BIG QUESTION: How good are our noses at smelling?

EXPERIMENTAL PROCEDURE

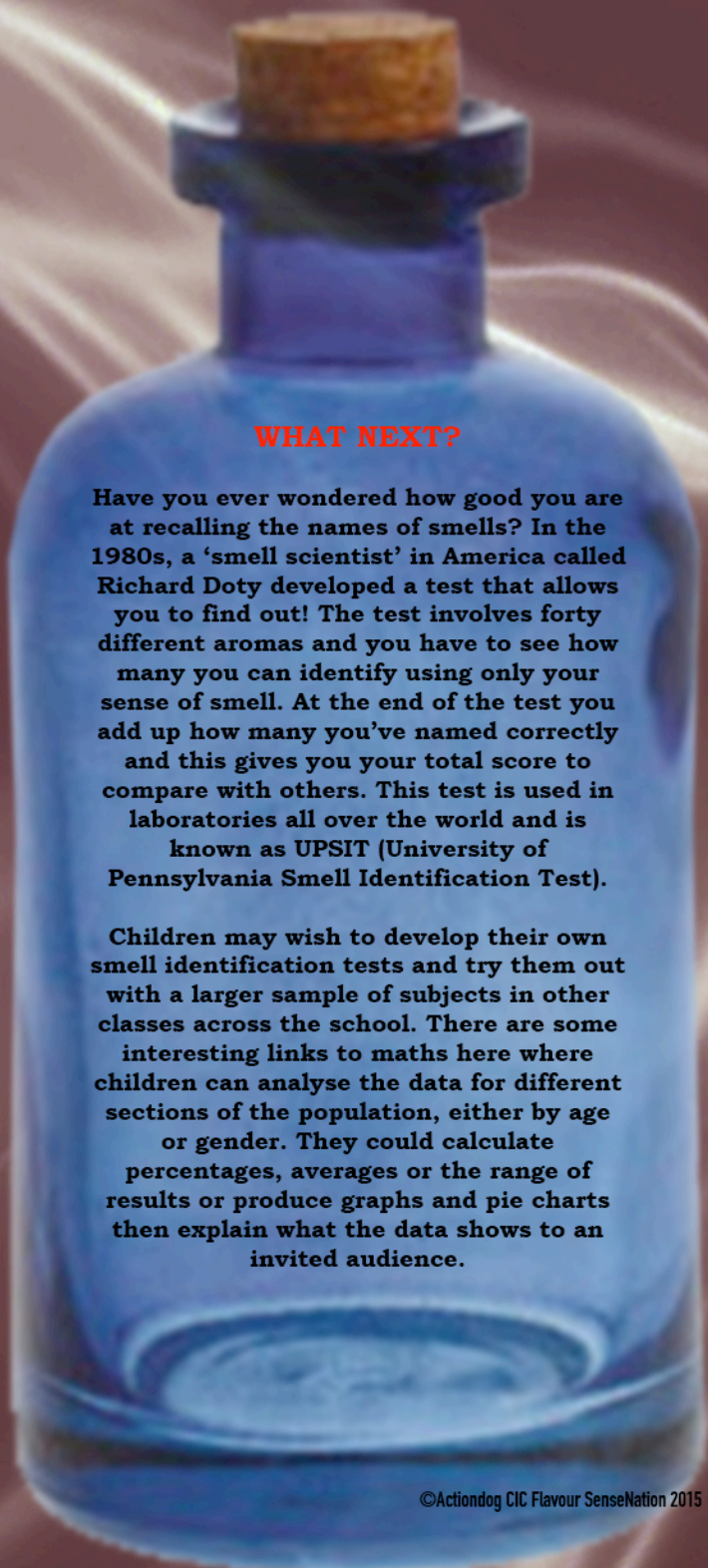
1. Tell the children that they are going to take part in a smell testing activity where they will be asked to identify different samples of food or drink flavours using only their sense of smell. Remind the children that although 90% of what we recognise as flavour comes to use through our sense of smell, often it is still very hard to identify common foods just by the way they smell. To make identifying foods easier, we rely on clues from all our other senses.
2. In small groups, tell the children to smell each sample in ascending order, starting with number 1. It is important that:
   - You do not tell them what each food flavour is.
   - You tell the children not to say what they think the flavour is until the whole group has smelt it.
   - The flavours are smelt one at a time with time allowed between each sample for discussion about what food or drink the smell may be.
3. **ASK:** Do you recognise the smell?
4. Tell the children to write down on a post-it note what they think each flavour is.
5. The teacher could produce a large squared grid on a flip chart or whiteboard and children could stick their post-it notes for each of the different samples onto the corresponding space on the grid. This is a good way to compare a large number of responses and look for similarities and differences in results.
6. Reveal the answers and the children can give themselves a total score of correctly identified flavours.
7. The children should realise that identifying aromas using only their sense of smell is a lot more difficult than they may have thought. We rely heavily on all of our senses and flavour perception is not defined by using just one sense but rather by using all our senses together.

RESOURCES (In Kit)

- Bottles of flavour
- Smelling sticks

RESOURCES (To source)

- Post-it notes



WHAT NEXT?

Have you ever wondered how good you are at recalling the names of smells? In the 1980s, a 'smell scientist' in America called Richard Doty developed a test that allows you to find out! The test involves forty different aromas and you have to see how many you can identify using only your sense of smell. At the end of the test you add up how many you've named correctly and this gives you your total score to compare with others. This test is used in laboratories all over the world and is known as UPSIT (University of Pennsylvania Smell Identification Test).

Children may wish to develop their own smell identification tests and try them out with a larger sample of subjects in other classes across the school. There are some interesting links to maths here where children can analyse the data for different sections of the population, either by age or gender. They could calculate percentages, averages or the range of results or produce graphs and pie charts then explain what the data shows to an invited audience.