



## UNDER PRESSURE



### Red Flags

Adult supervision is required when children use sharp objects. An adult should supervise the children's poking holes in the carton and hammering nails into the can.

### Questions to Ask

How is the flow different? Can the children draw pictures of the water flowing out of the 3 different holes?

### Science Connection

Water pressure is the force of the weight of water pushing on the water below it. Water at the level of the top hole has the least water pushing down on top of it so it has lower pressure. Water at the level of the bottom hole has the most water on top of it creating more pressure. The amount of pressure determines how far horizontally the stream of water goes from the container.

### WHY

To be a hydrologist and study the flow of water.

### WHAT YOU NEED

- An empty milk carton
- 3 Sharp pencils
- Water
- Sink

### WHAT TO DO

Using a sharp pencil, carefully poke a hole into one side of the empty container. **Do not remove the pencil.** Using the two remaining pencils, poke two more holes on the same side—one above the first hole and one below it. Remember to leave the pencils in the holes. Fill the carton with water and place it on the edge of the counter—with the holes aiming toward the sink. Pull out the pencils one at a time.

### VOCABULARY

Liquid: Feels wet, takes on the shape of the container it is in. Liquids flow.

Stream: A current or flow of water

### TRY THIS

*Poke holes in the different sides. What happens? Can you poke holes into the carton when it is filled with water? Which is more fun—when it's empty or when it's filled? Why?*

*You might want to color the water.*

*Using a hammer and nails, the children can make holes in an empty coffee can. Fill it with water and see what happens. Try covering with the plastic lid. Does it make a difference? Why?*