

Food Preparation and Nutrition Knowledge Organiser Year 7

Humans Taste by using their Tongue and Nose

- Human tongues are covered in thousands of taste buds, which detect five different things — **salt, sweet, sour, bitter** and **umami** (savoury).
- We use **taste buds** in conjunction with **olfactory receptors** in the nose (which detect **smells**) to identify the flavour of foods.

Taste receptors

Sensitivity to all tastes is distributed across the whole tongue (and indeed other regions of the mouth where there are taste buds), but some areas are more responsive to certain



Ingredients are selected for their nutrition, functional and sensory characteristics, as well as provenance and seasonality.

Other factors

Other factors also experience the way we feel about food. These include:

- food previously eaten;
- hunger and satiety;
- mood;
- where you eat, e.g. home, canteen, picnic;
- beliefs and values, e.g. religion, culture and tradition;
- social aspects, e.g. special

Using our senses

A range of senses are used when eating food:

- sight;
- smell;
- hearing;
- taste;
- touch.

A combination of these senses helps to evaluate a food.

SENSORY ANALYSIS

Sensory Star Graph

We use a star graph to record our opinions of a dishes sensory qualities.

- The bigger the shape the better the dish was received over all
- Areas that scored less indicate areas for modification/improvement
- A smaller shape indicates more areas for modification/improvement

The senses:

- aroma (nose icon)
- appearance (eyes icon)
- texture (hand icon)
- taste (mouth icon)

Using Your Senses

There are five senses used when tasting food and drink: sight, smell, taste, hearing and touch. The senses help to develop food preferences (likes and dislikes) and evaluate foods through preference or discrimination tests.

SIGHT

The size, shape, colour, temperature and surface texture all play an important part in helping to determine the first reaction to a food.

Moist Sticky Clear Firm Smooth Thick Juicy Flaky Coarse Dry Caramelised Bubbly Solid Heavy Icy Crumbly Opaque Steaming

SMELL

Smell (odour) and taste work together to produce flavour. This is the reason why people with a blocked nose find it difficult to determine the flavours of foods. Smell can trigger memories and either encourage or discourage someone from eating a food.

Aromatic Savoury Fragrant Tart Weak Zesty Pungent Citrus Sweet Bland Strong Earthy Spicy Mild Fresh Acidic Smoky Meaty

TASTE

We can detect five basic tastes: Bitter, Sweet, Salt, Umami, Sour.

Sweet Bland Bitter Savoury Umami Salty Zesty Strong Tart Tangy Rich Smoky Sour Spicy Piquant Mild Hot

HEARING

The sound of food being prepared, cooked, served, and eaten all help to influence food preferences. The sounds also influence our understanding of whether they are fresh or ripe, e.g. a crisp, crunchily apple.

Crackle Pop Crunch Brittle Sizzle

TOUCH

Food texture is the way food is felt by the fingertips, tongue, teeth and palate. When food is placed in the mouth, the surface of the tongue and other sensitive skin reacts to its surface texture. This sensation is known as mouthfeel.

Brittle Bubbly Tender Solid Close Open Granular Greasy Moist Goopy Chewy Soft Clayey

Taste receptors

Our tongues are covered with taste buds, which are designed to sense chemicals in the mouth. Most taste buds are located on the top outer edges of the tongue, but there are also receptors at the back of the tongue as well as on the walls of the mouth and in the back of the throat. As we chew food, molecules mix with saliva, enter taste pores and interact with gustatory hairs, also known as taste receptors. This triggers nerve impulses that are transmitted to the brain.

Olfactory system

This is the sensory system used for olfaction, or the sense of smell. As we breathe in the air, olfactory receptor cells are stimulated by odours and the olfactory membrane sends neural messages up the olfactory nerve to the brain.

Intensity

Foods may be described by association, e.g. meaty, milky or fruity. The intensity (low, medium or high) can also be recorded, e.g. garlicy or salty.

SENSORY VOCABULARY

Sensory evaluation involves using one or more tests to determine different characteristics of food such as appearance, odour, taste and texture. A wide range of vocabulary is used to describe sensory characteristics of food products.

ODOUR

aromatic, floral, perfumed, fragrant, scented, pungent, bland, rancid, acidic, citrus, tainted, savoury

APPEARANCE

stringy, heavy, flat, fizzy, crystalline, wet, cuboid, fragile, dull, firm, flaky, crisp, fluffy, dry, crumbly, lumpy, smooth, hard, mushy, sticky

TEXTURE

brittle, rubbery, short, gritty, clammy, close, stodgy, bubbly, sandy, tacky, tender, waxy, open, soft

TASTE

sweet, cool, bitter, zesty, warm, hot, tangy, sour, sharp, rich, salty

APPEARANCE

rotten, acrid, musty, musty, pungent, bland, tart, strong, mild, spicy, weak, savoury

TEXTURE

stringy, heavy, flat, fizzy, crystalline, wet, cuboid, fragile, dull, firm, flaky, crisp, fluffy, dry, crumbly, lumpy, smooth, hard, mushy, sticky

