

# Rainbow in a Jar: - Water Density Experiment



Dear Year 6,

We normally look forward to welcoming you to our Science Faculty during your transition days at John Port Spencer Academy

Since the current circumstances mean we can no longer do this this year, it doesn't mean that you get to miss out on carrying out exciting experiments!

We are creating a competition to see who, in our future year 7 can produce the best rainbow? Try the experiment and send in your pictures to us at [rjv@johnport.derbyshire.sch.uk](mailto:rjv@johnport.derbyshire.sch.uk) . We will pick a winner to be announced in September!

## Equipment

- 4 glasses
- Warm water
- 1 measuring cup
- Food colouring
- Sugar or salt and measuring teaspoon
- Spoon
- Pipette or baster
- Jam jar or test tubes



## Instructions

1. Set out 4 glasses. Measure 1 cup of water into each glass. (why is it important to have the same amount of water in each glass?)
2. Add a few drops of food colouring to each glass of water.

3. Measure and add a different amount of sugar (or salt) to each glass of coloured water.

- RED COLOR - 2 TBSP
- YELLOW COLOR - 4 TBSP
- GREEN COLOR - 6 TBSP
- BLUE COLOR - 8 TBSP

4. Stir until as much of the sugar (or salt) is dissolved as possible.

Time to use your baster or pipette to create a colourful rainbow in a jar.

5. Use the baster's measuring marks to ensure you get the same amount of each colour. Add the blue to the test tube or jam jar.

6. Next, add the green, but add the green very, very slowly. You may want to release the water slowly along the side of the test tube or jar.

7. Continue to do the same thing, working your way back through the colours. Slow and steady.

It might take a few practices before you get a full rainbow.

You could experiment further and use other colours of the rainbow and different amounts of salt or sugar to produce one with 7 layers!

Good luck and we look forward to seeing your creations

