

# Educational Innovations<sup>®</sup>

#SM-925

## Goldenrod Paper (pack of 100 sheets)

This goldenrod paper is colored with a dye which is an acid-base indicator. It turns bright red in bases (eg. solutions of ammonia, baking soda or washing soda) and golden-yellow in acids (eg. vinegar or lemon juice). Try the following:

1. With a Q-Tip, write a message with household ammonia. As the ammonia evaporates, the red message will disappear.
2. Write a permanent message with a base such as a solution of baking or washing soda. The message remains.
3. Write an invisible message on the goldenrod paper using a piece of candle wax. Spray the paper with a basic solution to see the message.
4. Use goldenrod paper to classify safe household products as acidic or basic.
5. Use goldenrod indicator paper to test for acids and bases.

For over 150 years litmus paper has been used to test the acidity of a solution. Now you can use goldenrod paper in the same way.

	COLOR		
	Basic Solution	Acidic Solution	Neutral Solution
Red Litmus Paper	<i>Turns Blue</i>	<i>Stays Red</i>	<i>Stays Red</i>
Blue Litmus Paper	<i>Stays Blue</i>	<i>Turns Red</i>	<i>Stays Blue</i>

Note: You can change red litmus paper into blue litmus paper by soaking the red paper in a weak solution of a base, such as, baking soda,  $\text{NaHCO}_3$  and allowing it to dry.

	COLOR		
	Basic Solution	Acidic Solution	Neutral Solution
Yellow Goldenrod Paper	<i>Turns Red</i>	<i>Stays Yellow</i>	<i>Stays Yellow</i>
Red Goldenrod Paper	<i>Stays Red</i>	<i>Turns Yellow</i>	<i>Stays Red</i>

Note: You can change yellow goldenrod paper into red goldenrod paper by soaking the yellow paper in a weak solution of a base, such as, baking soda,  $\text{NaHCO}_3$  and allowing it to dry.

Suggested Activity: Provide students with the above litmus paper chart (not the goldenrod chart), a few pieces of red and blue litmus paper, vinegar, baking soda, and a sheet of goldenrod paper. The challenge is to prepare a similar type chart for goldenrod paper.



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