

## Investigating the line

### Is the “line” that forms when two colors meet a special property of M&M’s?

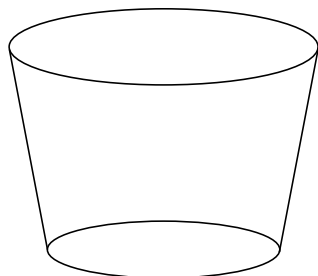
Before we explore the main question, let’s take a better look at the “line” that forms between M&M colors.

#### *Procedure*

1. Place a clear plastic container with a flat bottom on a white sheet of paper. Then pour water into the container to a depth that would cover the M&M’s.
2. Once the water settles, place two different-colored M&M’s in the water about 2 centimeters apart.
3. Observe for about 1 minute.



1. Draw a side view of the M&M’s and their dissolved colors and write what you see.



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2. The way the colored sugar solutions from M&M’s don’t mix could be something that happens only with M&M’s. But it might also happen with other candies or colored substances. What else could you test to find out if non-mixing happens with other colored substances?

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Empty the water and M&M’s into a bucket or sink and dry the clear plastic container with a paper towel.

Activity 1.4

Investigating the line *(continued)*

In the following activity, you will use colored corn syrup in water the way you tested M&M's. Like the M&M coating, the colored corn syrup is made with food coloring and sugar. Using this basic sugar solution will help you find out whether non-mixing is a property of colored sugar solutions or whether non-mixing is something that happens only with M&M's in water.

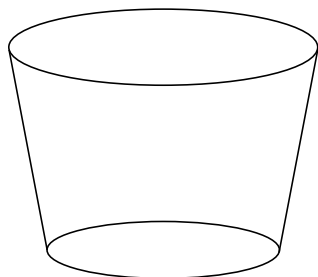
**Procedure**

1. Place a clear plastic container with a flat bottom on a white sheet of paper. Then pour water into the container until it is about as deep as the water was when you tested the M&M's.



2. Once the water settles, hold the droppers with the red and blue sugar solutions upright in the container of water about 2 centimeters apart. Then gently add about 5 drops of each solution directly beneath each dropper. When you are done, carefully remove the droppers from the water.
3. Observe for about 1 minute. Look from the side and describe what you see.

3. Draw a side view of the colored corn syrup in water and write what you see.



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Empty the clear plastic container and dry it with a paper towel.

**Activity 1.4**

**Investigating the line** *(continued)*

4. Is the line that forms when two colors meet a special property of M&M's? \_\_\_\_\_

5. How do you know? \_\_\_\_\_

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6. Do you think that the dissolved coating from gumballs or other candies with colored sugar coatings would form a line when the colors meet? \_\_\_\_\_

What makes you think that?

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