

# HOW TO CREATE COLOUR CHANGING LEMONADE

BY VOLVO X FLYING CAPE

Colour changing lemonade uses food grade experiment materials and can be a refreshing drink to boost vitamin c intake and interest in chemistry learning!

## MATERIALS

- Dried blue pea flowers
  - cup of hot water
    - clear glass
- 3-4 Tablespoon sugar / Honey
- Lemon juice from 1 lemon
  - Ice tray
  - clean spoon
- Blender (optional)

## INSTRUCTIONS

### STEP 1

Soak dried blue pea flowers in hot water for 15 - 20 minutes. Leave to cool.



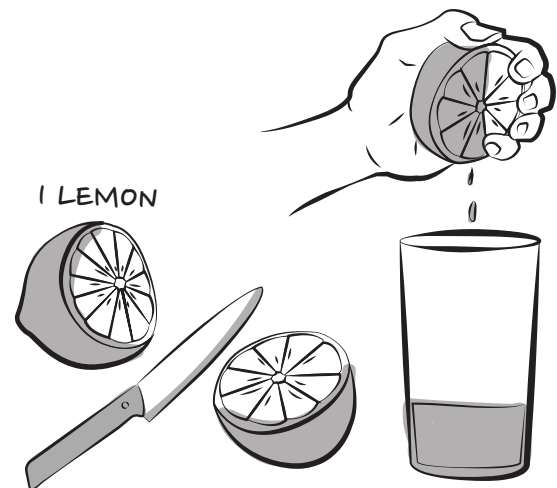
## STEP 2

Pour blue pea water into an ice tray and freeze for at least 1 hour.

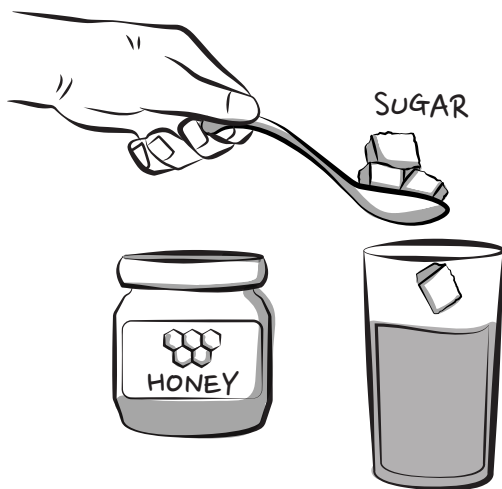


## STEP 3

cut washed lemon into half and squeeze out lemon juice from 1 lemon into clean glass.  
Remove seeds if necessary.



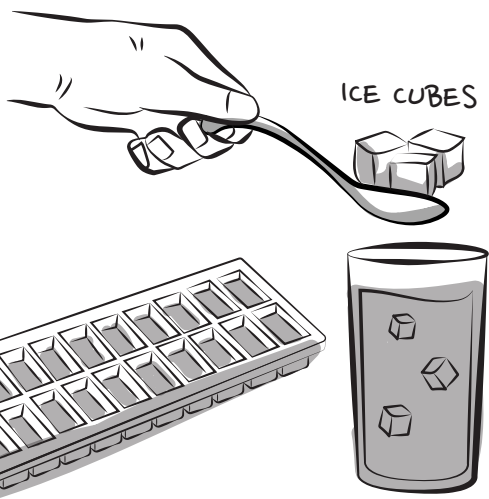
1 LEMON



SUGAR

## STEP 4

Dissolve sugar / honey in warm water to taste. Add into lemon juice.  
Stir to mix well.



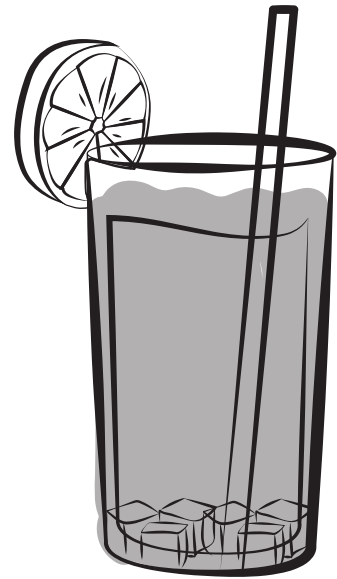
ICE CUBES

## STEP 5

Add in blue pea ice cubes and watch the blue pea liquid turn from blue to purplish-pink!  
You can blend the ice cubes to make crushed ice for a better effect.

## EXPLANATION:

Butterfly pea flowers contain a super bright blue pigment called anthocyanin. The anthocyanin acts as a base indicator, which means it will change colour as the pH level changes. Lemonade is a drink high in citric acid. When the anthocyanin mixes with the lemonade, its colour will change from blue (basic pH level) to purple or pink (highly acidic pH). The indicator has changed to show a pH Level lower than 7.



## EXPERIMENT PICTURE



Source: Image from [www.theflavorbender.com/galaxy-color-changing-lemonade-slushtie/](http://www.theflavorbender.com/galaxy-color-changing-lemonade-slushtie/)

Experiment provided by Smart Science Lab