

Shape of Water Splatter Versus Drop Height: Scientific Method/Graphing

If you dribble Kool Aid while you are standing when you pour it, will it splatter more or less than if you are sitting when you pour it?

In this activity, we will practice using the scientific method while investigating the effect of drop height on the size and shape of water droplet splatters when they land. We will be careful to change only the one item whose effect we will observe. This is called the _____. All of the other conditions must be kept completely identical. These conditions are called _____. At the end we will graph our results. Graphing is an important part of the science world. It is how we often share results.

Problem:

Hypothesis:

Data:

Diameter of Drop Splatters in mm

Drop Height	Trial 1	Trial 2	Trial 3	Total	Average	Description
5 cm						
10 cm						
20 cm						
40 cm						
80 cm						

Conclusion:

Instructions:

1. Add a few drops of food colouring to a glass of water.
2. Fill the dropper with the coloured water.
3. Measure the heights listed in the chart using a meterstick positioned with one end on the splatter paper and the other end measuring the dropper height.
4. From each height drop 3 drops of water (in different places on the paper).
5. Measure size of the splatter in MILLIMETERS, and record each trial size in the chart.
Find an average for each drop height.

~~6. Repeat this process for each height~~

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~~7. For each drop~~

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~~7. From each height drop 3 drops of water (in different places on the paper).~~

~~7. Measure size of the splatter in MILLIMETERS, and record each trial size in the chart.~~

Questions:

1. How does your conclusion compare to your hypothesis?
2. Describe 2 things(controls) that you had to do exactly the same for each trial to make sure you were as accurate as could be.
 - a.
 - b.
3. Which type of data do you think is “best” for use in reporting scientific data: measurement or descriptions? Why?