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Team First Report

MCEN 4151-001

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Droplets



This photo was taken as our team second activity. Unlike the first one where the team split up and did separate shoots, this one was taken with the entire teams' contributions. The idea was the catch a frame at the perfect time when a water droplet has dropped into a bowl of water and created the splash effect around itself. The water droplet was dyed a color, and the water which was in the bowl was dyed another color. The results of this experiment turned out to be a beautiful flower like image, that the water droplet creates. The team which consisted of Shalil Jain, Sophie Adams, and Kailey Shara

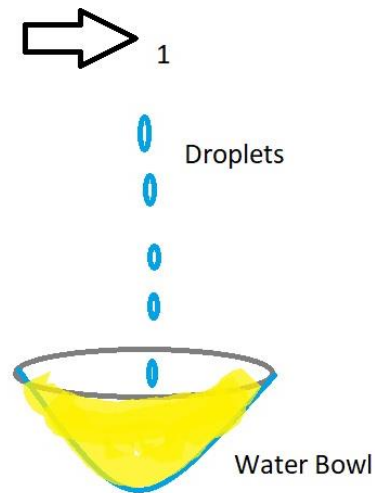


Figure 1: The set up to capture the droplet image

The droplets that were being continuously dropped were dyed blue, where the water filled in the bowl was dyed yellow. This was to better try and get a contrast between the two different waters.

The visualization technique used to was to get a lot of light into the bowl in order to get as many shades of the droplet as possible. This photo was taken as soon as the droplet hit the water surface. The act of the wave and flowering effect is caused by the surface tension between the two fluids, which creates a force causing a flower effect.

The photograph technique in the photo was to shoot it at a very fast shutter speed. We achieved this using a Nikon D3400 with a shutter speed of $1/2500$ of a second, and a high iso at 4032, along with an aperture $f/5.6$ 140mm. The dimensions of the original photo was 6000x 4000 pixels. Many shots of the droplet were taken continuously in order to get a large sample to choose from. The post editing of the image was done using a photo editing software offered by

Hp, and the only thing that was changed was the exposure and intensifying the colors, which were then turned into black and white which exposed many of the shadows.

This image shows a droplet landing on top of water which creates a splash flower effect and the purpose was to draw the audience towards a still image that seemed like it had motion. I chose the black and white because it allowed the viewers to focus more on the droplet. If I were to change anything else for future experiments I would allow more like for the water in the bowl, and to choose an even darker background.

Original Image