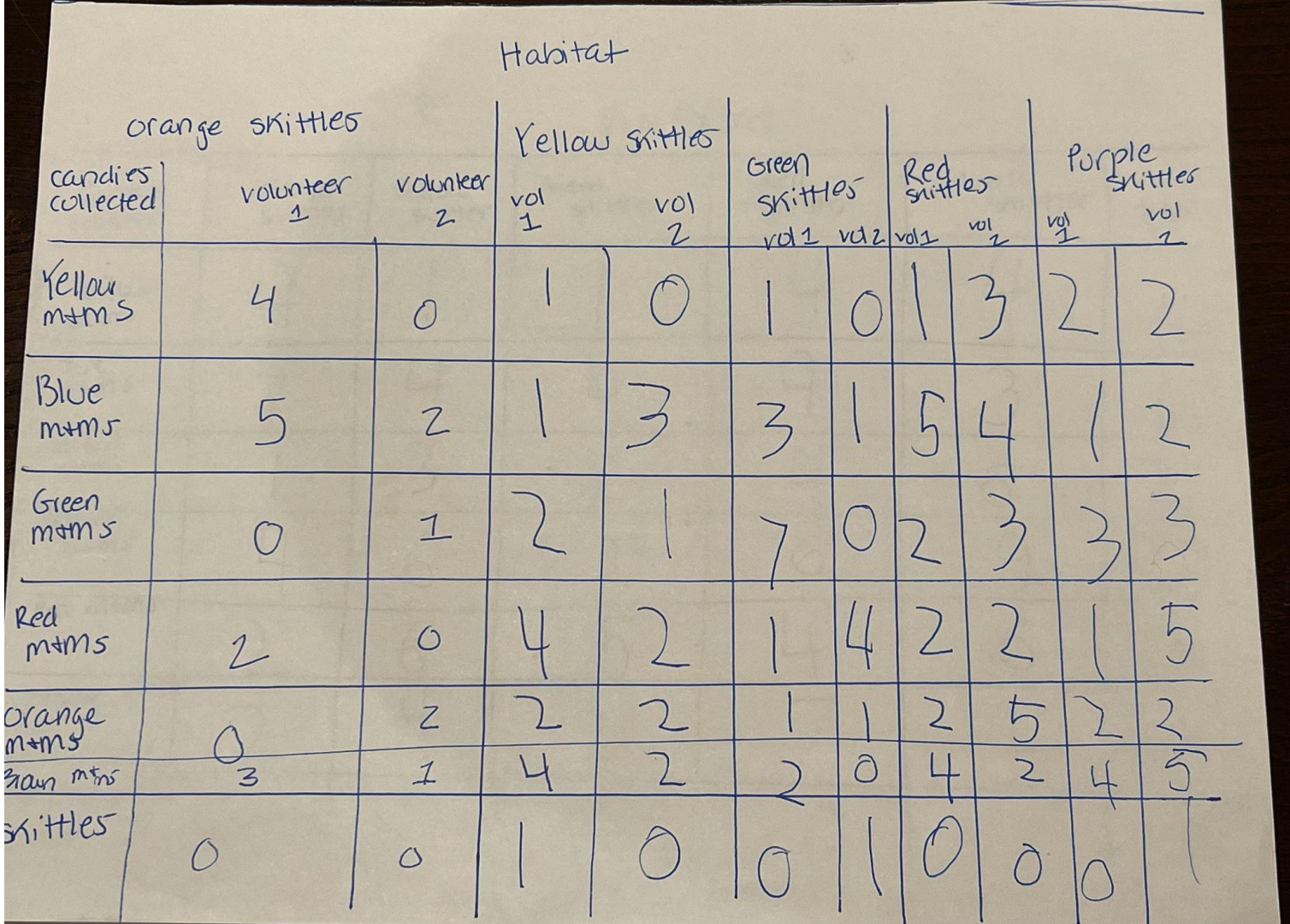

Habitat

candies collected	orange skittles volunteer 1	orange skittles volunteer 2	Yellow skittles vol 1	Yellow skittles vol 2	Green skittles vol 1	Green skittles vol 2	Red skittles vol 1	Red skittles vol 2	Purple skittles vol 1	Purple skittles vol 2
Yellow m+ms	4	0	1	0	1	0	1	3	2	2
Blue m+ms	5	2	1	3	3	1	5	4	1	2
Green m+ms	0	1	2	1	7	0	2	3	3	3
Red m+ms	2	0	4	2	1	4	2	2	1	5
orange m+ms	0	2	2	2	1	1	2	5	2	2
Brown m+ms	3	1	4	2	2	0	4	2	4	5
skittles	0	0	1	0	0	1	0	0	0	1

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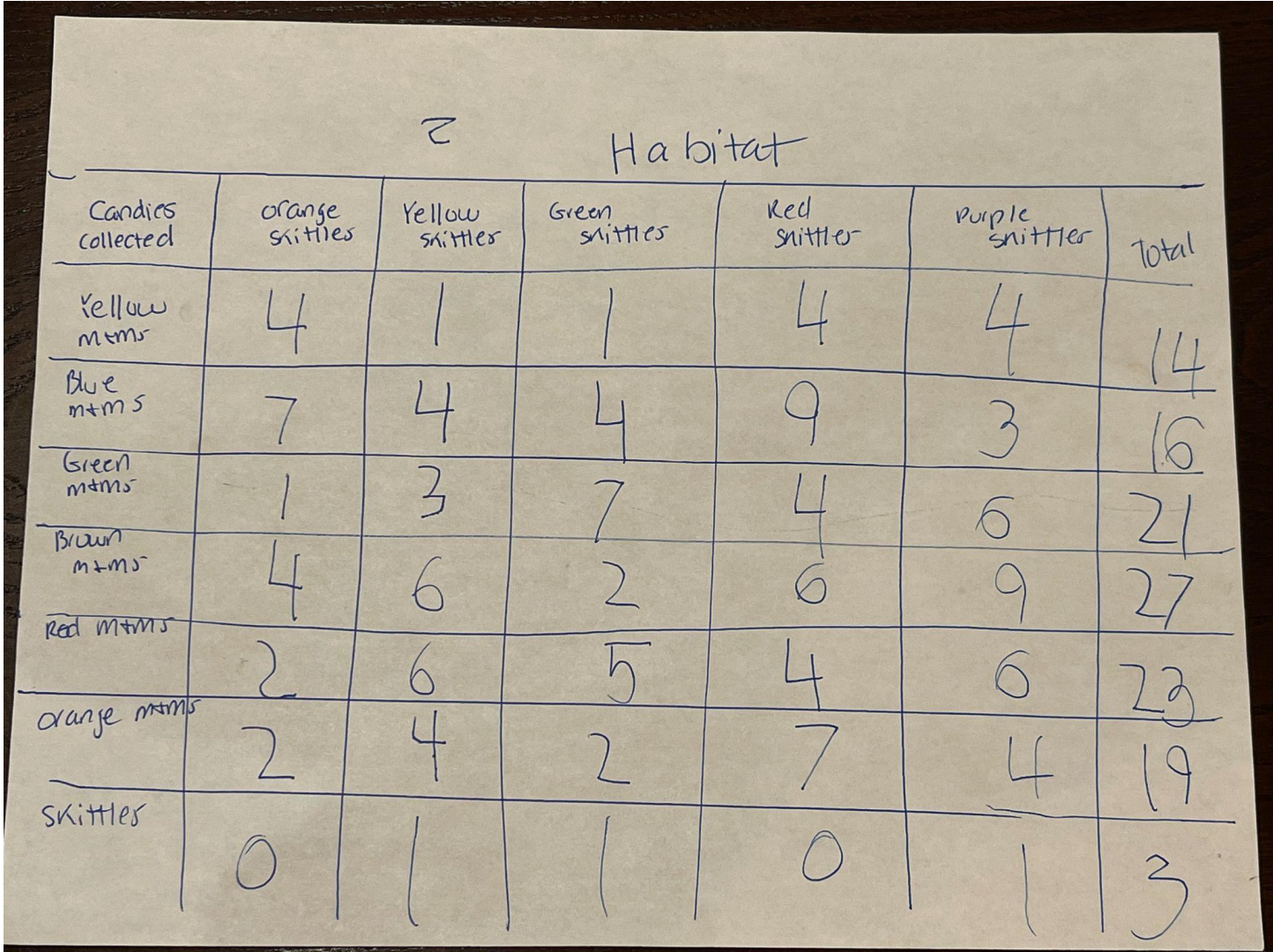

2 Habitat

Candies collected	orange skittles	Yellow skittles	Green skittles	Red skittles	Purple skittles	Total
Yellow m+ms	4	1	1	4	4	14
Blue m+ms	7	4	4	9	3	16
Green m+ms	1	3	7	4	6	21
Brown m+ms	4	6	2	6	9	27
Red m+ms	2	6	5	4	6	23
orange m+ms	2	4	2	7	4	19
Skittles	0	1	1	0	1	3

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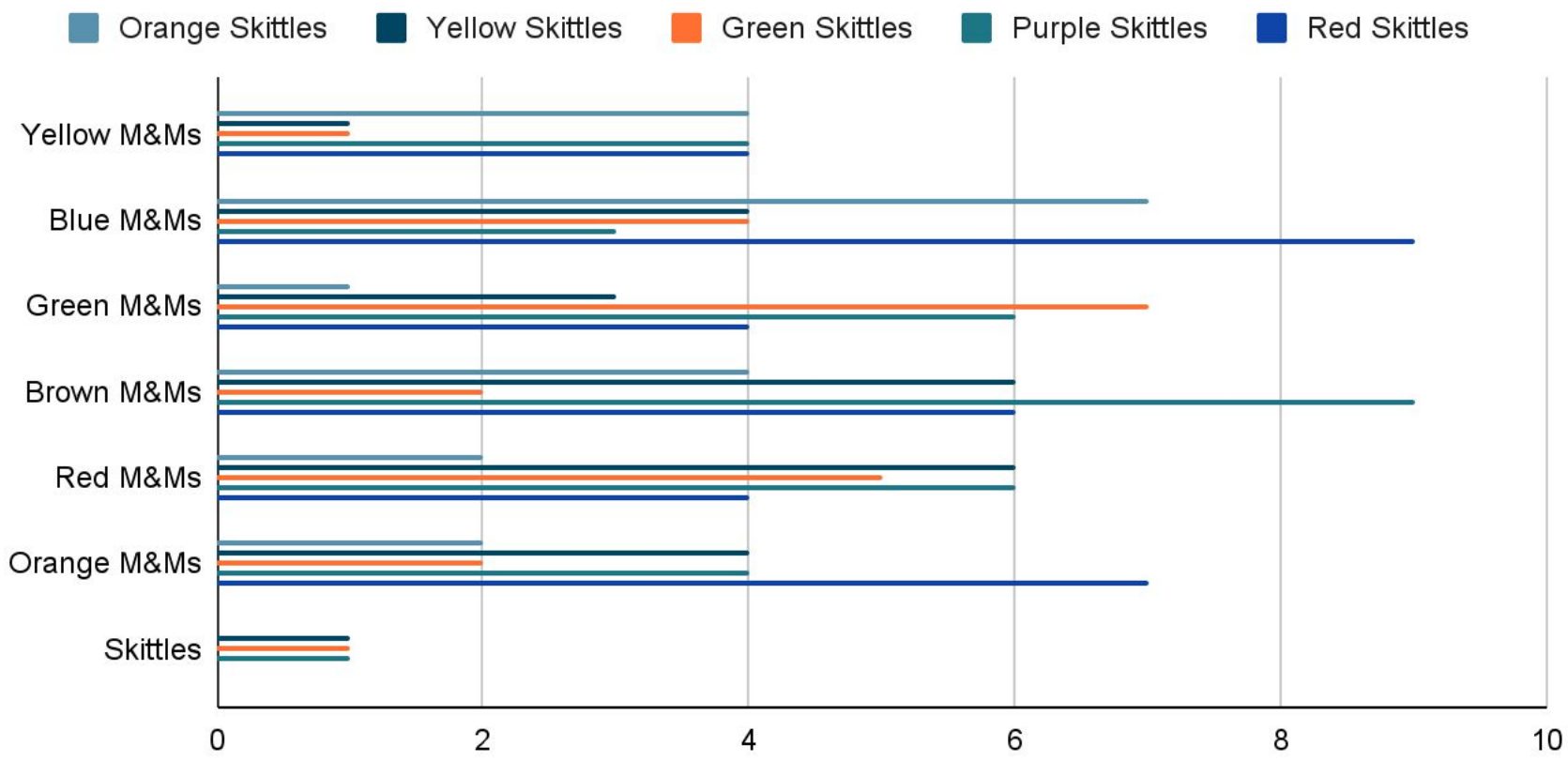

Conclusion and Reflection:

I found out that brown and blue M&Ms stood at the most. I think this is because they are the most different from the other colors.

I was surprised that the brown and blue M&Ms stood out the most. I thought that the yellow would because it is the brightest. I was also surprised at how different the green M&M and green Skittles were. The different greens made it very easy to tell which were M&Ms and which were Skittles. I think this means that sometimes in the wild even if an animal tries to blend in, they might not.

If I did this project again I would try it with only one color M&M at a time. For example, I would try just Orange M&Ms and just Orange Skittles. I think it would be harder to tell them apart, but I dont know.