GCSE Design and Technology: Food Technology

Other Guidance:

• Glossary of Terms
GLOSSARY OF TERMS

This glossary has prepared in support of AQA’s new GCSE Design and Technology: Food Technology specification. It has been devised to provide 14-16 year olds with a definition and an explanation of key words in the Specification. The definitions and explanations should not be considered to be either definitive and exhaustive. Candidates should also use them to assist with further support.

A
Additive: a natural or synthetic substance which is added to food for a specific purpose
Aeration: when air is trapped in a mixture
Aesthetic: attractive
Ambient temperature: normal room temperature (20-25°C)
Anaerobic: not needing oxygen
Analysis of brief/task: breaking down the design brief/task to identify key points
Annotation: add explanatory notes
Antioxidant: a substance that stops fat in food going rancid
Antibacterial: substance that will usually destroy bacteria
Appliance: a piece of electrical equipment
Aseptic packaging: preserves foods without using preservatives or chilling
Assembling: putting component parts together
Attributes: particular characteristics of a food

B
Bacteria: single-celled organisms present in air, soil, animals and the human body
Balanced diet: a diet which provides adequate amounts of nutrients and energy
Biodegradable: broken down totally by bacteria
Bland: lack of flavour/taste
Blast chilling: quick freezing – small ice crystals form and there is less damage to the food than in slow freezing

C
Calcium: a mineral element which is essential for strong bones and teeth
Calorie: a unit of energy which is used to give the energy yield of foods and the energy expenditure by the body
Caramelisation: process of changing the colour of sugar from white to brown when heated
Carbohydrate: the major source of energy for the body
CAM Computer Aided Manufacture: the use of a computer to control all the processes involved in the manufacture of a product
Clostridium: a form of bacterial food poisoning
Coagulation: the change in the structure of protein brought about by heat, mechanical action or acids
Coeliac disease: caused by an intolerance of the protein gluten present in the cereals wheat, barley and rye
**Cook-Chill**: a method of food preparation in which the food is cooked then rapidly chilled and stored below 5°C thus increasing the keeping quality of the product for a short time

**Colloidal structure**: when two substances are mixed together

**Colloids**: formed when one substance is dispersed through another

**Communication**: pass on information, ideas and thoughts

**Consistency**: ensures products are the same

**Consistent**: the same quality each time a product is made

**Consumer**: a person who buys or uses products and service

**Contaminate**: to spoil or dirty something

**Critical Control Point (CCP)**: when a food safety hazard can be prevented/reduced to an acceptable level

**Cross contamination**: the transfer of food spoilage/poisoning from one food to another

**Cryogenic freezing**: food is immersed or sprayed with liquid nitrogen

**D**

**Danger zone**: the temperature range (5 to 63°C) in which bacteria grow

**Date marking**: of manufactured foods. Best before is the date up until the food will remain in peak condition. Perishable foods have a Use By date up to which the food can be kept if stored appropriately

**Descending**: from the largest to the smallest

**Descriptors**: a word describing a sensory characteristic, e.g. spicy

**Design task**: a statement which provides the situation for your designing and making

**Design criteria**: a list of general points from which a range of different ideas can be made

**Deteriorate**: starting to decay and losing freshness

**Development**: make changes to a food product which will affect its characteristics

**Dextrinisation**: when starch converts into a sugar

**Diabetes**: a metabolic disorder caused by the poor absorption of glucose; this can be due to the failure to produce insulin (in insulin dependent diabetes) or the poor response of tissues to insulin (in non insulin dependent diabetes). Type 1 diabetes mellitus develops in childhood. The onset of Type 2 is in middle age

**Dietary Fibre**: material, mostly from plants, which is not digested by humans but which absorbs water and binds other residues in the intestine thus aiding the excretion of waste material from the body

**Dietary Guidelines**: advice from the Government on recommended food intake in order to achieve dietary goals

**Dietary Reference Values (DRVs)**: scientifically calculated estimates of the amounts of nutrients needed for good health

**Difference test**: a method of finding out if there are any differences between product samples

**Diverticular Disease**: a disease caused by a lack of fibre in the diet
**E**

**E numbers:** the classification system of permitted additives produced by the European Union

**Eatwell plate:** a healthy eating model, to encourage people to eat the correct proportions of food to achieve a balanced diet

**Emulsifier:** a substance that stops oil and water from separating

**Emulsifying agent:** a substance that will allow two immiscible liquids (substances that do not mix) to be held together, e.g. lecithin in egg yolk

**Emulsion:** a mixture of two liquids is called an emulsion

**Enrobing:** coating and surrounding a product with another ingredient

**Enzymic browning:** reaction between a food product and oxygen resulting in a brown colour, e.g. sliced potato has brown patches when sliced and left in the air

**Estimated Average Requirement (EARs):** the average need for a nutrient. Values calculated for energy requirements of groups of people. They represent the needs of most people in a particular group and decisions

**Evaluation:** summarise information and make conclusions, judgements

**F**

**Fair testing:** to compare like with like using only one variable

**Fermentation:** when yeast produces carbon dioxide

**Fibre:** indigestible parts of food – usually cellulose, which remains in the intestine after digestion

**Finishing:** completing the presentation of a food product to a high standard

**Flavour enhancers:** tasteless substances used to enhance the taste of savoury foods

**Foams:** a mixture of gas and liquid is called a foam, e.g. air whisked into egg white creates a foam

**Food additive:** a substance added to a food product to improve its quality

**Food spoilage:** caused by the natural decay of food or by contamination by micro organisms

**G**

**Gelatinisation:** heated starch granules absorb liquid and swell, and burst to thicken liquid

**Gels:** a small amount of a solid mixed in a large amount of liquid that then sets e.g. jam.

**Gluten:** protein found in flour

**Guideline Daily Amounts (GDAs):** guide to the amounts of calories, sugar, fat, saturated fat and salt a person should try not to exceed so as to have a healthy balanced diet

**H**

**Halal:** food which is selected and prepared according to Islamic dietary law

**Hermetically:** airtight

**Higher level making skills:** food preparation and cooking skills which require care, precision and understanding and which can be carried out to a high standard

**High-risk food:** food which is an ideal medium for the growth of bacteria or micro-organisms

**Hygienically:** to prepare food in a clean environment to stop food spoilage or poisoning occurring
I
Impermeable: cannot penetrate
Irradiation: a process used to reduce spoilage in some foods
Iron: a mineral present in the blood and stored in the liver. Prolonged lack of iron leads to anaemia

J
Joule: a unit of energy. Used to show the energy content of foods

K
Kosher: food which is selected and prepared in accordance with Jewish dietary law

L
Landfill sites: large holes in the ground where bags of household waste are buried
Lard: saturated animal fat produced from pigs
Lecithin: present in egg yolk and soya and used as an emulsifier in manufactured foods
Listeria monocytogenes: common food-poisoning bacteria

M
Making skills: practical skills which show your ability to make food products
Market research: the study of consumers’ needs, preferences and lifestyles
Micro organism: tiny living things such as bacteria, yeasts and moulds which cause food spoilage. Can only be seen through a microscope
Micronutrient: vitamins and minerals which are needed in small quantities for health
Minerals: substances used by the body to control processes; they form an essential part of body fluids Modification: simple changes which have little effect on the structure and composition
Modified Atmospheric Packaging (MAP): used to extend the shelf life of food. The packs are gas flashed to reduce the amount of oxygen and replace it with carbon dioxide or nitrogen
Modified starches: starches that have been altered to perform additional functions
Monitoring: keeping constant watch

N
Net weight: not including packaging
Non starch polysaccharide: the part of food that is not digested by the body
Nutrient: the part of a food that performs a particular function in the body
Nutritional analysis: using resources to find out the nutritional content of a product
Nutritional content: the type and quantity of nutrients which the product supplies
Nutritional labelling: the information relating to nutrients and energy in the food which is stated on packaging

O
Obesity: excessive fatness. Measured as a ratio of weight to height
Organic food: plants grown without the use of synthetic pesticides fungicides or organic fertilizers. They must have been prepared without preservatives
Organoleptic: sensory qualities (texture, flavour, aroma, appearance) of a food product.
Pasta: the collective name given to a number of wheat flour products which are cooked by boiling. They are made from dough containing durum wheat

Pasteurisation: the process of prolonging the keeping quality of products such as milk by heating to destroy harmful bacteria

Pastry: dough made from flour, fat and water

Pathogenic: causing disease

Pathogens: bacteria which cause disease

pH: a measure of acidity or alkalinity

Preservative: a substance that extends the shelf life of a food

Preservation: the protection of perishable foods from deterioration by removing the conditions necessary for the growth of micro-organisms

Preservatives: substances added to some processed foods to prevent spoilage

Prior knowledge: knowledge you already have which does not require research

Product Analysis: examining a food product to find out the ingredients, packaging characteristics and properties

Product Specification: a list of features/characteristics/properties which a food product must meet

Profiling test: sensory evaluation test to identify individual specific characteristics of product

Proportion: relative quantities of ingredients in a recipe, expressed in numbers

Protein: the nutrient required for growth and repair

Prototype: the first version of a product that is being developed

Pulses: peas, beans and lentils. They provide a good source of protein and B vitamins

Q

Quality Assurance: a guarantee by retailers and manufacturers that products are safe and of a good quality

Quality Control: steps taken to check a product at various stages of making to ensure a consistent and high quality outcome is achieved

Questionnaire: questions asked to a range of people. Results can be used to inform ideas

R

Raising agent: increases the volume of doughs, batters and mixtures by promoting gas release (aeration)

Ranking test: a method of putting in order the intensity of particular characteristic of a product

Rating test: a method of rating a particular attribute or preference for a product on a word or numbered scale

Recycled: to make into something else

Reference Nutrient Intake: (RNI): the amount of a nutrient that is enough for most people in a group
**S**

**Salmonella:** a type of bacterial food poisoning

**Sample:** small amount of the product

**Scaling up:** multiplying up proportionally. Increasing a recipe for bulk production, keeping the ratio and proportions the same

**Sensory Analysis:** identifying the sensory characteristics of products, i.e. taste, texture, appearance, mouth-feel, colour

**Sensory evaluation:** using the range of senses to assess a food product – appearance, smell, taste

**Sensory qualities:** the look, smell, taste, feel and sound of food products

**Shelf life:** the length of time a food product can be kept and be safe to eat

**Shortening:** when fat coats the flour particles preventing absorption of water resulting in a crumbly mixture

**Solution:** when a solid dissolves in a liquid, e.g. salt in water

**Specification:** details which describe the desired characteristics of a product

**Stabilizers:** substances which absorb water and are often used as thickening agents; many can produce gels and also act as emulsifiers

**Standard component:** pre-prepared ingredient that is used in the production of another product

**Staple food:** a food that forms the basis of a traditional diet – wheat, barley, rye, maize or rice, or starchy root vegetables such as potatoes

**Sterilisation:** a method of increasing the keeping quality of products by destroying all microorganisms by heating to a high temperature

**Suspensions:** a solid held in a liquid

**Sustainability:** to continue to support

**Symptoms:** a sign of something

**Syneresis:** usually refers to eggs; if overcooked, the proteins shrink as they coagulate and separate from the watery liquid

**T**

**Tampering:** to interfere with

**Target Group:** the specific group of people at which you are aiming the product

**Test kitchen:** the place where a food technologist experiments and develops new products

**Textured vegetable protein:** protein produced from soya beans. It is either extruded or formed into chunks. Used as an alternative protein and as a meat extender

**Tolerance levels:** the amount of difference allowed when making

**U**

**Ultra Heat Treatment (UHT):** the high temperature, short time sterilization of milk known as long life milk.

**V**

**Vacuum packaging:** a method of preserving food by removing air

**Vegans:** people who eat no products of animal origin

**Vegetarians:** those who for a variety of reasons, choose not to eat meat

**Viscosity:** the thickness of a liquid or a mixture, such as a sauce
Command words for Question Papers

**Analyse**: separate information into components and identify their characteristics

**Comment**: present an informed judgement

**Compare**: look for similarities and differences and, usually, reach a conclusion

**Consider**: review and respond to given information

**Contrast**: set in opposition in order to bring about which is preferable

**Define**: give the precise meaning of a word or phrase

**Describe**: give a detailed or graphic account of; set out characteristics

**Discuss**: investigate or examine through argument. Give reasons both for and against. Present salient points

**Evaluate**: appraise the worth of something

**Examine**: investigate closely

**Explain**: give reasons, make plain

**Identify**: select key characteristics

**Illustrate**: make explicit, present clarifying examples

**Outline**: explain the main features

**Prove**: use factual evidence to show the truth

**State**: present in a concise and clear form

**Summarise**: give a concise account of the main points