Stage 5 Food Technology: Year 10

Focus area: Food equity

Access to an adequate food supply is a global issue. Students examine food production and distribution globally and how this is influenced by factors such as transport, infrastructure, political environment and geographic considerations. Students plan and prepare safe and nutritious foods appropriate to specific situations.

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:

5.1.1 demonstrates hygienic handling of food to ensure a safe and appealing product
5.1.2 identifies, assesses and manages the risks of injury and OHS issues associated with the handling of food
5.2.1 describes the physical and chemical properties of a variety of foods
5.2.2 accounts for changes to the properties of food which occur during food processing, preparation and storage
5.2.3 applies appropriate methods of food processing, preparation and storage
5.3.1 describes the relationship between food consumption, the nutritional value of foods and the health of individuals and communities
5.4.1 collects, evaluates and applies information from a variety of sources
5.4.2 communicates ideas and information using a range of media and appropriate terminology
5.6.2 evaluates the impact of activities related to food on the individual, society and the environment.

Time allocation: 5 weeks (Term 4) 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: higher order thinking, high expectations, connectedness. Introduction to senior school analysis of articles, highlighting key content and translating this into the inequities that exist in society.				
2 weeks 5.3.2	• circumstances that bring about food inequity including – access to a continuous and safe supply of water – availability of safe and nutritious food – financial means to meet food needs – knowledge of nutrition principles to enable appropriate selection of food – distribution issues	• explain the circumstances that relate to food inequities	• Class to read article: "Water – Every Drop Counts", *New Internationalist Magazine,* March 2003, pp. 9–12. Highlight key information then glue copy into book. • Discussion based on article: "How Not To Feed Africa", *New Internationalist Magazine*, Jan/Feb 2003, pp. 14–15 (article on overhead). • Issue class with "Food and Farming", analyse information with the class. Highlight key points. **Introduce probiotics showing a yogurt container with Acidophilus on label. Discuss antibiotic users as being most likely to be deficient.** www.gnc.com/health_notes/healthnotes.aspx?ContentID=2901004&lang=en	
5.3.1 5.4.1	*Core* • foods which are developed to enhance health including – probiotics – functional foods	*Core* • discuss the role of nutritionally modified foods in the diet • discuss current developments in the nutritional modification of food	• Revise under and over nutrition diet-related diseases by looking at photos of people with varying conditions like obesity and anorexia. • Class to view video on bulimia and discuss implications. Contrast with malnutrition in developing countries.	
5.4.2 5.6.2	*Core* • implications of under and over nutrition and diet-related disorders such as – diabetes type 2 – coeliac disease – obesity – anaemia – osteoporosis – coronary heart	• 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	• Class to look at article in *Nutrition – The Inside Story*, pp. 166–169. Study *Wonder White* bread for homework and answer set questions on case study (pages 170–171). • *Practical:* 1) Rice-based main meal from developing nation 2) Meal using highly processed foods –	

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	disease – hypertension – colon cancer • anorexia and restrained eating *Core* • industrial food preparation – levels of processing – additives – environmental, social, health and economic effects	• describe the nature of anorexia and how it compares with other forms of disordered eating *Core* • identify the varying levels of processing and the accompanying changes that occur to food • identify the role of additives in food processing • discuss the environmental, social, health and economic implications of food processing	analysis of additives	
The following elements of quality teaching will be addressed: narrative, engagement, substantive communication. Local nutritional status will interest students and make the issues more relevant to their learning situation.				
1 week 5.3.2 5.6.1	• groups that may experience food inequity in developed and developing countries such as – rural and isolated people – people on low incomes or unemployed – women and children – people with disabilities – the aged/elderly – Aboriginal and indigenous people	• identify groups at risk of food inequity locally and globally • discuss how belonging to more than one risk group can compound nutritional disadvantage	• Discussion of food inequity locally. Findings by Department of Health that Coonamble had worst level of nutrition in NSW in recent years. Analyse reasons why. • Identify groups at risk, compile notes after brainstorming on board. • Develop a flow chart showing how the risk of nutritional disease increases with certain life styles. • Revision of food packaging and importance to people in developing nations. Class to do work sheet after reading case history on powdered milk supply to developing nations. • Watch video on multinationals exploiting poorer nations with *gifts* of food supplies that are	

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5.1.1 5.1.2 5.6.2	– chronically ill people – people with dementia – alcohol and drug abusers – homeless people *Core:* • food packaging – forms/materials – functions – technological developments such as barrier, active, vacuum and gas – environmental impact – labeling/legal requirements	*Core* • outline the functions of packaging, including the persuasive purpose of food packaging • suggest suitable packaging for a variety of food types in different circumstances • identify food labeling requirements • ethical considerations in declaration of ingredients	tainted.	
The following elements of quality teaching will be addressed: background knowledge, problematic knowledge, higher order thinking. Continuing climatic and geographical location issues give students the background material to understand much about what effects food distribution and availability. This is built on by linking the *new* material to that already at hand.				
1 week 5.3.2 5.5.1	• influences on food availability and distribution such as – geography/climate – religious/cultural beliefs – socioeconomic status – government policy such as trade restrictions – natural disasters such as flooding or drought – war – educational levels	• relate the factors that influence food availability and distribution to food equity • compare and contrast access to food by different groups	• Brainstorm knowledge of what affects food availability. Discussion on impact of droughts/floods, recent large increases in vegetable prices with extreme heat, etc. Compile list on board for class to copy. • Narrative on transport/refrigeration as observed by students in local town. • Revise the importance of nutrition labeling, especially related to different groups in the community. Awareness that 80% of older Aboriginals have diabetes in Gilgandra, importance of fresh food with minimum addition of sugar/fat products.	

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5.3.1 5.4.2	– multinationals – technological developments such as transport and refrigeration *Core:* • nutrition labeling – health claims – legal requirements – labeling symbols such as Glycaemic Index and Health Heart tick	*Core:* • analyse the nutritive content of food using electronic databases either online or by using a CD-ROM • discuss the value to the consumer of endorsed labeling symbols	• *Practical*: Design and make a menu suitable for an aged diabetic person.	
The following elements of quality teaching will be addressed: knowledge integration, explicit quality criteria. Students are encouraged to see the relationship between Food Technology issues and those studied in Agriculture and Geography. In designing the final practical they will be able to check the quality of material learnt and whether it meets the required outcomes of the course.				
1 week 5.3.2 5.5.1 5.5.2 5.6.1	• food production practices – cash cropping, subsistence farming • physical and social cost of malnutrition • provision of aid aid agencies – emergency/relief aid – developmental aid, e.g. promoting breast feeding, developing agricultural skills	• examine food production and distribution on a global scale • explain the consequences of malnutrition • identify dietary diseases associated with malnutrition • identify the role of agencies which provide aid • design, plan and prepare safe and • nutritious food items appropriate to specific situations	• Class to examine food production and distribution chart. Read Fawcett, M. and Lee, L., *Food Tech Issues*, p.161. • View pictures of people suffering malnutrition, Tull, A., Food and Nutrition, p. 6. • Discuss cash cropping and subsistence farming in developing nations. View video: *The Impropriety of the Multinationals*. Read pp. 178–179, *Nutrition – The Inside Story.* • Examine the role of agencies in the developing nations referring to *The Food We Eat: Part 2*, pp. 14–15. Summarise in note books. • *Practical:* This will be the final practical exam. Class to design, plan and prepare foods that would be suitable for a five year old malnourished child.	

Outcomes	Students learn about:	Students learn to:	Teaching and learning strategies	Register
	Additional content • support networks for groups that may experience food inequities including – government – voluntary	• examine a group that experiences food inequity and investigate available support networks and the support provided	Final examination (theory) for Year 10 Food Technology.	