



## Invisible Ink

Did you know that invisible ink was invented over 2,000 years ago by the Greeks? Since then, evidence of documents written with invisible ink has been found in many major wars. From George Washington and the CIA to spies and now... you!

**Materials needed:** *A lemon, a knife, a spoon, a toothpick, something to write on, and an oven (a solar oven would work great).*

### Activity:

Step 1: Cut the potato in half.

Step 2: Using a spoon, scoop a hole in the top of the potato (think of this as an "ink" well).

Step 3: Using the knife or spoon, push some of the potato juice into the hole.

Step 4: Using the toothpick as your writing tool, write out your message!

To reveal your message, place the paper into a warm oven (250f/120C) for a few minutes. You will start to see the message appear in front of your eyes!

### Question Time:

1. Why do you think the ink reappears in heat?
2. What other liquids do you think would work?
3. What are some benefits of creating invisible ink?

**For the Adults:** This activity works on literacy, science, and critical thinking skills.

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## Paper Alternatives

Paper is made out of many different materials you may not have considered. Fruit skins, bamboo, animal skin, and poop from a cow – just to name a few. In this activity, we will be making our own paper. No need to find a cow – all you'll need is some dryer lint.

**Materials needed:** Dryer lint from a few loads of laundry (you'll need about a cup of wet lint for one piece of paper), a bowl and water for soaking, a blender, your Kiwi Co. box frame, and a sponge.

### **Activity:**

Step 1: Collect all the lint you plan on using. Keep in mind the color lint will be the color of the paper, so mix, match, do you!

Step 2: Place lint in a bowl of water and soak overnight.

Step 3: Put one cup of lint into the blender and fill it to the top with water.

Step 4: Blend until the lint becomes a soft pulp.

Step 5: Strain the pulp from the water. A colander works well, or you can use your hands.

Step 6: Place lint pulp in the frame.

Step 7: Press the sponge into the pulp, pulling out the excess water.

Step 8: Once excess water is gone, flip the screen onto a flat, absorbent surface (like a tea towel or pillowcase) and let dry.

Step 9: When the paper is dry, the paper is ready!

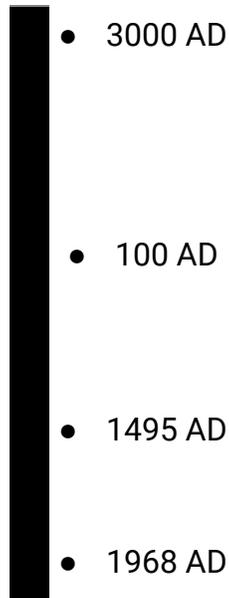
**For the Adults:** This activity works on problem-solving, critical thinking, and science skills.

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# Timeline Challenge

*Mini graphic game*

Think you know the history of paper? Fill in each event on the timeline!



*Events:*

- Sticky notes invented
- Egyptians create paper out of papyrus
- England establishes its first paper mill
- Xu Shen compiles huge dictionary, *Shuowen jiezi*, of Chinese characters

*Answers:* **3,000 BC:** Egyptians create paper out of papyrus; **100 AD:** Xu Shen compiles huge dictionary, *Shuowen jiezi*, of Chinese characters; **1495 AD:** England establishes its first paper mill; **1704 AD:** Boston News Letter, the first American newspaper, starts printing; **1968 AD:** Sticky notes invented