

BIG QUESTION: How sensitive is the tongue to tastes?

EXPERIMENTAL PROCEDURE

1. Remind the children that they have been shipwrecked on a desert island, having to forage for their own food. Ask the children to summarise what they've learned about the taste buds. Ask them to describe what the taste buds do, and to explain how they would help us to make possibly life-saving decisions about the food they encounter on the island.

2. Explain that the children are going to try some samples of unfamiliar or unknown food. They will need to describe each taste and also say whether or not they can taste sour, bitter, salt, sweet or umami in each one. Some of the samples may contain more than one of these basic tastes so they will need to be very detailed and accurate with their responses.

3. Tell the children they are going to make a 'tasting scale' to record what they can taste in some food samples. They will also record the intensity of each taste. They could devise their own ranked scale for each basic food taste, (salt, sweet, sour, bitter and umami) with labels such as 'no taste' at one end and 'very strong taste' at the opposite end. Ask the children to divide the scale into different levels of taste intensity (e.g. 1-5).

4. Tell the children that they are now going to eat their food samples. They should taste a small amount of sample 1. They should close their eyes, concentrate and think about how many of the five basic tastes they can identify as well as how strong each taste would rate on their taste scales. They could record this by drawing a line or cross on their scale, showing the intensity of taste for sour, bitter, salt, sweet or umami in each sample.

5. Children should repeat the tasting process with each of the remaining samples of food and then compare their responses with others in the group to look for patterns/similarities/differences in results, paying close attention to the range of responses within the class.

6. ASK: Could you use your taste scales to plot a graph showing the range of results in your class?

RESOURCES

- Tomato Ketchup
- Slices of orange
- Soy sauce
- Seaweed (dried)
- Defrosted frozen peas
- Cranberry juice
- Branston pickle
- Cheddar cheese
- Plastic teaspoons or cotton buds x 8 per child
- Paper, drawing materials.
- Graph paper/Excel spreadsheet.

To source

WHAT NEXT?

A local food manufacturing company is hiring 'young food testers' to evaluate a new range of products aimed at children aged between 9 and 14. You could write a letter or email to the company explaining why you think you would be well suited to the job. Don't forget to include everything you have learnt about the sense of taste as well as the results from your taste test investigation