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“Get Wet” Report

This purpose of this image was to experience any phenomena that occurred in the mixture of fluids. It served as an entry point in the art and science of Flow Visualization. This image is simple, and was the most visually successful of similar attempts with different colors and lighting scenarios. The constant across all attempts was the main fluid, water, while the variables included lighting, food coloring changes and depth of field. This shot was acquired with the assistance of a non-student, Siobhan Sullivan.

The flow presented in the image is food coloring flowing through water, contained in a fishbowl. The fishbowl is squared and cubic, clear glass, 12 in. by 12 in. and 12 in. in height. The food coloring was dropped into the water with no expressive force, and the flow occurred downward, as well as looping and spiraling out to the left. The force acting on the flow was the resisting force of the water, acting against the dye portion of the food coloring solution. Gravity was the main force acting on both fluids pulling the heavier dye down through the water, while over time it dissolved into the water itself.

The fishbowl was filled with water, set out at room temperature throughout the duration of the camera setup process. Blue food coloring was added to the water 3 inches above the top of the water line. This was controlled by a ruler set vertically

next to the fishtank, out of the frame. No flash was used, but the shot was light from below, with 25 LED Christmas lights varying in blue, red, green and yellow.

The frame of the image encompasses the whole of the cubic bowl, 12 inches across and 11 inches in height, and a tripod was used to ensure no camera shake and the camera was set 10 inches from the glass wall of the bowl. An 18-55mm focal length zoom lens was used, set at full zoom extension (55mm), and set at a focal point in the center of the tank, six inches from either side. A Canon EOS Rebel T3 digital camera was used and the final image dimensions were 3768 × 2848 pixels, while the original was 4272x2848. I only cropped out a reflection on the left side of the frame. Manual exposure, ISO, and shutter speed were used, an f5.6, 3200 ISO, and a shutter speed of 1/30, respectively. There was no post filmic editing other than the crop of the left edge of the frame.

The goal of the image was to try many different scenarios of food coloring in water, and honestly, this photo came as a beautiful surprise. The other shots taken needed a high level of manipulation or had some pro-filmic tweaks that were needed, but never attained, such as focal length, shutter speed and above all—focus. I wanted a shot that showed shallow depth of field, and it wasn't until this shot, a last ditch, "give it all we've got effort" yielded this beautiful mistake.