

Here's a way to write secret messages – messages so secret they're invisible.

Materials

- Vinegar or lemon juice
- Cotton swab
- Paper
- Heat source (like a candle)
- Baking soda and water (optional)

1

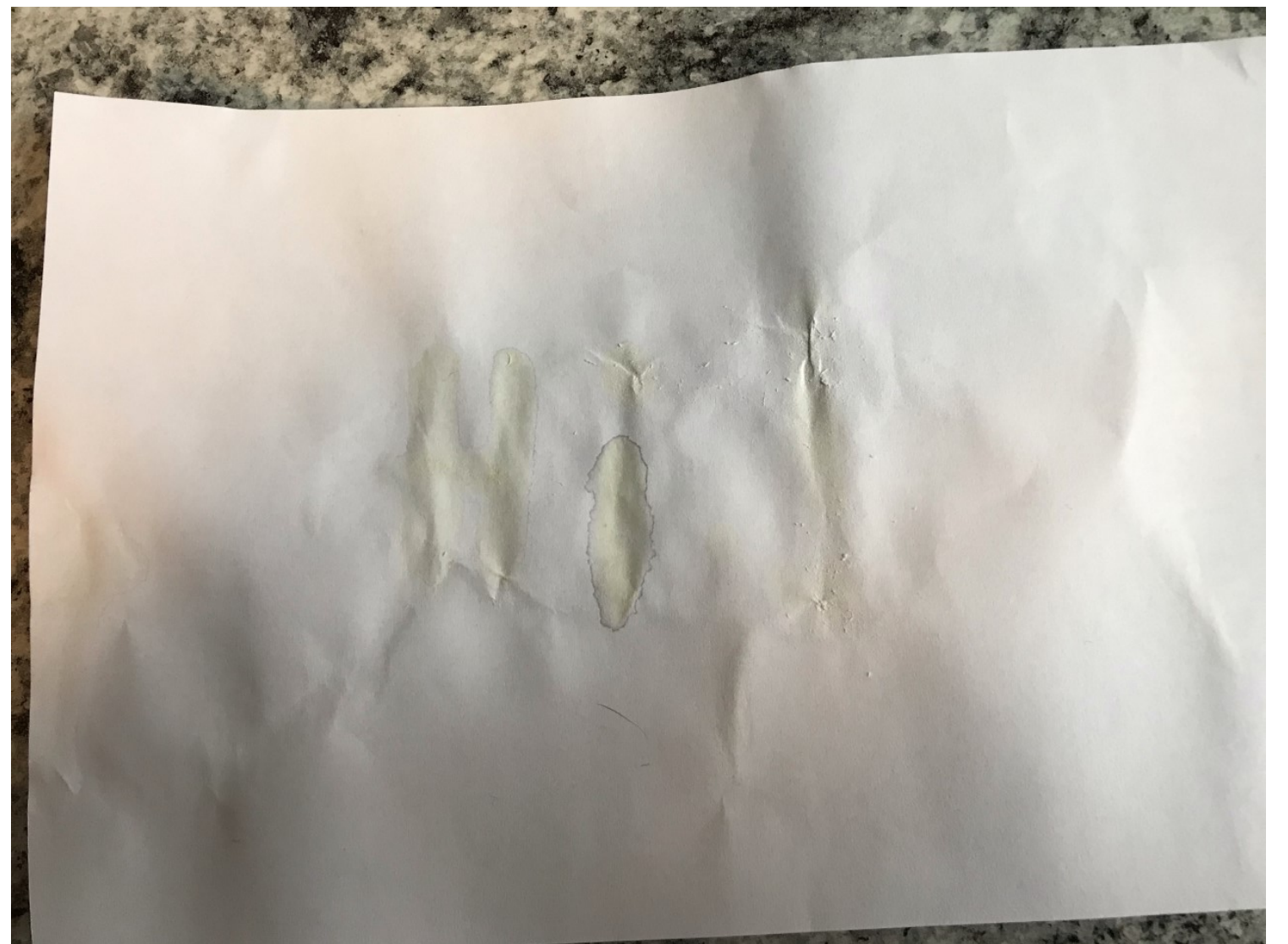
Dip your cotton swab/Q-tip into the lemon juice or vinegar.

2

Write your message on the piece of paper using the wet cotton swab.

3

Let your secret message dry.



4

In order to decode use an adult's help. Pass the paper back and forth over the heat source. Make sure to keep the paper moving so the heat is not applied to only one section of the paper. Gradually the writing will appear.

Alternatively...

- 1** Mix the baking soda and water together. The higher the concentration of baking soda the better.
- 2** Using another cotton swab/Q-tip dip the baking soda into the solution and go over the secret message. This will reveal your secret message.



What's Happening?

That heat from the flame causes a chemical change in the dried ink. The portion of the paper which absorbed the vinegar or lemon juice chars at a lower temperature than the untreated paper, so the writing shows up as a faint brown scorching.

If you are using the baking soda solution to reveal the secret message. A chemical reaction is happening. Vinegar and lemon juice, which has citric acid in it, react when a base (alkaline) comes in contact. Acids react with bases to create salt water.

