

Featured Project:

Soap Soufflé

How to blow up soap in the microwave? That is the question! This soapy experiment is a great way to have some good, clean fun. What to do with the soap after this experiment? Don't waste it – it's still soap!



Materials Needed:

- Bar of **Ivory** soap (must be Ivory because of its high air content)
- Microwaveable plate
- Microwave
- Knife



Time to Make: 5-10 minutes

Instructions:

1. Use the knife to cut the soap into 4 equal pieces and place them on a dinner plate. Place the plate into the microwave after asking permission from an adult.
2. Cook the soap on HIGH for a minute or two and watch as it expands into beautiful puffy clouds. Be warned: it will expand six times its original size.
3. Allow the soap to cool before touching it. You'll find it's puffy yet rigid. It's still soap as it only underwent a physical change, not a chemical change.

What's going on?

Soap contains small pockets of air that have water vapor trapped inside of them. Like the moisture inside of a popcorn kernel, the water vapor inside of soap heats up when the microwave is turned on. This leads to areas of high pressure inside the soap. Eventually the softened "walls" of the bar can't hold up to the pressure and the soap starts to bubble and expand. As the soap cools down it stiffens up, but keeps its new shape. Try the same experiment with any bar of soap other than Ivory. Do you see the same results?

Source: <https://www.stevespanglerscience.com/lab/experiments/soap-souffle/>

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