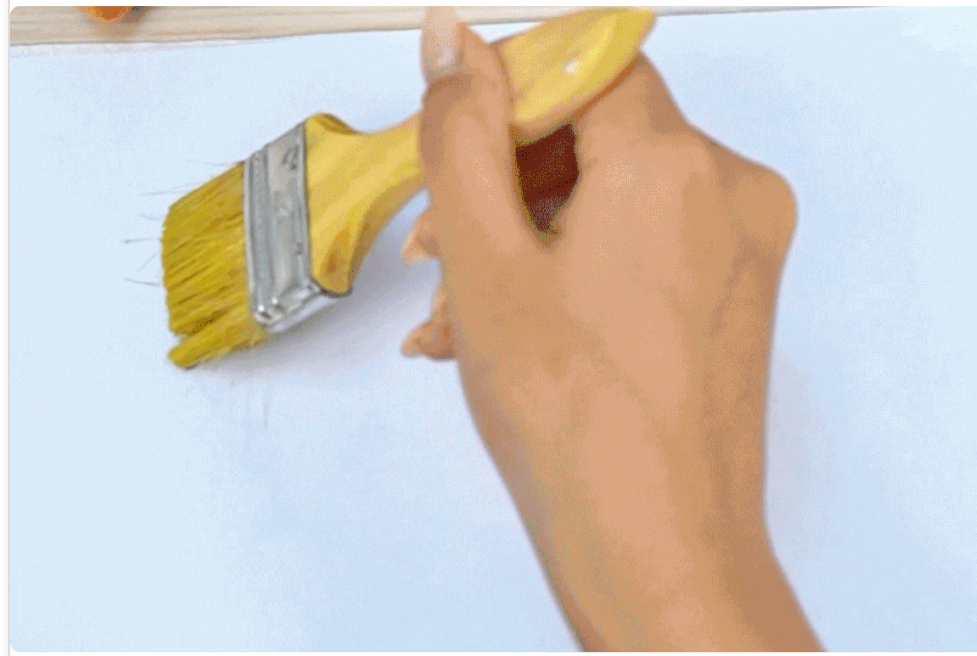


# Top Secret! Uncover the Hidden Message!

October 22, 2024 / DIY / Stem Activities / Chemistry / Age 3 - 5 / Secret Message

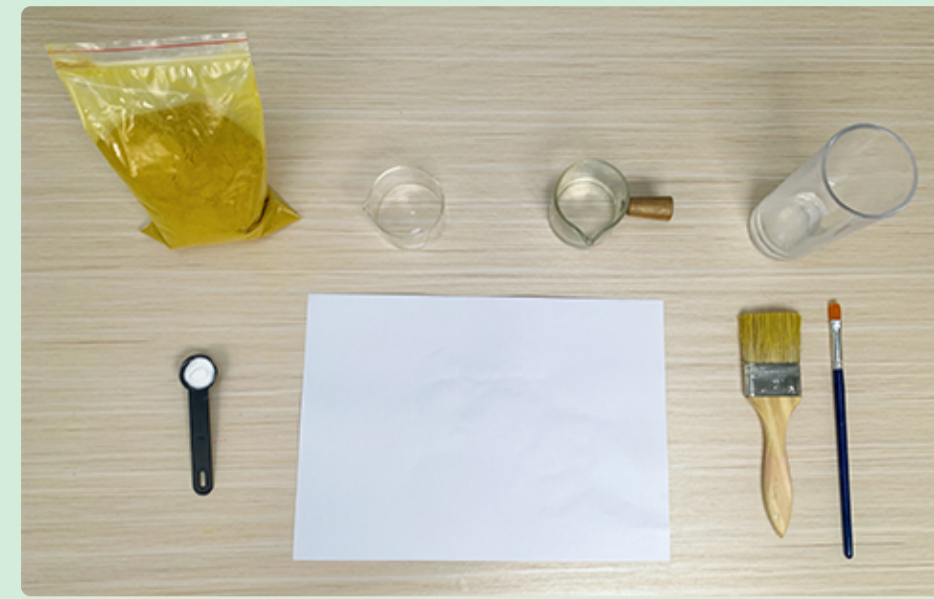


Ready to become a science spy? Write secret messages with invisible ink that only those who know the secret can see! You can create secret letters with simple kitchen materials. Your friends will need a special method to "decode" this letter and understand your hidden secret!

- Age: 3-5
- Time: Less than 30 minutes
- Messiness level: Messy

## Materials Needed:

1/2 teaspoon turmeric  
1 teaspoon bicarbonate of soda  
30ml warm water  
30ml rubbing alcohol,  
Brush  
Paintbrush



## Step-by-Step Instructions:

1. Mix 1 teaspoon of bicarbonate of soda with 30ml of warm water.



2. Dip into the mixed bicarbonate of soda solution and draw or write on paper. Let the paper dry.



3. In a container, put 30ml of rubbing alcohol and 1/2 teaspoon of turmeric, and mix them together.



4. Take out the dried paper from step 2, dip the brush into the mixture of alcohol and turmeric, and brush it evenly on the paper. The secret message on the paper will appear.



## The Science Behind It:

The secret behind this experiment is an acid-base reaction. Bicarbonate of soda is an alkaline substance, while turmeric is a natural acid-base indicator. When you write with the bicarbonate of soda solution, it looks like clear water, and no one will know what you've written. But when you "decrypt" this letter with the turmeric solution, it changes colour, revealing your mysterious writing! This is because turmeric and bicarbonate of soda undergo a chemical reaction, making the invisible writing visible.