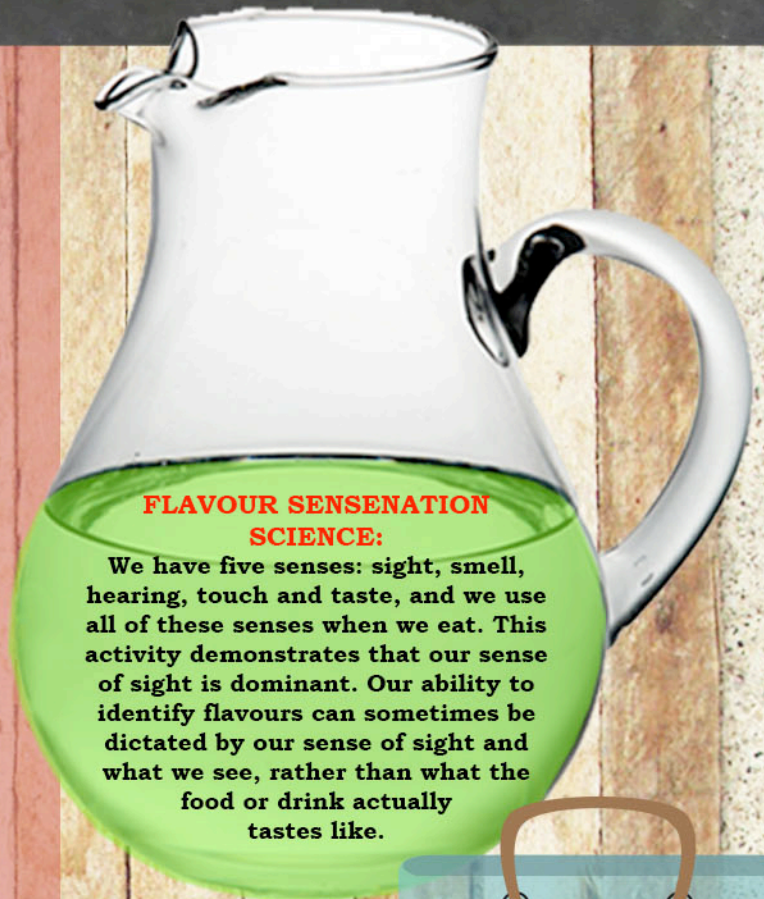


BIG QUESTION: Does colour influence our flavour perception?

EXPERIMENTAL PROCEDURE

1. Set the scene by telling the story.
2. **ASK:** How would you feel about eating yellow sausages, green ketchup or blue bread? Do you think that this would affect the flavour of the food? Why do you think this?
3. Now show the class two large (transparent) jugs of flavoured water. One drink coloured red and the other drink coloured green.
4. Each child will be given a sample of the green drink to taste and then asked to describe the flavour.
5. **ASK:** What flavour do you think this green drink is?
6. This will be followed by a taste of the red drink
7. **ASK:** What flavour do you think this red drink is?
8. **ASK:** Was one drink sweeter than the other?
9. Children could present this data in the form of a 'human bar graph' and be asked to sit or stand in a line in front of the drink they thought tasted the sweetest.
10. Children can then interpret the data in the form of a graph and the children could suggest the name and labelling of the graph.
11. It will be very likely that the majority of children describe the flavour of the red drink as tasting of sweet, red berry flavours, whereas the green drink may be described as tasting of more acidic/sour fruits like apple, melon, kiwi fruit. As fruits ripen their colour darkens or reddens, so the children are likely to assume that the red drink is sweeter.
12. The teacher will then reveal that the two drinks are identical in flavour and sweetness. Spend some time gathering the children's reactions.
13. Our sense of sight is dominant, we make decisions about what something will taste like before we have even put it in our mouths. Sometimes this can make us think that we are tasting something we are not!
14. Refer back to the story, when the scientist's friends commented that the coloured food tasted strange. Several of them refused the food. The scientist learnt something very important about how the colour of food can affect our perception of its flavour.



FLAVOUR SENSATION SCIENCE:

We have five senses: sight, smell, hearing, touch and taste, and we use all of these senses when we eat. This activity demonstrates that our sense of sight is dominant. Our ability to identify flavours can sometimes be dictated by our sense of sight and what we see, rather than what the food or drink actually tastes like.

RESOURCES

- Clear identical jugs
- Clear plastic drinking cups
- Clear, sweet fruit flavoured water such as Robinsons Fruit Shoot Hydro, Volvic Touch of Fruit or supermarket own brands.

To source

WHAT NEXT?

There have been some fascinating studies performed by scientists looking at how our sense of sight (in particular the colour of foods and drinks) affects our sense of taste. Children could design, prepare and present their own plates of food, thinking about colours, shapes, and layout of the food on the plate. They could even think about the colour and type of the plateware and cutlery, and how this can affect how foods can taste! Children could plan and carry out their own investigation and then present their findings in an email or letter to a national supermarket or food company.