



Making Still Lemonade



Investigation 1

You will need:

a jug, a teaspoon, a pipette, lemons & lemon squeezer or concentrated lemon juice, sugar, water and yellow food colouring.



Show what you have done with drawings

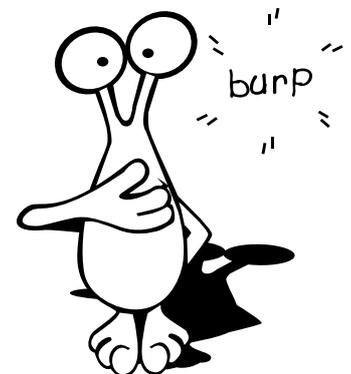
1. Measure 200ml of water.

2. Add 50ml of lemon juice.

3. Stir in 5 teaspoons of sugar.
What happens to the sugar?

4. Add 2 drops of colouring.

5. Taste to test the flavour then drink.



Investigation 2

Make a second batch of Still Lemonade and try different amounts of ingredients. Does it taste better with 40ml of lemon? How about 6 spoons of sugar? This is called "changing the variables". What is the perfect recipe for Still Lemonade?

The Perfect Still Lemonade Recipe

ml of water	ml of lemon juice	spoons of sugar
-------------	-------------------	-----------------

Investigation 3

Which do you think dissolves faster a spoonful of loose sugar or a sugar cube? How could you test this? You must make sure the test is fair. There must be the same amount of water in each beaker and you need to stir at the same rate. Did you get the result you expected? Why do you think this is?

What I Expected to Happen	The Result	Why ?

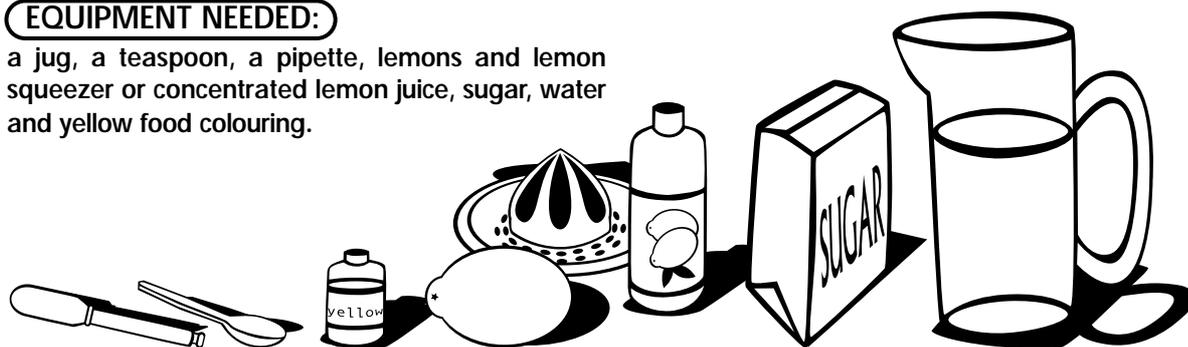
These activities show children what happens when solids are mixed with liquids; how to identify changes and what factors can affect the rate of change. Pupils need to recognise that dissolving is not the same as melting and that not all materials dissolve. The concepts of changing variables to affect outcomes and fair testing are also introduced.

investigation 1

This experiment is a practical demonstration of dissolving that gives the science a context.

EQUIPMENT NEEDED:

a jug, a teaspoon, a pipette, lemons and lemon squeezer or concentrated lemon juice, sugar, water and yellow food colouring.



1. Measure 200ml of water.
2. Add 50ml of lemon juice.
3. Stir in 5 teaspoons of sugar. What happens to the sugar?
4. Add 2 drops of colouring.
5. Taste to test the flavour then drink.



investigation 2

Make a second batch of Still Lemonade and try different amounts of ingredients. **This is called "changing the variables"**. Does it taste better with 40ml of lemon juice? How about 6 spoons of sugar?

Split the class into groups and ask each to try different amounts of ingredients.

What is the perfect recipe for Still Lemonade?

investigation 3

Which do you think dissolves faster a spoonful of loose sugar or a sugar cube? How could you test this?

This experiment introduces fair testing and making predictions.

Ask the children to predict which dissolves faster a spoonful of loose sugar or a sugar cube, and explain their reasoning. Ask them to design a fair test. To make it fair there must be the same volume of water in each beaker and you need to stir at the same rate. These answers can be prompted by holding up two beakers with unequal quantities of water, then miming stirring at different rates.

Ask them to discuss the results and suggest reasons.

The sugar lump should dissolve more slowly as only the outside of the cube is in contact with the water.

DO YOU KNOW HOW TO GET THE DISSOLVED SUGAR BACK? THE ANSWER IS SHOWN ON THIS CD-ROM UNDER "MORE ABOUT DISSOLVING"