

Water Science

Hanford Mills Museum Activity Guide *Recommended for Grades PreK-1*



Image courtesy of publicdomainpictures.net.



Welcome, Water Scientists!



Image courtesy of pixnio.com.

What is a Water Scientist?

- A water scientist is someone who studies water.
- Scientists can learn many things about water by doing tests called experiments.
- In this activity, you will be a water scientist and study water!

Water in New York State

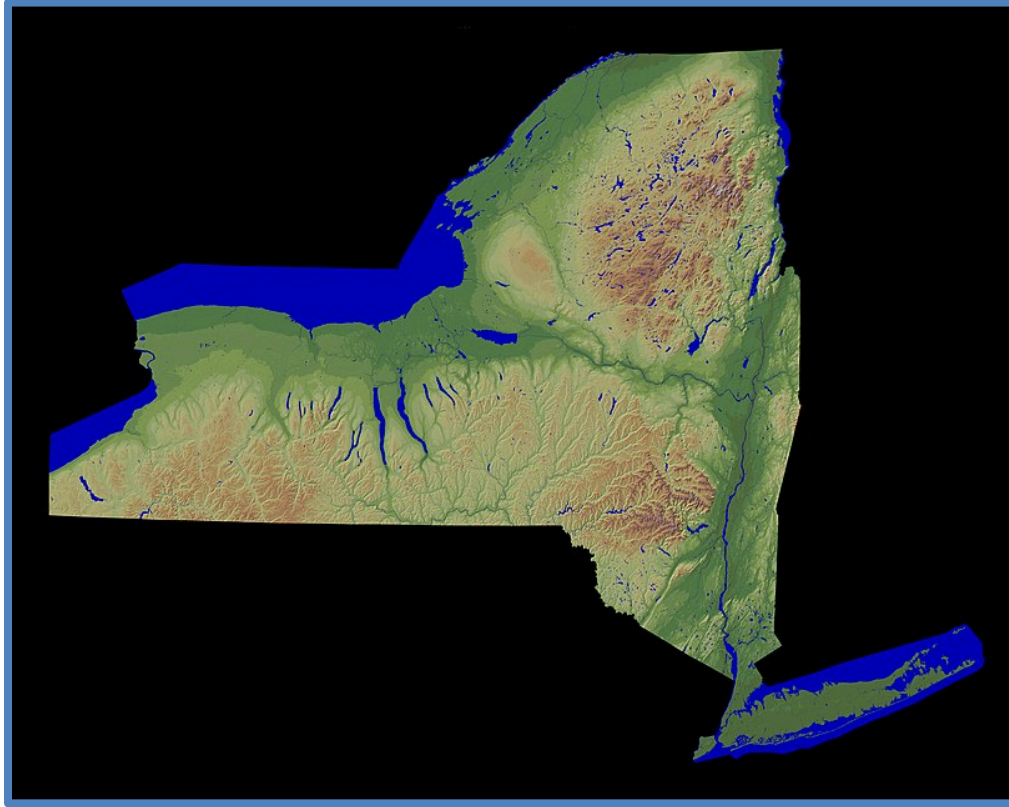


Image of New York State courtesy of Wikipedia and USGS.

People living in New York State are lucky to have a lot of water. We get plenty of rain and snow, and we have many lakes and rivers to hold the water. The Catskills has so much water that we can share it with New York City. Everyone should do their best to not waste water, though!

Experiment 1: Capillary Action

In this experiment, we are going to see how water moves in different ways. Sometimes water will move up instead of falling down.

Materials:

- Washable/water-soluble marker
- Paper towel
- Coffee filter or paper towel
- Small bowl of water

Instructions:

1. Press the coffee filter or paper towel flat.



2. Place the filter or paper towel on top of another paper towel.



3. Using a washable marker, draw a small circle in the middle of the filter or paper towel.



4. Fold the filter in half so it looks like a taco.



5. Fold in half again so it looks like a slice of pizza, or a square if you are using a paper towel.



6. Quickly dip and take out the marker colored end of the filter into a cup of water. Can you see the water moving upwards?



7. Leave the filter or paper towel on the paper towel to dry (5-10 minutes). If you would like, you can try Experiments 2 and 3 while you wait.
8. Gently unfold the filter or paper towel and look what happened to the color. Did the color move? Draw what you see on the Water Science Worksheet.



Experiments 2: Pennies & Surface Tension

Water is not sticky like gum or juice, but water droplets do like to stay or stick together. How many drops of water we can fit on a penny before the water falls off the sides?

Materials:

- Water Science Worksheet
- Towel or washcloth
- Penny
- Bowl of water
- Eye dropper or straw (if you don't have an eye dropper or a straw, you can still do this activity with a container that you can use to slowly pour water)

Step 1: Place a penny on the towel.



Step 2: Using an eye dropper or a straw, suck up some water from the bowl.



Step 3: Using the eye dropper or straw, begin putting water on the penny one drop at a time. If you don't have an eye dropper or straw, pour water onto the penny as slowly as you possibly can.



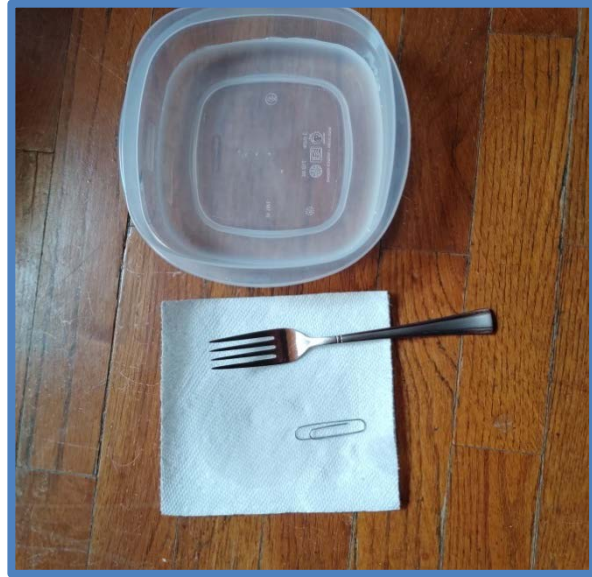
Step 4: What happens to the shape of the water on the penny? Draw what you see in the box on the Water Science Worksheet.



Bonus Challenge: Is it possible to make things like metal float on water? Water really likes to stick together, so we might be able to make a paper clip float!

Materials:

- Paper towel
- Fork
- Paper clip
- Bowl of water



Step 1: Place the paper clip on the fork.



Step 2: Slowly and gently lower the fork with the paper clip onto and into the water. The more slowly you can do this, the better!



Step 3: As carefully as you can, remove the fork from under the paper clip and let it float! It might take you more than one try.



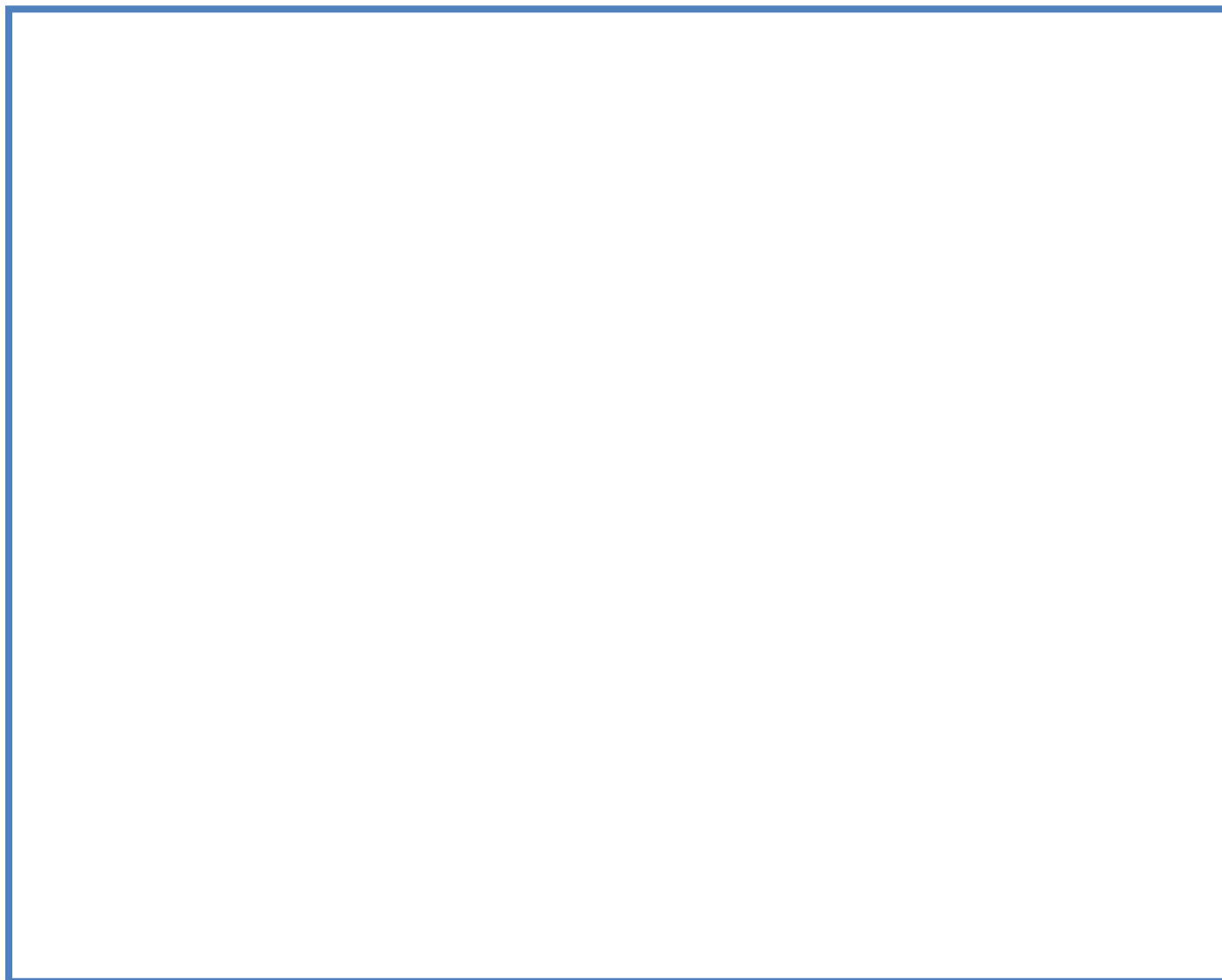
Name: _____

Water Science Worksheet

Experiment #1:

Draw what your paper towel or coffee filter looked like?

Draw a picture of it!



Experiment #2:

What did the water on your penny look like? Draw a picture of it!



How many drops fit on your penny? _____

Bonus Challenge

Did you try to make a paper clip float? Did it work?
