

1.1 Act 1 Investigating Water

(Edited version for public review)

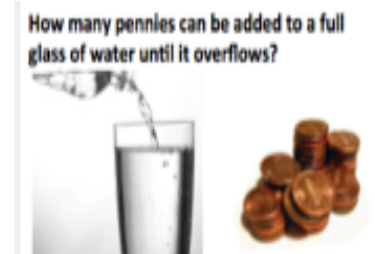
Investigating water's capability to hold together

- 1) Predict how many pennies can be added to a full glass of water.

- 2) Try it. Add pennies carefully and be sure to observe the water at the top of the glass. How many pennies?

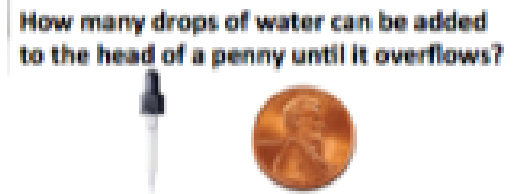
_____ Was your prediction correct? _____

- 3) Sketch a side profile of the glass of water just before the last penny was added.



- 4) Predict how many drops of water can be added to the surface of a penny without spilling over.

- 5) Try it. Add drops carefully and be sure to observe the water on top of the penny. How many pennies? _____ / Was your prediction correct? _____



- 6) Sketch a side profile of the penny just before the last drop was added. How is this drawing similar to the one you drew for #3.

Re-add drops to two pennies until the water is almost ready to spill over.

- 7) Predict what you think will happen if you poke one penny's water with a wet toothpick?

- 8) Try it. Observe the surface of the water especially as the toothpick enters the water. Describe and sketch your observations



- 9) Predict what you think will happen to the second penny's water dome if it is poked by a toothpick that has been dipped in soap.



- 10) Try it. Observe, record and sketch what happens.

Investigating water's ability to stretch

Place a piece of wax paper on top of the Water Stretch Investigation worksheet (tip: add tape to hold it down). Add drops of water to the circle until the circle is full. Then using the dropper or a toothpick try stretching the water.

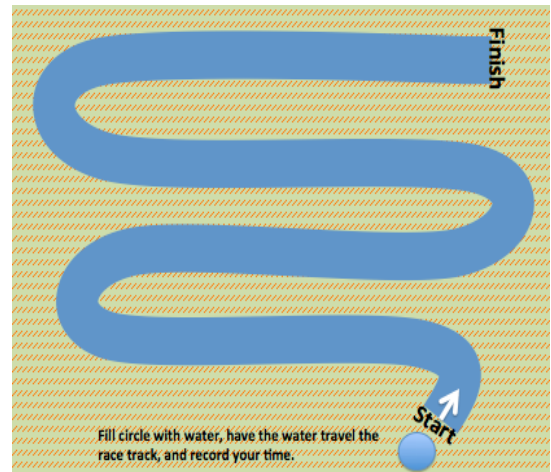
- 1) Observe and record how far (in cm) the water was able to stretch without separating.



- 2) When you tried to stretch the water, did it stretch easily? Explain.

- 3) Predict how long in seconds it will take a drop of the same size to go through the course from start to finish.

- 4) Test it and record your time below. (If you have time try it again)



- 5) What happened if the drop split apart, and what happened when the drops touched again?

- 6) Would you claim that water is more attracted to other water drops or to wax paper? Explain your thinking.

- 7) How do you think these two tasks would change if soap were added to the water?

Investigating how water interacts with objects at its surface

- 1) Predict: What will happen when a paperclip is placed on top of the water?

- 2) Try it. Was your prediction correct?

Fill the dish with water and find a method to get the paperclip to float without adding any materials.

- 3) Record your...



(Additional materials available in members' resources)