



# ICE IN A GLASS: WILL IT OVERFLOW?

If you fill up a glass with ice to the top with water, will it overflow when the ice melts?

## YOU WILL NEED

- A drinking glass
- Warm water
- Ice cubes

## WHAT YOU DO

### Step 1

Put two or three ice cubes in a glass and carefully fill the rest of the glass with warm water, filling the glass as much as possible without water spilling out.

### Step 2

As the ice cubes melt in the glass of water, watch carefully to see if it overflows.



### THE SCIENCE BEHIND IT

When water is really cold it freezes, turning into solid ice. However, water is strange because, while most other liquids contract (get smaller) when they freeze, water actually expands (gets bigger) when it freezes. And so, when the ice is in the glass of water, the ice is taking up more room that it would if it was water. This means that when the ice melts, the water level in the glass stays about the same. Water expanding when it freezes can cause problems; it is the reason that water pipes sometimes burst during the winter!



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