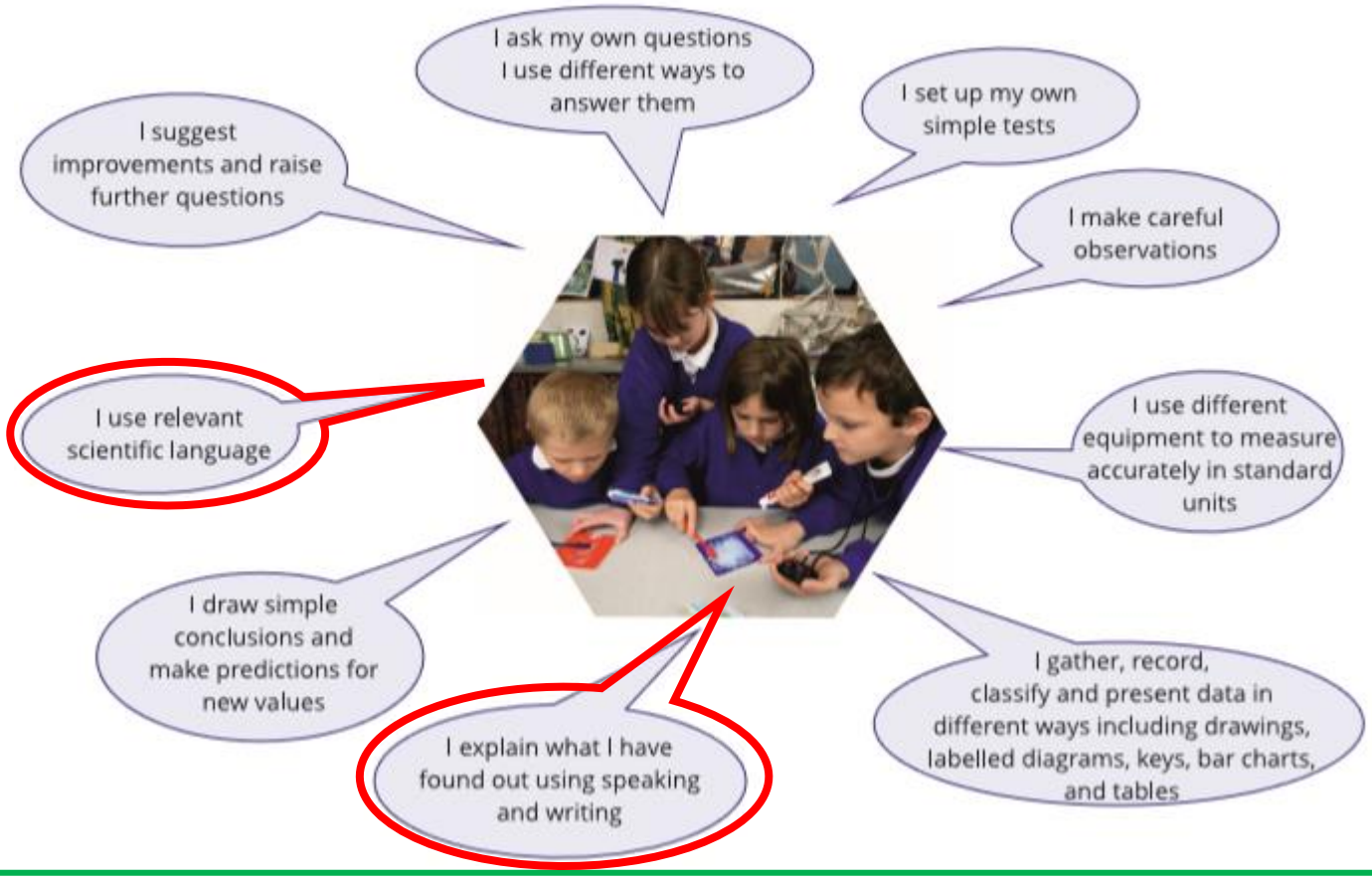
Canonbury Home Learning
Year 2/3 Science

Summer 2 Lesson 5
LO: To work scientifically – To explain what I have found out using scientific language

This picture below shows some of the important things we need to do to be a scientist. This half term we are going to practise **working scientifically.** How many of these skills do you already use?



We learn lots of new **scientific language** (Science words) when we carry out investigations and learn new topics in Science lessons. It is important to use these words if we can, because they often **describe something very precisely** and clearly. This makes it **easier for others to understand** (and it makes you sound even cleverer!)

This lesson you are going to be looking at densities of different liquids!

You will be observing how different liquids have a greater mass than others, this makes them denser. The heaviest liquids will sink, the lighter liquids will rise to the top.

Task:

Follow the instructions below to observe what happens when you add liquids of different densities to the same container. You can choose the Spicy or Red Hot version of the investigation depending on the equipment you have.

Why do the liquids settle in a certain order?

When you have carried out the investigation, **use scientific language to explain** what it shows.

You could use words like:

dense density liquid mass volume

You can explain it in writing, pictures with captions, or speak it aloud to an adult and video yourself to post on Class Dojo!

Have fun! We look forward to seeing how you get on!

Spicy investigation:

https://www.youtube.com/watch?v=Z50jEi1igNQ

Red Hot investigation:

The brief

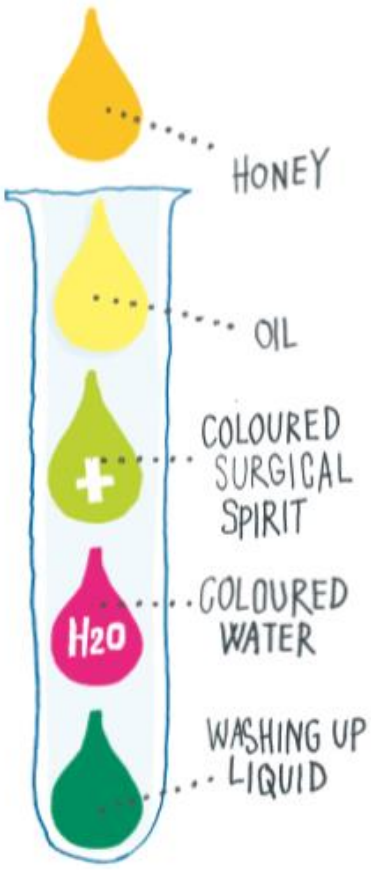
Layer different liquids in a tube and discover how and why they settle in a certain order.

Materials

- A test tube
- Honey
- Oil
- Surgical spirit
- Water
- Washing up liquid
- Two shades of food colouring

The method

1. Start by adding food colouring to the surgical spirit and to the water – using a different shade for each. This will allow you to identify each liquid.
2. Measure out equal quantities of each liquid. Add them to the tube, one by one.



Top tip

Try weighing each liquid before you add it and predict which order the liquids will settle in. The layers may be a little mixed at first. Allow them to settle for a moment and watch the layers start to define.

How does it work?

Different liquids have different densities and therefore, different weights. The heaviest liquids will sink, the lighter liquids will rise to the top. Density is a comparison between an object's mass and volume. Remember the equation:

$$\text{DENSITY} = \frac{\text{MASS}}{\text{VOLUME}}$$

Based on this, if the weight – or mass – of something increases but the volume stays the same, the density has to go up. Lighter liquids, like water, are less dense than heavy liquids, like honey, and so float on top of the more dense layers.