

Thank you for participating in this Molecularium Workshop. We hope that you will join us again. More importantly, we hope that you will continue to make science learning a fun part of your child's life. We have put together some simple science activities that you and your family can do together. Like the workshop, these activities are aligned with New York State Learning Standards and will help you child to grasp important physical science concepts being taught in school. Please visit our website to find out which standards these activities meet and to access additional resources. Have fun exploring the world of science!

## Activity #1                      Surface Tension Experiment

**You will need:** a variety of non-toxic liquids, clear plastic cups, pennies or other solid objects.

Try testing the surface tension of liquids other than water at home. Experiment with vinegar, milk, oil, soda, shampoo and dish liquid. Remember to use the same size container for each experiment and to fill the container to the rim every time. Always add the same solid material to each container of liquid. If you don't have pennies, use pebbles, paper clips, or buttons instead. The liquid that holds the most pennies without spilling over the edge has the strongest surface tension.



## Activity #2                      Cohesion Experiment

**You will need:** writing paper, cardboard and construction paper, shallow plastic containers or cake pans, water.

Fill containers with an inch of water. Hold two sheets of writing paper together. Do they stick together? Submerge the sheets in water one at a time. When completely wet, hold the sheets together. Do they stick? How easily do they separate? Do they peel apart? Do they slide apart? Next put the paper in a warm place to dry. Do they stick together when they dry? Try the same test with cardboard and construction paper.

# Water Olympics

## Take-Home Family Activities

### Words to Remember:

Cohesion: force of attraction between molecules of the same substance

Liquid: matter that flows and takes on the shape of its surroundings; molecules are close together and move slowly

Molecule: smallest unit of an element or compound which is made of two or more atoms bonded together

Surface Tension: force on a surface of a liquid that makes it behave as if it has a skin

### More to Explore

Bosak, Susan V. 1991. Science Is...A source book of fascinating facts, projects and activities. Scholastic Canada LTD, Ontario Canada.

Kerrod, Robin and S.A. Holgate, 2002. The Way Science Works: Discovering the secrets of science with exciting, accessible experiments. DK Publishing, NY, NY.

### NYS Learning Standards:

Elementary Science/Physical Science 3.1: Observe and describe properties of materials, using appropriate tools.

Elementary Science/Physical Science 3.1b: Matter has properties that can be observed through the senses.

Elementary Science/Physical Science 3.1e: The material an objective is made up of determines some specific properties of the object.