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Calculating Colours Primary Masterclass

Beaker number	Percentage of mixture which is blue water	Fraction of mixture which is blue water	Fraction of mixture which is red water	Amount of blue water	Amount of red water	Ratio blue:red
1	20%	1/5		60ml		1:4
2			3/5		180ml	
3			2/5		120ml	
4		4/5		240ml		
5	100%					
In the row below, you can make up your own mixture (make sure you write down the fractions).						
Mystery mixture						
In the challenges below, it's a good idea to discuss your thoughts with an adult.						
Challenge A				210ml	90ml	
Challenge B		7/8				
Challenge C			1/3			

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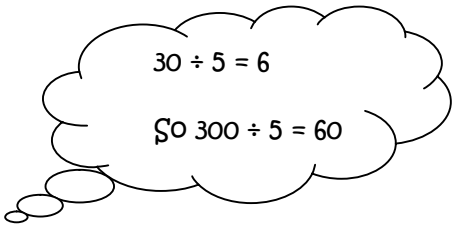
Equipment
On your table you should have:
One jug of blue water
One jug of red water
Glass beakers
Measuring cylinders
funnels

Use worksheets and your knowledge of fractions to help you make some different shades of purple water.

Example

You want 1/5 of the (300 ml) mixture to be blue water:



300 ml ÷ 5 = 60 ml

So, in your pair, measure out 60 ml of blue water and pour it into a beaker.

Now, you want the other 4/5 to be red water:

1 'unit' = 60 ml... so 4 units = 4 x 60 ml = 240 ml

So you need to measure out 240 ml of red water and pour it into the beaker with the blue water.

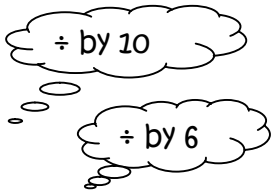
Now, you have 60 ml of blue water mixed with 240 ml of red water:

So the ratio or blue : red is . . .

60:240

= 6:24

= 1:4



Fill in as much of the worksheet as you can, using a calculator when you need to.

Order the beakers by looking at their colour (from red - - to - - purple - - to - - blue).

Then record your order on the number- line.

With your group, make up your own mixture, (record the fractions that you used) – then test another group – can they work out where in the order your mystery mixture goes?