

AQA GCSE Food Preparation and Nutrition

Food choice knowledge organiser

3.5 Food choice	R	A	G
<u>3.5.1 Factors affecting food choice</u>			
3.5.1.1 Factors which influence food choice			
To know and understand factors which may influence food choice (physical activity level (PAL), celebration/occasion, cost of food, preferences, enjoyment, food availability, healthy eating, income, lifestyles, seasonality, time of day, time available to prepare/cook)			
3.5.1.2 Food choices			
Food choice related to <u>religion</u> (Buddhism, Christianity, Hinduism, Islam, Judaism, Rastafarianism and Sikhism), <u>culture</u> , <u>ethical</u> and <u>moral beliefs</u> (animal welfare, fairtrade, local produce, organic, Genetically Modified (GM) foods) and <u>medical conditions</u> (food intolerances (gluten and lactose) and the following allergies: nuts, egg, milk, wheat, fish and shellfish).			
3.5.1.3 Food labelling and marketing influences			
How information about food available to the consumer, including labelling and marketing, influences food choice.			
<u>3.5.2 British and international cuisines</u>			
<ul style="list-style-type: none"> • food products from British tradition and two different cuisines Cuisine is defined as: 'a style characteristic of a particular country or region where the cuisine has developed historically using distinctive ingredients, specific preparation and cooking methods or equipment, and presentation or serving techniques'.			
<u>3.5.3 Sensory evaluation</u>			
<ul style="list-style-type: none"> • sensory testing methods • how taste receptors and olfactory systems work when tasting food. 			

GCSE Food preparation and nutrition (food choice - factors)

You must be able to understand that religions, customs and beliefs influence food choice. Know about conditions that may be caused by intolerance or allergy to food. Understand the meaning of 'cuisine' in terms of the food related to the traditional eating habits of certain countries. Learn about the cuisine of two other countries as well as British traditional cuisine. Understand how to taste food products using your senses accurately. Know about a range of sensory testing methods. Know which information is legally required for a food label. Explain how this information will help the consumer. Understand the ways in which nutritional labelling can be presented. Provide reasoned suggestions for food choice based on a range of factors.

Key Points

1. If you can't tolerate certain foods you have to change your diet.
2. Some religions have their own dietary laws and rules.
3. Diabetes is a condition caused because the pancreas doesn't produce any or enough insulin.
4. Coeliac disease is a condition where people have an adverse reaction to gluten.
5. Lactose intolerance is caused when the body is unable to digest lactose (a sugar found in milk and dairy products).
6. An allergy to nuts can cause anaphylaxis.
7. The reasons why people become vegetarian include religion, dietary laws, ethical reasons, health or family.
8. Cuisine relates to the established range of dishes and foods of a particular country or religion.
9. Cuisine is also concerned with the use of distinctive ingredients and specific cooking and serving techniques.
10. Accurate sensory testing of foods helps manufacturers and cooks develop food products and improve recipes.
11. The human olfactory system (smell) and taste sensors are important when tasting food.
12. EU= European Union
13. FSA=Food Standards Agency
14. People need to make informed choices about the food they buy based on their income, lifestyle and preferences from the food available to them.
15. Many factors affect the food choices that people make.

Quick Test

1. What religions traditionally do not eat pork?
2. Which foods can people with coeliac disease not include in their diets?
3. Name two traditionally British dishes.
4. Why is it important to use codes when tasting foods?
5. List the stages used to carry out a controlled sensory analysis
6. What is triangular testing?
7. What information must be included on food labels by law?
8. What does PAL mean?
9. Explain the different factors that affect people's food choice.

Keywords

1. Regional
2. Multicultural
3. Cuisine

Keywords

1. Cardiovascular
2. Eatwell Guide
3. Healthy eating
4. Physical Activity Levels (PAL)
5. Availability
6. Seasonality, Lifestyle

Keywords

1. Senses
2. Taste
3. Aroma
4. Texture
5. Olfactory
6. Sensory analysis
7. Palate
8. Sensory characteristics
9. Rating Tests
10. Ranking tests
11. Star profile
12. Triangle testing
13. Paired preference tests

Key words

1. Kosher
2. Halal
3. Vegetarian
4. Ovo-lacto vegetarian
5. Vegan
6. Lacto vegetarian
7. Ethical
8. Diabetes
9. Coeliac
10. Gluten
11. Protein
12. Malnutrition
13. Lactose intolerance
14. Allergy
15. Anaphylaxis
16. Epi pen

GCSE Food preparation and nutrition (food choice - factors)

Food choice

Food choices for a balanced diet depend on many factors, such as:

- advertising and other point of sale information;
- cost and economic considerations;
- cultural or religious practices;
- environmental and ethical considerations;
- food availability;
- food preferences;
- food provenance;
- health concerns;
- individual energy and nutrient needs;
- portion size;
- social considerations.

Consumer information

Information can help consumers make informed choices, including:

- advertising and marketing;
- media, online blogs/forums;
- packaging, nutrition and health claims;
- point of purchase information and product placement;
- recipe ideas.

Cost and economic considerations

The cost of food and money available will influence people's food choices. If money is limited, people may choose to buy more basic items. Luxury items might then be selected for special occasions.

Food prices

Food prices can and do change throughout the year and over time. This may be due to a variety of reasons, including:

- climate and weather patterns;
- crop failure;
- crop disease;
- seasonality;
- consumer demand;
- agricultural costs increase;
- fuel prices go up;
- increased use of bio fuels.

Budgeting

There are many things that we can do to spend money wisely on food. Examples can include:

- eating the seasons;
- stocking up on food with a long shelf-life;
- taking time to plan meals and write a shopping list;
- cooking using one pot;
- making fake-aways rather than buying takeaways;
- using leftovers;
- replacing branded items with cheaper items;
- comparing prices and shop around to find the cheapest items;
- growing your own food.

Cultural or religious practices

People around the world choose to eat or avoid certain food due to their cultural or religious practices.

Religion	Pork	Beef	Lamb	Chicken	Fish
Islam	x	Halal only	Halal only	Halal only	✓
Hinduism	x	x	✓	✓	✓
Judaism	x	Kosher only	Kosher only	Kosher only	✓
Sikhism	x	x	✓	✓	✓
Buddhism (strict)	x	x	x	x	x
Seventh-day Adventist Church	x	x	x	✓	✓
Rastafari movement	x	x	x	x	x

Environmental and ethical considerations

Some considerations when buying food might be:

- fair trade;
- local food;
- genetically modified (GM) food;
- organic food;
- free range.

Food availability

Buying food when it is in season will often mean that the price is lower. Technology and the importation of food has allowed food to be available all year round.

Personal preferences

A number of factors can influence personal preferences, including:

- colour, size and shape of crockery and cutlery used;
- portion size;
- serving style;
- taste, aroma, texture, appearance, shape and colour of food.

Food provenance

Food provenance is about where food is grown, caught or reared, and how it was produced. Food certification and assurance schemes guarantee defined standards of food safety or animal welfare. There are many in the UK, including:

Red Tractor



The British Lion mark



Marine Stewardship Council



Health concerns

People may choose their food based on their own or their family's health and wellbeing:

- allergy and intolerance, e.g. lactose intolerance, coeliac disease, wheat allergy, dairy allergy;
- body image;
- health issues, e.g. coronary heart disease, type 2 diabetes, inflammatory bowel disease, over or under malnutrition;
- mental health.

Individual energy and nutrient needs

The amount of energy and nutrients needed differs between different age groups and between males and females.

Energy needs also depend on activity levels. For example, athletes will have much higher energy requirements due to their high level of physical activity.

Task

- Consider your own household and create a mind map of the social and economic considerations that affect your food choice. Explain how different this might be to your grandparents at your age.
- Explain why food provenance is important to some consumers. Include examples of UK food certification and assurance schemes.

Key terms

Advertising: Advertising is a form of communication for marketing and used to encourage, persuade, or manipulate an audience to continue or take some new action.

Ethical: Relating to personal beliefs about what is morally right and wrong.

Food certification and assurance schemes: Defined standards of food safety, quality or animal welfare.

Food provenance: Knowing where food was grown, caught or raised and how it was produced.

Marketing: Promoting and selling products or services, including market research and advertising.

Religion: A particular system of faith and worship.

Seasonal food: Food grown at a particular time of year.

Portion size

Having a healthy, balanced diet is about getting the right types of foods and drinks in the right amounts.



Social considerations

- Body image and peer pressure.
- Development of ready meals and a wider range of convenience foods.
- Development of labour saving devices.
- Lack of competence and confidence in the kitchen.
- Lack of time.
- Living arrangement (e.g. living alone).

GCSE Food preparation and nutrition (food choice - labelling)

Food labelling

Manufacturers include a range of information on food labels. Some of which is legally required and some of which is useful to the consumer or supermarket.

Nutrition information helps consumers make healthier choices. Back-of-pack nutrition information is legally required on food packaging.

NUTRITION

When heated according to instructions

Typical values	Per 100g	Each pack (390g**)
Energy	457kJ 109kcal	178kJ 424kcal
Fat	3.9g	15.2g
of which saturates	1.9g	7.5g
Carbohydrate	12.1g	47.1g
of which sugars	1.6g	6.2g
Fibre	1.1g	4.2g
Protein	5.8g	22.6g
Salt	0.6g	2.2g

Legally required information

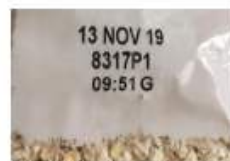
- Name of food or drink.
- List of ingredients (including water and food additives), in descending order of weight.
- Weight or volume.
- Date mark (Best before and use by).
- Storage and preparation conditions.
- Name and address of the manufacturer, packer or seller.
- Country of origin and place of provenance.
- Nutrition information.

Additional information may also be provided, such as cooking instructions, serving suggestions or price.

Date marks

Best Before The date after which foods may not be at their best, although probably safe to eat if stored according to instructions.

Use-by-date The date given to foods that spoil quickly, such as cooked meats. It is unsafe to eat foods beyond their use-by-date.



Beetroot salad

Keep refrigerated. Once opened consume within 24 hours and by the 'use by' date shown.

Additives

Food additives must be shown clearly in the list of ingredients on food labels, either by the additive's name or E number.

Additives are added to ensure safety, increase shelf life or improve the taste, texture or appearance of food. Additives need to be approved before they can be used. Additives are given an 'E number' to show that they have been rigorously tested for safety and have been approved for use in food by the European Commission.

An example is E100 or curcumin, made from turmeric.

Another example is caramel (E150), a synthetic colouring commonly used to colour colas.



Key terms

Additives: Are added to ensure safety, increase shelf life or improve the taste, texture or appearance of food. They must be shown clearly on food labels.

Allergen labelling: Allergens must be clearly shown in **bold**, **highlighted**, **underlined** or in *italics*.

Back-of-pack labelling: Is legally required and can help consumers make healthier choices.

Claim: Any statement about the nutrient content or health benefit of a food product.

Front-of-pack labelling: Is voluntary but must provide certain information and can use red, amber and green colour coding.

Labelling: The term given to the information about the product which is displayed on the packaging.

Nutrition information: Helps consumers make healthier choices.

Front-of-pack labelling

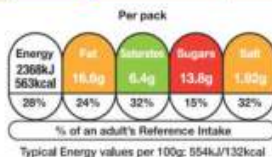
Front-of pack-nutrition information is voluntary but if a food business chooses to provide this, only the following information may be provided:

- energy only;
- energy along with fat, saturates, sugar and salt.

Red, amber and green colours, if used, show at a glance whether a food is high, medium or low for fat, saturates, sugars or salt. The colour coding can be used to compare two products.

Nutrient	Low	Medium	High
Fat	≤3.0g/100g	>3.0g to ≤17.5g/100g	>17.5g/100g
Saturates	≤1.5g/100g	>1.5g to ≤5.0g/100g	>5.0g/100g
(Total sugars)	≤5.0g/100g	>5.0g and ≤22.5g/100g	>22.5g/100g
Salt	≤0.3g/100g	>0.3g to ≤1.5g/100g	>1.5g/100g

Note: Portion size criteria apply to portion sizes/servings greater than 100g.



Allergen labelling

An allergic reaction to a food can be described as an inappropriate reaction by the body's immune system to the ingestion of a food.

By law, food, drink and ingredients that are known to contain allergens are required to be in **bold**, **highlighted**, **underlined** or in *italics*.

The most common allergens are present in:

Celery (and celeriac)	Milk
Cereals containing gluten	Molluscs
Crustaceans	Mustard
Eggs	Nuts
Fish	Peanuts
Lupin	Sesame
	Soybeans
	Sulphur dioxide

INGREDIENTS

Water, Carrots, Onions, Red Lentils (4.5%), Potatoes, Cauliflower, Leeks, Peas, Cornflour, **Wheat** flour, Cream (**milk**), Yeast Extract, Concentrated Tomato Paste, Garlic, Sugar, **Celery** Seed, Sunflower Oil, Herb and Spice, White Pepper, Parsley

ALLERGY ADVICE

For allergens, see ingredients in **bold**

Nutrition and health claims

Nutrition and health claims are controlled by European regulations. Claims on a food or drink should have been authorised and listed on the European register of claims and have met certain conditions.

Nutrition claims

A nutrition claim describes what a food contains (or does not contain) or contains in reduced or increased amounts. Examples include:

- Low fat (less than 3g of fat per 100g of food);
- High fibre (at least 6g of fibre per 100g of food);
- Source of vitamin C (at least 15% of the nutrient reference value for vitamin C per 100g of food).

Health claims

A health claim states or suggests there is a relationship between a product and health. In order to make a claim, the amount present of the nutrient, substance or food must fulfil the specific conditions of use of the claim. The types of health claims are:

- 'Function Health Claims';
- 'Risk Reduction Claims';
- Health 'Claims referring to children's development'.

Tasks

- Find four different packaged food items in your household or online and list the information provided on the packaging. Explain the purpose of each piece of information and identify if it is legally required or consumer information.
- Explain the importance of date marks and storage instructions, including the consequences of not following them.

To find out more, go to:
<https://bit.ly/2SPnj1g>

GCSE Food preparation and nutrition (food choice – sensory characteristics)



Sensory characteristics

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

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.

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 occasions, events.

Sensory evaluation and tests

Sensory evaluation analyses and measures human responses to food and drink, e.g. appearance, touch, odour, texture, temperature and taste. In order to obtain reliable results, sensory evaluation tests should be set up in a controlled way to ensure fair testing, e.g. no distracting colours, noise or smells; same size portions; coded samples, and water to drink.

Preference tests - these types of tests supply information about people's likes and dislikes of a food. They include hedonic, paired comparison and scoring tests.

Discrimination tests - these types of tests aim to evaluate specific attributes, i.e. characteristics of a food (such as crunchiness). They include triangle, duo trio, ranking and paired comparison tests.

Key terms

Discrimination tests: Aim to evaluate specific attributes, such as crunchiness.

Preference tests: Supply information about people's likes and dislikes of food.

Sensory attributes: Words used to describe the appearance, odour, taste and texture of a food product

Sensory evaluation: A scientific discipline that analyses and measures human responses to the composition of food and drink.

The olfactory system: The sensory system used for olfaction, or the sense of smell.

Umami: Savoury taste, often known as the fifth taste.

Sight

The size, shape, colour, temperature and surface texture all play an important part in helping to determine your first reaction to a food. Often if a food does not look appetising, then you will not eat it.

Taste

The tongue can detect five basic tastes:

- bitter;
- salt;
- sour;
- sweet;
- umami.

Taste receptors

Our tongues are covered with taste buds, which are designed to sense chemicals in the mouth.

Smell (odour)

The nose detects volatile aromas released from food. An odour may be described by association with a particular food, e.g. herby, cheesy, fishy. The intensity can also be recorded.

Touch

Texture can be assessed through touch. When food is placed in the mouth, the surface of the tongue and other sensitive skin reacts to the feel of the surface of the food. The sensation is also known as mouth-feel.

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 tastes than others.



Smell and taste

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.

Hearing/sound

The sounds of food being prepared, cooked, served and eaten all help to influence our preferences. The sound of eating food can alter our perception of how fresh a food is (e.g. crunchy carrots).

Umami

Umami is a savoury taste, often known as the fifth taste. It is a subtle taste and blends well with other tastes. Umami has its own distinct savoury taste, often associated with ripe tomatoes and cheese.

The olfactory system

The olfactory system is the sensory system used for olfaction, or the sense of smell.

Tasting vocabulary (sensory attributes)			
Sight	Bubbling	Flaky	Opaque
	Caramelised	Firm	Smooth
	Clear	Heavy	Solid
	Coarse	Icy	Steaming
	Crumbly	Juicy	Sticky
	Dry	Moist	Thick
Smell	Acidic	Fresh	Spicy
	Aromatic	Meaty	Strong
	Bland	Mild	Sweet
	Citrus	Pungent	Tart
	Earthy	Savoury	Weak
	Fragrant	Smoky	Zesty
Sound	Brittle	Crisp	Pop
	Crackle	Crunch	Sizzle
Taste	Bitter	Rich	Strong
	Bland	Salty	Sweet
	Floury	Savoury	Tangy
	Hot	Smoky	Tart
	Mild	Sour	Umami
	Piquant	Spicy	Zesty
Touch	Brittle	Dry	Short
	Bubbly	Goosey	Soft
	Chewy	Granular	Solid
	Close	Greasy	Tacky
	Cloying	Moist	Tender
	Coarse	Open	Waxy

Tasks

- Work through the sensory evaluation worksheets on Food – a fact of life <https://bit.ly/2WpSTov>
- Make a list of the sight, smell, taste, touch and sound of the different food had for lunch yesterday. Describe how these different attributes influenced your like/dislike of the different food.

a FACT OF

<https://bit.ly/2Bzsog5>

Foods and Cuisines from Around The World



A **cuisine** is a style of cooking from a particular country or region of the world. Different cuisines have different ingredients, styles and preparation & cooking techniques. **Some examples are shown below.**

Staple foods are crops that grown in particular parts of the world due to their climate and conditions. E.g. wheat in Europe, rice in Asia or maize in South America.



UK



Roast dinner. Fish & Chips. Bakewell Tart.



Japan



Sushi. Ramen. Udon noodles. Jasmine Rice.



Italy



Pizza, Pasta, Lasagne, Risotto, Gelato.

China



Spring Rolls. Stir fry. Sweet & Sour. Chow Mein.



Mexico



Chilli Con Carne, Burritos, Tacos, Salsa, Guacamole



India



Samosas, Curries, Tandoori Chicken, Nan Breads

GCSE Food preparation and nutrition (food choice)

Factors that influence food choice

- Availability/ Seasons
- Health/physical activity level PAI
- Nutrition
- Culture/tradition
- Ethics/morals/beliefs
- Food preferences/eating habits
- Cost
- Medical condition
- Enjoyment/celebration/occasion
- Time of day/time available to prepare/cook food
- Lifestyle
- Income
- Social life

Food choices related to ethical and moral beliefs

- Animal Welfare
- Fairtrade
- Local Produce
- Organic Food
- Genetically Modified



Food choices related to food intolerances and allergies

- Food intolerance
 - Lactose intolerance- found in milk and milk products
 - Coeliac disease- intolerant to the protein in gluten. Cannot eat wheat, barley, oats and rye and food products that contain them.
- Food allergies
 - Can happen within a few seconds up to a few hours after the food is eaten and can even have life threatening consequences.

Food labelling and marketing influences

- Food labels- to give consumers a range of information
- Some information is mandatory (law)
- Some are eye catching using colours, slogans, health advice etc
- They inform and educate consumers
- Info that is mandatory
 - The name
 - Ingredients
 - Weight, quantity and volume
 - Name and address of business
 - Instructions
 - Shelf life
 - Instructions of how to store
 - Allergens and additive warnings/information



Marketing influences

- TV adverts
- Internet
- Apps
- Social media
- Samples
- Leaflets posted and in store
- Product placement in films and TV
- Magazines and newspapers
- Billboards

The following nutrients must be shown in 100g or 100ml of a food product so people know how much of each nutrient and energy they are consuming

- Energy value
- Protein
- Fat
- Saturated fats
- Carbohydrates
- Sugars
- Salt

AQA

Section 4: Food Choice

Religion

Symbol	Religion	What Cannot be consumed
	Buddhism	Some don't have meat and dairy. But the majority avoid meat and alcohol
	Christianity/Catholicism	No restrictions
	Hinduism	Beef, onions, garlic and alcohol
	Islam	Pork, alcohol
	Judaism	Pork, shellfish, dairy and meat cannot be eaten together
	Rastafarianism	Pork, Fish longer than 30cm, many don't drink alcohol, tea or coffee
	Sikhism	Some don't drink alcohol, tea or coffee