

## What Happens When You Put Ivory Soap in the Microwave?

### Description

Have you tried this easy experiment that only requires a bar of Ivory soap, a microwaveable plate, and a microwave?



Simply put it in the microwave for a minute and a half and watch as the rectangular bar of soap transforms into something 6 times its size! I first saw it on the [Happy Hooligans website](#) and have been itching to try it myself.

I have yet to try the experiment, but I did track down the science behind why the Ivory soap. Read the [how and why here](#).

As the site explains, Ivory soap is one of the few brands that float in water because it has air pumped into it during the manufacturing process. If you didn't want to click on the link, here's the part about why it expands in the microwave:

This is actually very similar to what happens when popcorn pops or when you try to microwave a marshmallow. Those air bubbles in the soap (or the popcorn kernels or the marshmallow) contain water. Water is also caught up in the matrix of the soap itself. The expanding effect is caused when the water is heated by the microwave. The water vaporizes, forming bubbles, and the heat causes trapped air to expand. Likewise, the heat causes the soap itself to soften and become pliable.

This effect is actually a demonstration of Charles' Law. Charles' Law states that as the temperature of a gas increases, so does its volume. When the soap is heated, the molecules of air in the soap move quickly, causing them to move far away from each other. This causes the soap to puff up and expand to an enormous size. Other brands of soap without whipped air tend to heat up and melt in the microwave.

See more at: <http://www.stevespanglerscience.com/lab/experiments/soap-souffle#sthash.GgEOxeIG.dpuf>

And here's his video if you'd rather just keep it safe and watch online!

This is definitely something I'll do when Avery gets just a little older and doesn't try to eat everything she touches. Part of the fun is getting to feel how the soap has changed after being nuked. Apparently, it easily crumbles and can even be used to make [homemade laundry detergent](#)!

If you haven't already, try this with your kids and have the guess what will happen after the 90 seconds is up.

As a side note, this will fill your room with a pleasant, soapy smell, so try it right after cooking fish or when you just need to freshen up the kitchen! Maybe at your workplace?

**What do you think of this easy experiment?**

**Have you tried or heard of it before?**

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