



## INVISIBLE INK

Use a chemical reaction to uncover a secret message.

### Materials

Paper  
Cup or bowl  
Lemon juice  
Q-tip or paint brush  
Heat source  
(E.g. incandescent bulb, lit candle)



Note: Do not eat or drink anything used in this activity.

### Procedure

- Pour a small amount of lemon juice into the cup or bowl.
- Dip the Q-tip or paint brush into the lemon juice and use it to write a secret message onto the paper.
- Allow the paper to dry completely so that the message becomes invisible.
- Have an adult reveal your secret message by holding the paper over (but not on) your heat source.

### Results

The secret message was revealed by the heat!

### Why?

When the lemon juice on the paper was exposed to the heat, it underwent a chemical reaction called oxidation. The lemon juice is nearly colorless under normal conditions, but oxidation caused it to turn a dark color and reveal the message.

This activity was adapted from the American Chemical Society's "Celebrating Chemistry: Our Health, Our Future". You can find more activities on their website, [acs.org](http://acs.org)