



## LEAKPROOF BAG

### 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

- Several Round Sharp Pencils
- Water
- Resealable Storage Bag

### INSTRUCTIONS

**STEP 1:** Fill the resealable storage bag with water. Describe the resealable storage bag by its observable properties.

**STEP 2:** Gently push the round sharp pencils through the bag. What happens? Explain how pushing the round sharp pencils through the resealable storage bag can be used as a model to describe how matter is made up of particles too small to be seen.

### EXPLANATION

The bag is made of polymers. Polymers are long, repeating chains of molecules. When the sharp pencils are pushed through the bag, these chains of molecules seal up around the pencil, preventing the water from leaking out of the bag.



### 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 subdivided into particles that are too small to see, but even then, the matter still exists and can be detected by other means. An atom is the smallest particle of an element that still has all the properties of that element. A molecule is two or more atoms chemically bonded together. A polymer is a chemical compound made by linking smaller molecules in a long, repeating chain.

### I CAN STATEMENT

- ✓ I can plan and conduct an investigation to describe and classify different kinds of materials 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