



BLEEDING PAPER

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

- [Goldenrod Paper](#)
- Baking Soda
- Water

INSTRUCTIONS

STEP 1: Mix one cup of baking soda with one cup of warm water. Describe and classify the mixture by using its observable properties.

STEP 2: Dip the palm of your hand into the baking soda and water, slap your hand on a piece of goldenrod paper, and observe. Explain how the goldenrod paper can be used to help identify the mixture by its properties.

EXPLANATION

The goldenrod paper turns bright red when slapped with the palm of your hand, which is covered with baking soda and water. Goldenrod paper is made from a dye which is a pH indicator. The goldenrod paper turns bright red when exposed to a base such as ammonia or baking soda and turns a bright yellow when exposed to an acid such as vinegar or lemon juice.



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. Measurements of a variety of properties can be used to identify matter. Different properties are suited to different purposes. Scientists use a pH scale to measure the strength of acids and bases. A pH indicator is a substance that indicates the degree of acidity or basicity through a color change. The pH scale ranges from 0-14. A substance with a pH of less than 7 is considered an acid, while a substance with a pH of more than 7 is considered a base. An acid has a sour taste and a pH of less than 7. A base has a bitter taste and a pH of more than 7.

I CAN STATEMENTS

- ✓ I can plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- ✓ I can make observations and measurements to identify materials based on their properties.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

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