

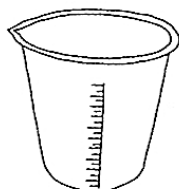
BUBBLE MAKING SHOW

Do you like bubbles? All kids love bubbles that fly in the sky reflecting sunshine. This kit enables you make various kinds of bubbles. Here is the journey to the dream land of bubbles. Are you ready? Let's go!

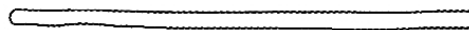
What's included in the kit:



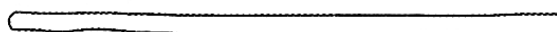
1 Bottle of Bubble Liquid



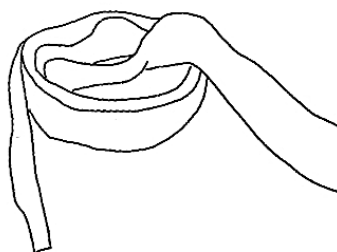
1 Measuring Cup



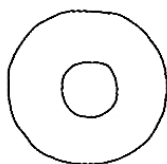
1 Stir Stick



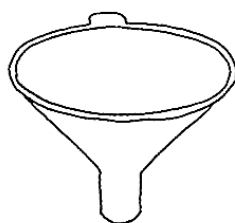
3 Straws



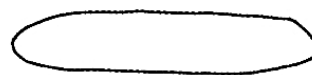
1 Cotton Rope



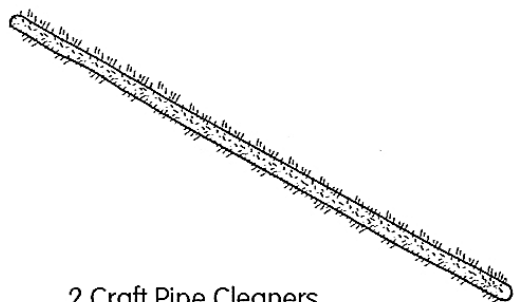
1 Washer



1 Funnel



1 Elastic Rubber Band



2 Craft Pipe Cleaners

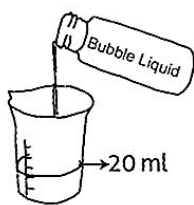
What you need to get or use:

1 Towel, Some Dishwashing Liquid, Some Water, Some Food Colors, 2 Wood Sticks, 1 Bowl, 1 Cup, 1 Dish.

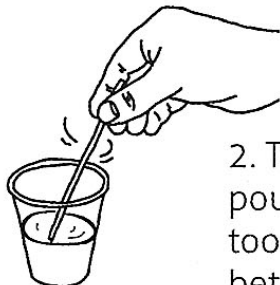
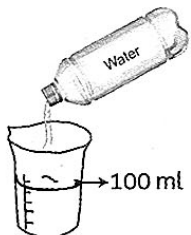
Notes:

You should well place your test appliances and reagents in the test and avoid splash. Clean and dry the repeatedly used appliances in the activities. Wash hand and clean the test appliances after the activities.

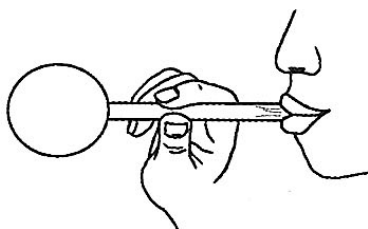
Activity #1: Bubble Blowing



1. Take 20 ml bubble liquid with the measuring cup and pour it into the cup.



2. Take 100ml water with the measuring cup, pour it into the cup and mix it up. If there are too many bubbles, leave it for a while (The ratio between water and bubble liquid = 5:1).



3. Dip one end of the straw into the bubble liquid.

4. Blow at the other end, can you make some bubbles now?

5. Dip the straw into the bubble liquid again and blow it harder. What does the bubble look like now?

6. Want a huge bubble? You need to blow continuously and gently to let the bubble grow slowly.

Activity Disclosure

If you blow suddenly, the bubble breaks out, forming tiny small bubble or no bubbles at all. When you blow it slowly, the bubble film becomes thinner and thinner and the bubble becomes larger and larger slowly.

More Secrets: Because of the surface tension of the soapy water, the air you blow out is captured inside a thin liquid film. Pure water has a strong inter-molecule attraction force, which makes the molecules bond together pretty tightly, and not tend to stretch and form bubbles. Mixed with the bubble liquid or some liquid soap, water has its surface tension decreased, and the water molecules are no longer bonded together tightly, thus bubbles are formed.

What you'll need from the kit:

- 1 Bottle of Bubble Liquid
- 1 Measuring Cup
- 1 Stir Stick
- 1 Straw

What you need to get or use:

- Some Water
- 1 Cup
- 1 Bowl

Activity #2: Triangle Bubbles

All bubbles are round, are not they? Can we make any unusually shaped bubble? Let's try together.

What you'll need from the kit:

Bubble Liquid (Left from Activity #1)

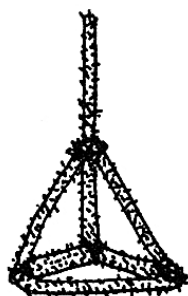
1 Straw

2 Craft Pipe Cleaners

Craft Pipe Cleaners



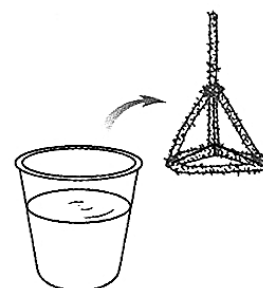
1. Bend and form the craft pipe cleaner into two adjacent triangles as shown in the figure.



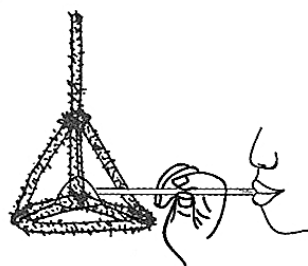
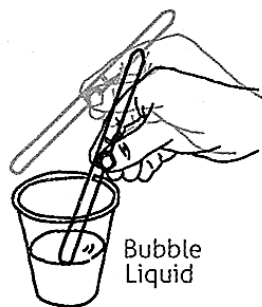
2. Connect the the two ends of the adjacent triangles with the other craft pipe cleaner to make a triangular pyramid.



3. Dip the triangular pyramid into the bubble liquid completely holding one end of the craft pipe cleaners.



4. Take the triangular pyramid out of the bubble liquid, and there is a triangle bubble on the pyramid.



5. Dip one end of the straw into the bubble liquid, poke it into the triangle bubble, and blow at the other end. What shape is the bubble you just blew out in? Blow more bubbles in the pyramid to make creatively shaped bubbles.

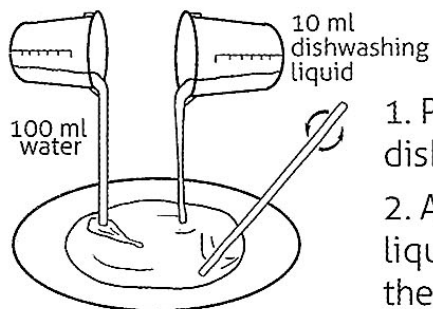
Activity Disclosure

The frame of craft pipe cleaner limits the bubble's film and shapes the bubble into a triangular pyramid. Bubbles cluster together inside the triangular pyramid are variously shaped under effects of various factors.

More Secrets: Why are all soap bubbles round? When we blow air into a bubble, it becomes larger and larger, but the air pressure outside compresses it to its minimum shape, and because sphere is the shape with the smallest surface area at the same volume, so all soap bubbles are round.

Activity #3: Bubble Snake

Do you want a super bubble maker which can make a lot of bubble at one blow? With this kit, you can make a super bubble set which can do bubble snakes.



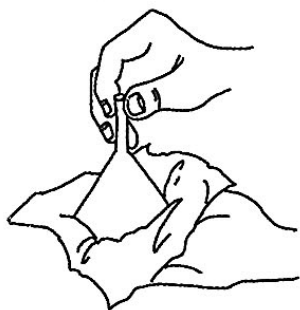
1. Pour 100 ml water into the dish.
2. Add 10 ml dishwashing liquid into the water and mix them up.

What you'll need from the kit:

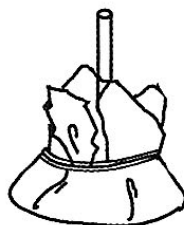
- 1 Elastic Rubber Band
- 1 Measuring Cup
- 1 Funnel

What you need to get or use:

- Some Dishwashing Liquid
- Some Food Colors
- 1 Towel
- 1 Bowl
- 1 Dish



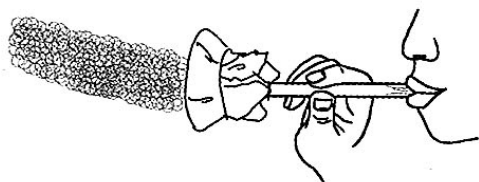
3. Cover the inlet of the funnel with an used towel.



4. Fix the towel with an elastic rubber band, keeping the towel stretched.



5. Dip the funnel inlet covered with the towel into the bubble water.



6. Blow at the outlet of the funnel to make a bubble snake. Try your vital capacity and blow as long as you can!



7. Dip the funnel inlet with the towel into the bubble water again, then take it out and put several drops of each color of the food colors on the towel.
8. Blow at the outlet of the funnel then you make a beautiful bubble rainbow.

Activity Disclosure

There are many tiny holes in the towel acting as tiny bubble sticks. When the towel is filled with bubble liquid, under the pressure of the air, many small bubbles will be blown out. At the same time, the movement of food pigment on the towel will be activated to form colorful bubbles.

Activity #4: Giant Bubbles

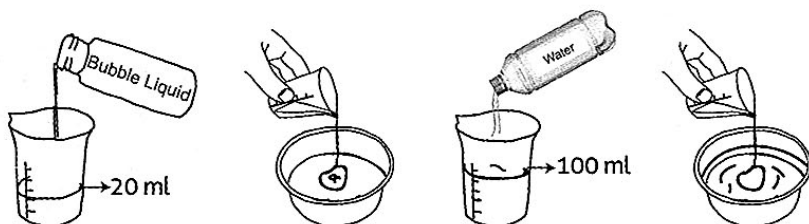
You have made triangle bubbles and normal size bubbles. With this kit, you can make giant bubbles.

What you'll need from the kit:

- 1 Cotton Rope
- 1 Washer
- 1 Bottle of Bubble Liquid
- 1 Measuring Cup

What you need to get or use:

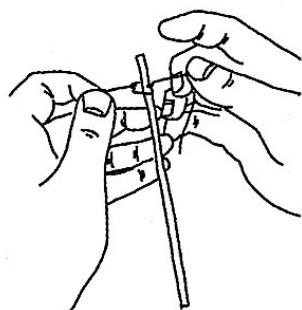
- Some Water
- 2 Wood Sticks
- 1 Bowl



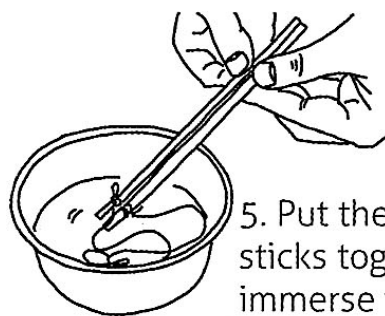
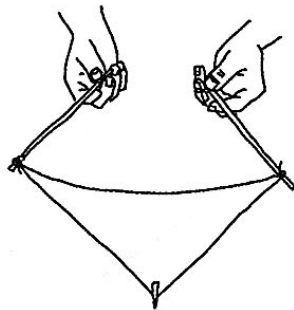
1. Take 20 ml bubble liquid and pour it into the bowl.
2. Take 100 ml water and add it into the bowl and stir.



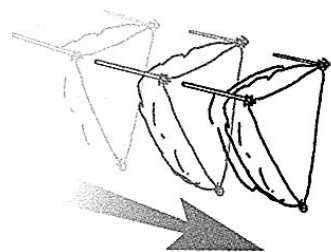
3. Lead the cotton rope through the washer.



4. Tie the cotton rope to the two wood sticks to make a device as shown in the following diagram.



5. Put the two wood sticks together and immerse the cotton rope totally into the bubble water.



6. Lift the cotton rope slowly, and separate the wood sticks, and a liquid film formed in the triangle cotton rope frame.

7. Flick the wood sticks gently, and a super giant bubble comes off the triangular cotton rope frame.

Activity Disclosure

The triangle cotton rope frames plays the role of the blow loops of bubble makers. When the wood sticks flicks, a lot of air is caught into the liquid film and forms a super giant bubble.

More Secrets: The glazing colors of a bubble shining in the sun look like rainbow, because the bubble you see actually has two thin films, which reflect lights onto them separately, and there is "double-layer interference" in the bubble films resulting in different light intensities.