



## FIREPROFF BALLOON

### 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

- 2 Balloons
- Water
- Utility Lighter

### INSTRUCTIONS

**STEP 1:** Inflate one of the balloons and tie the end so the air stays inside.

**STEP 2:** Have an adult ignite the utility lighter, place the flame under the balloon, and observe. What happens?

**STEP 3:** Place  $\frac{1}{4}$  of a cup of water into the other balloon. Carefully inflate the balloon and tie the end so the air and water stay inside the balloon.

**STEP 4:** Have an adult ignite the utility lighter, place the flame under the balloon, and observe. What happens? Make observations to provide evidence that energy can be transferred from place to place by heat currents.

### EXPLANATION

The balloon, with water, doesn't pop! The heat, from the flame, is transferred to the water, keeping the balloon from bursting.

## WATCH NOW



### SCIENCE BACKGROUND

Matter of any type can be subdivided into particles that are too small to see, which are always moving. The energy of the moving particles is known as thermal energy. Heat is the transfer of thermal energy from a warmer object to a cooler object. Heat is transferred from one location to another through conduction, convection, or radiation. Conduction is the transfer of heat between objects that are in direct contact with each other. Convection is the transfer of heat by currents through a liquid or gas. Radiation is the transfer of heat through space.

### I CAN STATEMENTS

- ✓ I can make observations to provide evidence that energy can be transferred from place to place by heat currents.

### NEXT GENERATION SCIENCE STANDARDS CONNECTION

4 – Energy | Energy and Matter