

# CRUNCH TIME

## Making Invisable Ink



### Serve Information:

Will make 3 x A4 pages with 'secret messages'

### INGREDIENTS:

- 1/4 Cup of bicarbonate of soda
- 1/4 Cup of water
- 1/2 Cup milk
- 1/2 Lemon (medium-sided)
- 1/2 Cup grape juice concentrate

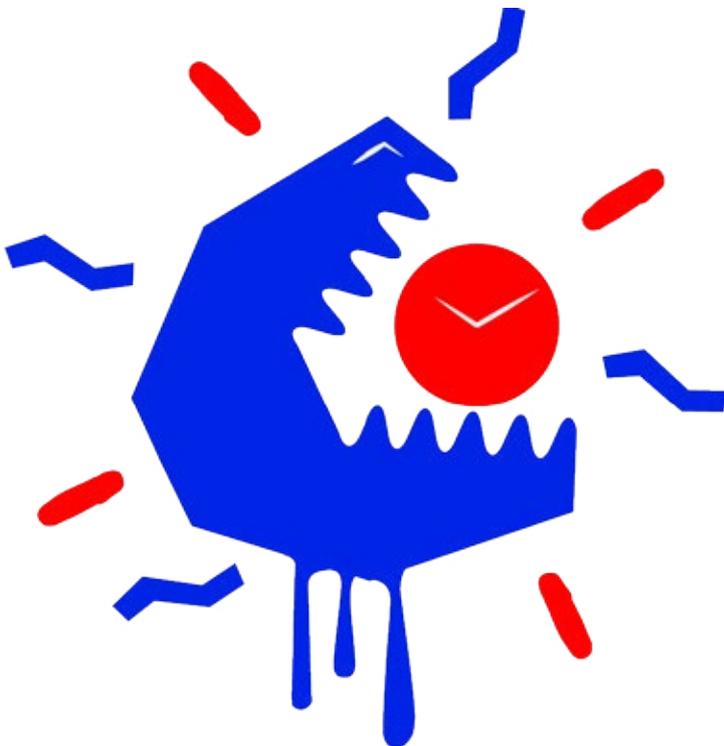
### EQUIPMENT:

- 3 Small bowls
- 3 Pieces of clean white A4 paper
- 4 Small paintbrushes (approx cm to 1cm brush width)
- 1 Teaspoon
- Lemon squeezer
- Table-top ironing board
- Small piece of paper
- Pencil
- Iron



## METHOD:

1. To make the first invisible ink, mix 1/4 of a cup of bicarbonate of soda and 1/4 of a cup of water.
2. Use a paintbrush and the bicarb mixture to write a message on paper. Set paper aside to dry for half an hour.
3. Take "prepared earlier" identical invisible ink message and show Alice (who can't see any writing)
4. You can make it appear by using grape juice concentrate
5. The grape juice concentrate is acidic. The acid in it reacts with the baking soda, so that a different colour appears on the page everywhere that the secret message is written.
6. To make the second type of invisible ink, take 1/2 a cup of milk and a clean paintbrush to write a message
7. To reveal the second message, that was written in milk, you can use an iron to reveal the message.  
Get an adult to help with this as it is hot
8. Milk is mildly acidic, and the acid weakens the paper. The acid actually remains in the paper after the milk has dried. When the paper is directly heated by the iron, the acidic parts of the paper start to turn brown first.
9. To make the third type of invisible ink, squeeze half a lemon and use a clean paintbrush to write a message
10. To reveal the third message that was written in lemon juice, you will need the heat from the iron again to reveal the message, as the lemon also contains acid



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