Year 9 Food and Nutrition – Knowledge Organiser

Clean hands. Hair tied back. Wear an apron. Wear blue plasters. Don't cough/sneeze over food.

KEY PROCESSES:

Shortening-is any fat that is a solid at room temperature and used to make crumbly pastry and other food products.

Dextrinisation- Occurs when starch is toasted or cooked by dry heat. It is a result of starch breakdown by dry heat to form dextrin's.

Coagulation-When it is heated the runny yolk and white (albumen – which is the major source of protein) turn solid.

Whipping- The process of beating an ingredient vigorously to incorporate air, which makes the ingredient frothy

Caramelisation- slow cooking process that occurs when sugar is cooked over low heat, causing a change in both appearance and flavour

Poaching-cook by simmering in a small amount of liquid.

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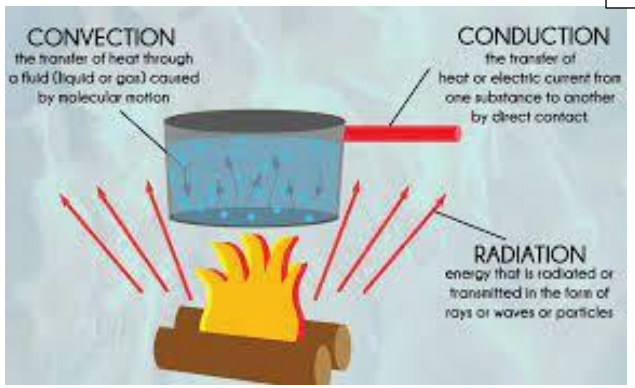
The Science of Food

Adding flavour, colour or texture

- Fresh and dried herbs and spices can be added to dishes to provide flavour and replace the salt in some dishes, e.g. garlic and ginger.
- Fruit, vegetables, herbs and spices can all be used in recipes to add colour.
- Nuts, seeds, grains, fruit and vegetables can be added to recipes to provide texture.
- The cooking method and cooking time can impact the texture, e.g. steaming or microwaving vegetables quickly can retain their colour, flavour and firm texture.
- Equipment used to process food can impact the texture, e.g. using a food processor to blend soup for a smoother texture.
- Natural, nature identical or artificial additives may be added to foods to perform specific functions.
- The main food additives are antioxidants, colours, flavour enhancers, sweeteners, emulsifiers and stabilizers, and preservatives.



Key terms

Conduction: The exchange of heat by direct contact with foods on a surface.
Convection: Currents of hot air or hot liquid transfer the heat energy to the food.
Functional ingredients: Included in food for additional health benefits.
Heat transfer: Transference of heat energy between objects.
Radiation: Energy in the form of rays.

How the selection of appropriate preparation and cooking methods can conserve or modify nutritive value or improve palatability:

Food functions

	Example	What happens?
Aerate	Cake	Baking powder makes the cake light
	Meringue	Egg white is whisked to form a foam
	Scone	Self-raising flour helps the dough rise
	Bread	Yeast makes the dough rise
Bind	Fish cake	Egg holds other ingredients together
	Naan bread	Yogurt binds dry ingredients into a smooth dough
	Pancake	Milk and egg combine flour into batter
	Pastry	Water combines flour and fat into a dough
Bulk	Cottage pie	Texured vegetable protein may be mixed with minced meat and vegetables
	Fruit pie filling	Sugar is boiled with fruit to form a thick puree
	Nut roast	Breadcrumbs absorb liquid and increase in size
	Vegetable samosa	Potato is the main filling
Glaze	Hot cross bun	Sugar solution is brushed over bun after baking
	Gammon	Honey is poured over to glaze
	Pie	Milk is brushed over before baking
	Sausage roll	Egg is brushed over to give a shiny golden colour
Set	Blancmange	Cornflour is boiled with milk and flavourings and then cooked
	Cold souffle	Gelatine forms a gel
	Jam	Pectin mixed with sugar and acid forms a gel
	Quiche	Egg is mixed with other ingredients and then baked
Thicken	Egg custard	Egg thickens when gently heated
	Sauce flour	Flour thickens a liquid when boiled
	Soup	Potato thickens soups
	Syrup	Sugar is boiled with water or fruit juice