



MISSION POSSIBLE: INVISIBLE INK

MATERIALS

WHAT YOU'LL NEED

- Half a lemon (No lemon? See alternate options on page 2.)
- Bowl
- Spoon
- Cotton swab
- White paper
- Iron (will require adult assistance)



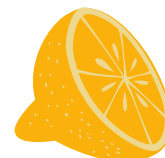
LEARNING CORNER

Why lemons?

Lemon juice is an organic substance that oxidizes and turns brown when it is heated up.

Oxidation: The reaction of a substance with oxygen. One of the effects of oxidation is for a substance to turn a darker colour.

When life gives you lemons, make invisible ink and write secret messages! Send those messages to other agents in your home and share the secret for them to read.



BIG QUESTION

How can we write and reveal secret messages using lemons?



Step by step activity instructions on next page.



BONUS QUESTIONS!

Do other items in our home oxidize?
How do each of those items react when exposed to oxygen?



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PREPARE YOUR INK

Cut a lemon into half.
Squeeze the lemon juice into a bowl.



LET THE JUICE DRY

Let the juice dry so it becomes completely invisible.

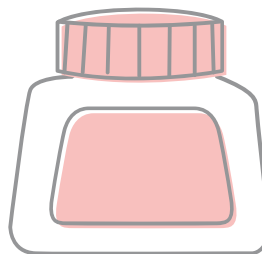
REVEAL YOUR MESSAGE

To reveal your secret message, heat the paper by ironing it!
(Adult assistance required.
Do not use steam function.
Note: In our example, we used the "cotton" function on the iron.)



USE THE INVISIBLE INK

Dip the cotton swab into the mixture. Write a message or draw a picture on the paper.



Try this activity with other acidic liquids such as milk, apple juice or vinegar. Which liquid works best?