

Tongue twisting tastes



Location

Ground floor, Food exhibition

In a nutshell

Put your taste buds to the test!

Spin the wheel to play the game! Pit yourself against your friends and family - who can work out what they're tasting? Can you think of any foods they remind you of?

What to do

This exhibit can be used as a two player game to see who identifies the different tastes most successfully. Follow the instructions on the screen turning the wheel and taking taste samples when requested. Each player can scan their final score using their barcode.

Time Required.

KS3 & KS4 3-4 minutes per student.

What's happening?

Although the tongue's muscles help guide food to the teeth and shape it so that it's digestible, the tongue is better known for its part in the perception of taste. Not only does the tongue detect taste (gustatory) sensations, but it also helps sense the texture, thermal and sometimes painful stimuli that give food its flavour.

It is a common view that the bumpy structures that cover the tongue's surface are taste buds however this is not true. These are actually papillae that sometimes contain taste buds and help create the required friction between the tongue and food. Taste buds are smaller structures, tucked away in the folds between papillae. Each taste bud is made up of basal and supporting cells that help maintain approximately 50 gustatory receptor cells. These specialized receptors respond to several primary tastes: sweet, salty, bitter, sour, umami (savoury) and fat, which some scientists are now claiming might be a sixth taste. On average, the human tongue has 2,000–8,000 taste buds. When a stimulus activates a gustatory cell, the receptor will synapse with neurons and send an electrical impulse to the gustatory region of the cerebral cortex.

Curriculum links

Curriculum links	
KS3	Science - Nutrition and digestion <ul style="list-style-type: none"> - the tissues and organs of the human digestive system, including adaptations to function and how the digestive system digests food (enzymes simply as biological catalysts)
KS4	Science - Nervous coordination and control in humans <ul style="list-style-type: none"> - explain how the structure of the nervous system (including CNS, sensory and motor neurones and sensory receptors) is adapted to its functions Computing <ul style="list-style-type: none"> - develop their capability, creativity and knowledge in computer science, digital media and information technology Food preparation and nutrition <ul style="list-style-type: none"> - develop knowledge and understanding of the functional properties and chemical processes as well as the nutritional content of food and drinks - understand and explore a range of ingredients and processes from different culinary traditions (traditional British and international), to inspire new ideas or modify existing recipes

Relates to:

Workshops & Theme Days	Shows	Trails	Other exhibits
<ul style="list-style-type: none"> • Choose Health (KS3 lower) • A Question of Taste day (KS3 & KS4) 	<ul style="list-style-type: none"> • Boggling Brains (KS3 & KS4) 		<ul style="list-style-type: none"> • Robot Waiter • Yum or Yuck • Kitchen

