## SSIEMSE EXPEDITIONS

In an effort to conserve surface area, bubbles like to share. Two bubbles will share one wall. However, the sharing gets more complex in groups of bubbles. With groups, the wall-sharing happens at 120 -degree angles. Follow the steps to make a frame that forces the sharing bubbles to form a cube.

## MATERIALS

Bubble solution (see bubble solution recipe in experiment guide)
$\square$ A bowl or tray at least 5 inches $x 5$ inches

6 chenille stems (pipe cleaners) 12 inches long
$\square 6$ straws
$\square$ Bubble wand
$\square$ Scissors

## INSTRUCTIONS

(1) Protect your eyes with glasses.

Cut each chenille stem and straw in half to make 12 chenille stems and straws.


Connect the pyramid shapes by twisting the ends together until you create a cube.

(2) Twist the ends of three chenille stems together to form the top of a triangular pyramid. (Be careful of the wires inside.) Repeat for the rest of the chenille stems until you have four pyramid tops with three stems each.

Fill the bowl about one inch deep with bubble solution. Dip one side of your cube frame into the solution. Rotate and dip each side of the cube in the solution.
(3) Slide straw pieces over each chenille stem to cover the fuzzy surface. (The bubble solution will cling to the straws better than the chenille stems.)


Shake the frame gently until the bubbles share walls and look like two connected funnels.


Use a bubble wand to blow a bubble into one of the bubble funnels. The bubbles will share walls and form a cube. If you don't get it the first time, keep trying!


