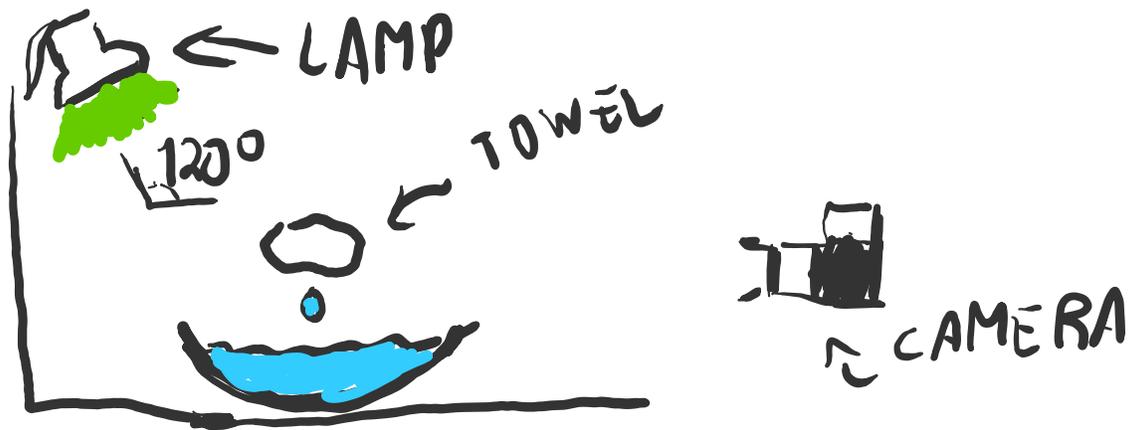




The Drip Drop

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For the get wet assignment, we were tasked into capturing a fluid phenomenon that intrigued us to get our feet wet using different camera features, setting up scenes, and researching. Personally, I have always been very interested in the interaction between water and a towel, more preciously, how water behaves when leaving a towel. I wanted the picture to demonstrate the water film leaving the towel and key points where it starts to drip. I was helped by Brian Gomez and Jared Moya who photographed the picture for me while I was squeezing the towel and adjusted the lightning as necessary. The setup is as follows.



For this experiment a big bowl of water and a hand towel is the only necessary equipment's we need. The hand towel has dimensions of 18in x 30in and the bowl has a diameter of around 25 in. The first step is to fully submerge the towel into the bowl to let it soak. The next step is to then take it out and squeeze it to let all the water trapped in out. The towel is made of cotton and when soaked in water, its cellulose fibers form bonds with the water molecules also known as adhesion. Once the towel is taken out of the water and squeezed, the water begins a flow due to gravity and the squeezing forces pushing it out of its bonds. However, instead of just dropping straight back down to the bowl, adhesion between the towel molecules and the cohesion between the water molecules will keep a film of water running down until it has nowhere else to go which happens at its local minimum.

To visualize the flow, I used a BriHome Smart LED Bulb in a lamp and set it to green with 50% brightness and set it up at 120 degrees from the camera. A black tablecloth was also draped in the back to hide the background but also reflect the light just enough to give a depth effect. No other lighting source was used as this was done in a complete dark room.

The camera that was used to capture this image is a Nikon D3500. The camera was setup with dimensions of 6000 pixels x 4000 pixels, a F-stop of f/4.8, exposure time of 1/250 sec, ISO of 12800, focal length of 82 mm, max aperture of 4.5 and at 2.5 feet from the towel. The picture was then taken and added a bit of contrast to intensify the water and

background divide and cropped to cut out the background because it wasn't necessary. The before picture is what's shown on the first page and the after is what's shown below.



The image reveals the water adhesion and cohesion on the towel. What I like about the picture is the nice film of water that can be seen on the towel surface and how all the drops happen at a local minimum. The fluid physics are shown to a certain extent, but I believe that I should've increased the shutter speed to reduce the motion blur of the water drops and maybe come closer to the towel to show the water film in greater magnification. I closely fulfilled my intent for the picture although I could've changed certain things. This idea could be developed further by putting the towel under a running faucet to let water continuously pass through instead of soaking the towel in a bowl of water and squeezing it. The question that I have is how could've edited this better to beautify the picture.