

Applying nutrition knowledge



Teacher's guide

Use the following information to inform your practical activity planning.

Key knowledge	Key learning points	Recipe ideas
Macronutrients		
Carbohydrate		
<p>Source All starchy foods, such as bread, rice, potatoes, pasta, cereals and cereal products; fruit and starchy vegetables, milk and milk products, sugar, preserves and confectionery.</p>	<ul style="list-style-type: none"> Carbohydrate – two main forms: starch and sugar Dietary fibre is also a type of carbohydrate Non-starch polysaccharides Dextrinization Caramelisation Gelatinisation 	<ul style="list-style-type: none"> Scones/scone based pizza Lasagne (roux sauce) Macaroni cheese Potato and rosemary loaf Couscous Tuna and broccoli pasta Swiss roll
<p>Function in the body The body's tissues require a constant supply of glucose, which is used as a fuel. Starchy foods provide important nutrients to the diet including B vitamins, iron, calcium and folate. Fibre is important for our health.</p>		
Protein		
<p>Source Meat, fish, eggs, dairy foods, cereal products such as bread, soya products, nuts and pulses.</p>	<ul style="list-style-type: none"> Denaturation—mechanical and enzymic Foam formation Gluten formation Acid denature Coagulation Gelation 	<ul style="list-style-type: none"> Bread Sponge cake Quiche Tandoori chicken Spicy bean burgers Meringue Fruit jelly Choux pastry
<p>Function in the body Protein provides amino acids, some of which we cannot make ourselves and so need to get from our diet. It is needed for growth and maintenance of normal muscles and maintenance of healthy bones.</p>		
Fat		
<p>Source Fats and oils, meat and meat products, dairy foods, oily fish, nuts, cakes, biscuits, pastry products, crisps and other snacks, chocolate.</p>	<ul style="list-style-type: none"> Saturated and unsaturated Shortening Plasticity Aeration Flakiness Emulsification 	<ul style="list-style-type: none"> Marvelous mackerel pate Cheese and onion triangles Marble tray bake Cheese straws Pastry—short and rough puff Creaming method/all in one Granola bars/flapjacks
<p>Function in the body Fat provides essential fatty acids (that we cannot make ourselves). It is required for a range of bodily processes and to maintain the normal structure of cells in the body. It carries fat-soluble vitamins and is important for their absorption.</p>		
Micronutrients		
B vitamins, e.g. thiamin, riboflavin, niacin, B6, folate, B12		
<p>Source Meat, fish, eggs, dairy foods, cereal products such as bread, soya products, nuts and pulses.</p>	<ul style="list-style-type: none"> Water soluble vitamin Many types of vitamin B within this group 	<ul style="list-style-type: none"> Pitta pockets Moroccan lamb kebabs Lemon and herb coley goujons Omelette
<p>Function in the body These have a range of functions within the body. Folate, for example, is needed for the normal development of the nervous system in unborn babies.</p>		
Vitamin C		
<p>Source Fruit especially citrus fruits and berries; green vegetables, peppers and tomatoes. Also found in potatoes.</p>	<ul style="list-style-type: none"> Water soluble vitamin Enzymic browning Knife skills Increases the absorption of non-haem iron Oxidisation 	<ul style="list-style-type: none"> Vegetable kebabs Chunky vegetable soup Fruit salad kebabs Fruit fusion Potato curry
<p>Function in the body Helps to protect cells from damage. Helps with the formation of collagen, which is important for normal bones, gums, teeth and skin. It also helps the immune system work as it should and the nervous system to function normally.</p>		
Calcium		
<p>Source Milk and milk products, cheese and other dairy products, some green leafy vegetables such as broccoli, fortified soya bean products, canned fish (if containing bones that are soft and can be consumed) and bread.</p>	<ul style="list-style-type: none"> Absorption promoted by vitamin D Absorption inhibited by phytates (wholegrain cereals, pulses) and oxalates (spinach, rhubarb, beetroot) 	<ul style="list-style-type: none"> Halloumi kebabs Macaroni cheese Greek yoghurt with honey Fruit smoothie Salmon pâté
<p>Function in the body Helps to build and maintain strong bones and teeth, as well as the normal functioning of nerves and muscles. It also helps blood clot normally.</p>		
Iron		
<p>Source Liver, red meat, pulses, nuts, eggs, dried fruits, poultry, fish, whole grains and dark green leafy vegetables.</p>	<ul style="list-style-type: none"> Haem and non-haem iron Absorption of non-haem promoted by vitamin C Absorption of non-haem iron reduced/inhibited by phytates, fibre, tannins (in tea) and calcium Iron deficiency anaemia 	<ul style="list-style-type: none"> Spaghetti bolognese Mini cheese and vegetable frittatas Salmon fish fingers Red lentil bake
<p>Function in the body Helps to make red blood cells, which carry oxygen around the body. It also helps the immune system to work as it should and helps the brain to function normally.</p>		