

# FULTON FRESH KITCHEN SCIENCE

## Invisible Ink

Greetings Agent 4-H, headquarters has a special mission for you!

**SAFETY FIRST!** Youth should always have parent supervision when performing science experiments.

### MATERIALS

- Lemon juice, lime juice and other fruit juices
- Paper
- Newspaper
- Paint brush, cotton swab or cotton balls
- Iron (clothing or hair)

### PROCEDURE

1. Collect your inks (lemon juice, lime juice, fruit juice or vinegar). You might need help cutting the fruit so ask an adult. Keep your liquids in different containers so you know which is which.
2. Spread out newspaper on your work surface. This is to help if there are any spills.
3. Get your paper. Using a paint brush, cotton swab or cotton balls, dip into your ink and write a message/draw your picture.
4. Let your ink dry completely on the paper. This could take a few minutes so feel free to paint on another piece of paper.
5. WITH ADULT SUPERVISION: Once the paper is completely dry, apply heat. You can hold the paper close to a light bulb or place your paper on some towels and gently use a clothing iron or hair iron. Be very careful when using a heat source.
6. Watch your paper reveal your message or drawing!

### SUBSTITUTIONS

In addition to lemon, lime, and other fruit juices, you can use vinegar as your invisible ink.

This lesson was adapted from <http://seven-oaks.net/5-foolproof-invisible-ink-recipes/>

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## Invisible Ink

Why do oranges wear suntan lotion? Because they peel.

### DID YOU KNOW?

The acidity in the ink (lemon, lime, other or vinegar) degrades the paper where it is applied. Once you add heat, the parts of the paper that has had ink on it burns quicker, revealing the hidden message or drawing.



### CAREER CONNECTION

The science experiment involves the use of different liquids and detective skills! If you liked this experiment, you might like to check out careers related to scientific research as a chemist or forensic scientist. Chemists can help in protecting all types of things, from food (agricultural chemist), car (analytical chemist in auto paint) and people with medication (pharmaceutical chemist). Forensic scientists help apply science to criminal and civil laws, assisting law enforcement in solving crimes.

Share a picture of your experiment with us on social media with the hashtag #localfoodmadefun.

Visit our website or social media channels for a follow-along video of this experiment.

[www.ugaextension.org/fulton](http://www.ugaextension.org/fulton)

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