## **Get Wet Image**

The image that was produced for the Get Wet assignment was a simple yet elegant image of a simple yet beautiful flow phenomenon.

A simple experiment was conducted to create the image. The materials used for this experiment were whole milk, blue food coloring, and a circular dish. First, the whole milk was poured into the dish to cover up the bottom of the dish. Next, the food coloring was dropped into the liquid from about a foot above the surface. This created an interesting pattern that showed how the drop disturbed the surface. The liquid was then disturbed by someone pushing some of the milk near and in the direction of the food dye. This caused the droplet of color to elongate and created a simple vortex because of the round edges of the dish. This is a very simple and repeatable experiment. The key aspect of this experiment that made the image successful was the vortex caused by disturbing the surface.

A number of phenomena contributed to the creation of this image. First, milk and food coloring are liquids of different densities. The reason that the food coloring doesn't immediately mix into the milk is because the density of the food coloring is less than the density of milk. High surface tension suspends the food coloring on the surface of the milk. Similar experiments are conducted with milk, food coloring, and soap. These experiments cause the food coloring to sink into the liquid because the soap decreases the surface tension of the milk. In this experiment, however, the surface tension is not decreased until the milk is disturbed and the milk and food coloring begin to mix at the edge of the spiral. Although it was initially thought that whole milk would suspend the food coloring better than fat free milk, the fat content actually increases the solubility of the food coloring. It is also interesting that because of this higher fat content, the whole milk is actually less dense than if low fat milk had been used.

The next phenomenon that was produced is the vortex. When the finger disturbed the flow, part of the milk began accelerating in the center of the food coloring and created a vortex. The vortex causes the spiral motion of the flow. Since a horizontal motion as opposed to an object being dropped in it disturbed the liquid, a vortex was created instead of ripples. The phoenix head effect at the tip of the vortex shows the food coloring beginning to dissipate into the milk. This is because the motion of the vortex decreases the surface tension and the food coloring is allowed to fall through the top surface.

Overall, this was a simple experiment that is easily reproducible and easily controlled. It would be interesting to use multiple colors of food dye and disturb the surface in multiple places to observe the interference patterns of the waves.

The goal of this image was to create a bold image with high contrast using a simple flow phenomenon. The camera used to create this image was a Canon PowerShot SD1200 IS. This is a simple point-and-shoot digital camera. This camera was ideal for starting out because it allows the user to change some settings, while making some automatic. The ISO for this image was set to 400. This created a higher contrast and removed some noise from the image. It created a lower sensitivity to ranges of color. This was beneficial for this image because the spectrum of color

included simple colors. The shutter speed was set to 1/25, meaning that the image was taken in 1/25 of a second. This was beneficial for this image because it was easier to get a clearer image. The aperture was set to F2.8. This is a lower aperture because there was a strong light source for the flow. However, the depth of field was sacrificed by using a lower exposure.

Finally, the point-and-shoot camera uses an auto focus and auto white balance. This was a disadvantage for this image because the focus was not as good as expected. Luckily, the white balance was simple to edit in the editing software, Adobe Lightroom 3. Adobe Lightroom 3 was also used to improve the contrast (a slight s-curve was created for contrast control), reduce noise, and sharpen the image.

The image that was produced was simple. This is what makes it unique. It is also difficult to determine exactly what the image is of. Many viewers said that it has a calming effect. It was also described as looking very oriental, like a bird or calligraphy. The goal of the stark color contrast was to create an impactful image that is beautiful. The calming properties of the image create a feeling of Zen and tranquility. This is also achieved with the softness of the image. Unfortunately, the downfall of this image is the rough glare in the bottom right corner of the image.

A number of lessons were learned from this Get Wet assignment. In particular, more attention will be given to camera settings. One of the largest flaws of the image is the glare in the lower right corner of the food coloring. This was an error of the overhead light source. In the future other sources of light and angles will be used to minimize the glare on the image. It would also be pertinent to use a camera with the option to manually focus on a subject, as focus was another glaring issue with this photograph. For future images a DSLR will be used because of the variety of options available for this method of taking pictures.

Aesthetically, it would be interesting to include multiple sizes of the lines in the image. Although the cropping lent itself to the overall image, it would be interesting to give the view more perspective on what the whole phenomenon is. Finally, contrast will be achieved in different ways using both the physical medium as well as the editing software.

Overall, a lot was learned about taking images of flows. These lessons will be applied to future images. The image that was produced was unique and beautiful. This was an interesting assignment that allowed the artist to get exposure to both the complexities and the beauty of visualizing flow.

Lundstrom, Kelly, and Kennda Lynch. "Milk Dye Activity Plan." <a href="https://inside.mines.edu/~klynch/lesson\_plans/milk\_dye\_activity\_plan.pdf">https://inside.mines.edu/~klynch/lesson\_plans/milk\_dye\_activity\_plan.pdf</a>>, 31 Jan. 2012. Web. 12 Feb. 2013.

