



EXPANDING SOAP

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a **CHOKING HAZARD**. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

INGREDIENTS

- Ivory Soap
- Microwave
- Paper Plate

INSTRUCTIONS

STEP 1: Place the bar of Ivory Soap on a paper plate. Describe and classify the soap by its observable properties.

STEP 2: Using the microwave, heat the soap for one minute.

STEP 3: Remove the Ivory Soap from the microwave and observe. Describe and classify the soap by its observable properties. How can the soap be used as a model to describe how matter is made of particles too small to be seen.

EXPLANATION

The water and air trapped inside the bar of Ivory Soap are heated by the microwave. This causes the water to evaporate and the air to expand. The expanding air, forces the Ivory Soap to puff up.



SCIENCE BACKGROUND

Matter is anything that has mass and takes up space. Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. Matter of any type can be subdivide into particles that are too small to see, but even then the matter still exists and can be detected by other means.

I CAN STATEMENT

- ✓ I can plan and conduct an investigation to describe and classify different kinds of matter by their observable properties.
- ✓ I can develop a model to describe that matter is made of particles too small to be seen.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

2 – Structure and Properties of Matter | Patterns
5 – Structure and Properties of Matter | Scale, Proportion, and Quantity