Stage 5 Food Technology: Year 9

Focus area: Food selection and health

The health of communities is related to the nutritional content of the food eaten. Students will examine the role of food and its nutritional components in the body, explore the nutritional needs of individuals and groups, explain the effects of poor nutrition and investigate means of improving the nutritional status of individuals and groups. Students will select, plan and prepare safe and nutritious foods to reflect national food guides.

Focus outcomes

A student:
5.3.2 justifies food choices by analyzing the factors that influence eating habits
5.5.1 selects and employs appropriate techniques and equipment for a variety of food-specific purposes
5.5.2 plans, prepares, presents and evaluates food solutions for specific purposes
5.6.1 examines the relationship between food, technology and society

Core (C) outcomes

A student:
5.2.1 describes the physical and chemical properties of a variety of foods
5.3.1 describes the relationship between food consumption, the nutritional value of foods and the health of individuals and communities

Time allocation: 10 weeks (Term 2) 2 blocks (at 75 minutes)

Outcomes	Students learn about:	Students learn to:	Teaching and learning strategies	Register
The following elements of quality teaching will be addressed: background knowledge, knowledge integration, inclusivity, narrative, correctness, higher order thinking, substantive communication Background knowledge on the function of food from Years 7 and 8 Design and Technology. Significance is linked to a deep understanding of the function of food in the body.				
1 week 5.3.2	• function of food in the body – growth and development – provide energy – repair and	• outline the functions of food in the body	**Function of food in the body** • Revision using brainstorming of nutrient function • Note making on nutritional components of food • Narrative on need for fibro then note making • View video on functions of body	

Outcomes	Students learn about:	Students learn to:	Teaching and learning strategies	Register
	maintain the body's cells		• *Practical:* Ham and salad wrap Orange quarters Water	
5.3.1	*Core* • nutritional components of food – food nutrient groups – proteins – carbohydrates – lipids – vitamins – minerals – water	*Core* • explain the role of the nutritional components of food in the body		
5.3.1	*Core* • the role of fibre in the diet	*Core* • describe the significant role of fibre in the diet		
The following elements of quality teaching will be addressed: knowledge integration, deep understanding, problematic knowledge, connectedness Knowledge integration with junior science course – general coverage in Year 8 and specific coverage in Year 9 course. Deep understanding of process of digestion.				
1 week 5.3.2	• digestion of food – gastro-intestinal tract – process of digestion – absorption of nutrients – metabolism	• describe the process of digestion	**Digestion of food** • Practical experiment to show process of digestion. • View diagram gastro-intestinal tract. • Discussion on absorption of nutrients. • Note making on metabolism. • Narrative about breakfast program. • *Practical:* Homemade Muesli Fresh fruit Toasted cheese fingers Milo	

Outcomes	Students learn about:	Students learn to:	Teaching and learning strategies	Register
The following elements of quality teaching will be addressed: knowledge integration, deep knowledge, connectedness, problematic knowledge, higher order thinking, substantive communication, explicit quality criteria, engagement Knowledge integration with PD/H/PE and junior Design and Technology course.				
2 weeks 5.3.2 5.2.1 5.1.1	• function and sources of food components including – proteins – carbohydrates/ fibre – lipids – vitamins and minerals *Core* • basic ingredients used in food preparation including – protein rich foods – carbohydrate rich food – food and vegetables – fats and oils – herbs – spices *Core* • reasons for cooking foods – sensory properties including colour, odour, texture,	• outline the source and function of the components of food • create food items using combinations of basic ingredients • explain how different cuisines are created by varying basic ingredients and techniques • generate procedural text to outline the steps in processing and preparing food products using a word processing package • discuss the reasons why basic ingredients need to be cooked for consumption • appreciate the role food components play on the sensory qualities of foods	**Functions and sources of food components** • Note making on functions and sources of food components. • Discussion on food preparation. • Discussion/viewing of recipe books showing basic ingredients and techniques. • Computer usage of word processing. • Experiment using raw and cooked pasta. • Demonstration of sensory qualities of food – use basic food colouring and flavouring to enhance colour, odour, texture, flavour. • Demonstration of cornflour to thicken in a blancmange, egg yolk in a mayonnaise. • *Practicals:* 1) Ka Se Min (mince, vegetables, rice, noodles) 2) Caesar salad, Mayonnaise Chocolate mousse (cornflour thickened)	

Outcomes	Students learn about:	Students learn to:	Teaching and learning strategies	Register
	flavour *Core* • properties of food – functional properties of carbohydrates, proteins and lipids	• examine the functional properties of a variety of foods • prepare food products that demonstrate the functional properties of ingredients (e.g. starch as a thickener, egg yolk as an emulsifier) • identify the properties of foods that make them suitable for particular preparation techniques/cooking methods		
The following elements of quality teaching will be addressed: problematic knowledge, higher order thinking, deep knowledge, knowledge integration, narrative, cultural knowledge, social support, metalanguage Problematic knowledge skills developed by student awareness of the variety of reasons for different RDIs. Higher order thinking will be covered by design/preparation of menu.				
2 weeks 5.5.2 5.3.1	• nutritional needs including – factors that affect nutritional needs – Recommended Dietary Intakes (RDIs) for various life stages *Core* • national guidelines for healthy eating including the National Dietary Guidelines for children and adolescents	• identify RDIs of major nutrients at various life stages • select foods to provide a balanced intake of nutrients • design and prepare a menu/meal/dish to meet the needs of specific groups *Core* • identify broad guidelines for healthy eating to promote optimal health and prevent disease	**Nutritional needs** • Use tables book to look at RDIs for various stages of life cycle. • Brainstorm selection of food to provide balance. • Design and prepare meal for an adolescent who is training for athletics – record on board and into Food Technology book. • Note making on Dietary Guidelines. • Read newspaper article on obesity. • Note making for guidelines for healthy eating. • Issue study sheet on nutrient requirements during the life cycle. Read and glue in Food Technology book. • *Practicals:* 1) Athletic adolescent: Country corn bake Wholemeal bread 2) Adult meal	

Outcomes	Students learn about:	Students learn to:	Teaching and learning strategies	Register
5.3.1	*Core* • nutritional requirements of different stages of the lifecycle – pregnancy – lactation – infancy – childhood – adolescence – adulthood – aged	*Core* • outline the special nutritional requirements at different stages of the lifecycle for both females and males	Quiche and salad	
The following elements of quality teaching will be addressed: inclusivity, connectedness, social support, deep understanding, engagement, high expectations, student direction Inclusivity is evident as students recognize factors influencing food habits. Connectedness revealed with how these effect food choices				
1 week 5.6.1	• factors that influence food habits including – social practices – religious – geographic location – economic situation – technological developments – individual preferences – mass media	• recognise the factors that influence food habits and explain how they affect food choices	**Factors influencing food habits** • Discussion on social practices like eating out on a Friday night, meat pies at football, etc. • Narrative regarding religious influences – Halal meat kill at abattoir. • Brainstorm influence of geographic location (seafood on coast, lamb and beef inland). • Demonstrate food costs – menu from restaurant listing Steak and Vegetables at $25. Demonstrate actual costing on board. • Taste test instant noodles. • Discuss individual preferences and influence of mass media advertisements at meal times, on billboards, using jingle advertising. • Notes covering above points. • *Practical:* Food for the aged Chicken Mornay Jacket potato, carrot straws, green beans	

Outcomes	Students learn about:	Students learn to:	Teaching and learning strategies	Register
The following elements of quality teaching will be addressed: higher order thinking skills, connectedness, deep understanding, knowledge integration, narrative, background knowledge, cultural knowledge, knowledge integration, inclusivity, high expectations, explicit quality criteria, engagement, social support, student self regulation, student direction, problematic knowledge, metalanguage, substantive communication Higher order thinking skills will be developed with students realising the implications of food consumption patterns. Connectedness with general nutrition. Hopefully deep understanding of ethical responsibilities of government and manufacturers will be developed. Knowledge integration applied to menu planning.				
3 weeks 5.3.2 5.3.1 5.6.2 5.6.1	• nutritional implications of food consumption patterns – under and over nutrition *Core* • implications of under and over nutrition and diet-related disorders such as – diabetes type 2 – coeliac disease – obesity – anaemia – osteoporosis – coronary heart disease – hypertension – colon cancer *Core* • anorexia and restrained eating • response to general nutrition levels including – social, political	• outline the effects of excess/insufficient nutrient intakes *Core* • outline conditions of over and under nutrition with reference to at least two diet-related disorders • explore the incidence of and reasons for eating disorders in women and men • describe the nature of anorexia and how it compares with other forms of disordered eating • discuss responses by various groups to general nutrition levels	**Nutritional implications of food consumption** • Students study pictures in text of excess/insufficient nutrient intakes • Note making on dietary assistance for diabetes type 2, coeliac disease, obesity, anemia, osteoporosis, coronary heart disease, hypertension, colon cancer • Reading newspaper articles on bulimia/anorexia – note making summary into Food Technology books • View video on bulimia • Observation of media reports on community response to nutrition levels – download from net • Evaluate nutritional food guides – on board, brainstorm good and poor features – reference to nutritionists view points in media • Narrate to students how to modify standard food to reflect food guides, eg. Oven baked potato slices rather than deep fried chips • Brainstorm a menu to plan and prepare, safe and nutritious food items (to reflect food guides). Peer assessment of students' work (class to work in pairs) • *Practicals:* 1) A healthy heart meal: Tuna Kedgeree	

Outcomes	Students learn about:	Students learn to:	Teaching and learning strategies	Register
5.5.1	and manufacturing directions – ethical responsibilities of government and manufacturers • application of food guides for menu planning and food choices	• evaluate the usefulness of nutritional food guides • analyse the nutritional value of a menu, meal or food item • modify a menu, meal or food item to reflect food guides • design, plan and prepare safe and nutritious food items to reflect food guides	Green salad 2) Preventing anaemia: Beef Stroganoff and rice 3) Food for a diabetic, coeliac person: Grilled lamb kebabs Oven baked potatoes Minted peas	
5.5.1	**Additional content** • active non-nutrients such as phytochemicals and probiotics	• evaluate the potential health benefits of active non-nutrients	To be allocated to gifted and talented students in week 3 and use made of web sites to research project. Completion date end of unit.	