

Cloud Rings & Foggy Bubbles

Dry ice can be lots of fun!

WHAT TO DO

An adult will drop a small piece of dry ice into a plastic bottle with a little warm water. As the fog or cloud streams out, squeeze the bottle with short gentle strokes to shoot donut-shaped rings into the air. Other bottles have caps with rubber tubes connected to funnels. Dip the funnel into soapy water to blow bubbles filled with fog.

WHAT'S HAPPENING?

Dry ice is extremely cold solid carbon dioxide (*that's why you should never touch it with your bare hands!*) At about -110°F it changes directly from a solid to a gas, skipping the liquid phase, i.e. it doesn't melt. That's why it's called "dry" ice. Under warm water this gas creates bubbles which float to the surface and pop, releasing the very cold gas to mix with and cool the surrounding air. This causes water vapor in the air to condense into tiny liquid water droplets- a cloud or fog. As you squeeze the bottle this fog encounters the still air outside and spins into a small ring. You need to squeeze just right, but with a little practice you'll be shooting perfect fog rings into the air!

You can also use it to blow soap bubbles filled with fog. The skin of the bubble is composed of very thin layers of water and soap molecules, so if you touch the bubble with dry skin it pulls or "wicks" the water and pops the bubble. If you wet your finger or hand, however, you can touch or even hold the bubbles without popping them.