TAS – Food Technology
Contemporary nutrition issues transcript

<https://web.microsoftstream.com/video/b5f32c12-10ec-44dd-a366-3ef7e4655a64>

(Duration 21 minutes 11 seconds)

Welcome to the Food Technology Presentation for HSC On Demand 2020. My name is Toni Robinson. I'm a Teacher Quality Advisor and Head Teacher Teaching and Learning.

I would like to acknowledge the traditional custodians of the various lands that we're meeting on today. I recognise the strength, resilience, and capacity of Aboriginal people in this land, pay my respects and acknowledge elders past, present, and future and also any Aboriginal people who are with us today.

The following is an in-class presentation for students with your teacher to look at one of the areas for improvement that was identified in the HSC marker feedback from last year's examination. The presentation will revise some of the content related to nutrition issues and demonstrate how to relate this to a past HSC question to achieve better results. It will also briefly review the use of terminology in the syllabus and how its correct use can lead to better demonstration of understanding.

The HSC Food Technology course consists of four units of equal weighting. The Australian food industry, contemporary nutrition issues, Food manufacture, and food product development. This presentation will address specific aspects of the unit contemporary nutrition issues. The focus area will be nutritional considerations and preventative strategies for a specific groups. As well, key syllabus terminology will be addressed throughout to support the content that's being discussed.

The following slides unpack an example of contemporary nutrition issues. A short answer question from a previous HSC examination. Firstly, I will look at the question and unpack HSC terminology, the content required to answer this question, and the marking criteria required to answer it. You can see on the screen some HSC exam marker feedback. This can be sourced from the NESA website. A summary of key points are displayed. These points can be applied to any short or extended response question. ‘Students should: be confident in using and interpreting syllabus terminology’. ‘Read the question carefully and respond to all components, including any key words’. Also ‘use the allocated space provided for each question along with the allocated marks’. The space gives a good indication of how much needs to be written. On your worksheet there is a copy of the question displayed on the screen. It's titled Activity One. Through discussions with your teacher, read the question and unpack what it is asking. Underline or highlight the key words. Remember that you're looking for two types of words, HSC verbs and syllabus terms. You might want to pause the video to give you time to complete this task.

How did you go? Compare your work to the screen. The verbs outline and explain have been underlined. These key words provide cues about how to approach the exam question. Did you highlight the marks allocated for each part? along with the number of lines provided on the exam paper these provide a good indication of the length and detail you should be giving in your answer. The terms in bold font, ‘nutritional considerations’, ‘specific group’, ‘specific strategy’, and ‘improve the health outcomes’ highlight the syllabus terminology that relates to this question. The final key to this question is in the last line ‘named in part A or a different group’. In questions with more than one part, it is crucial to check as sometimes you'll be asked to answer both parts on the same group. In this case, you can select a different group for part B if you choose to.

We're going to use the HSC marker feedback to identify the key content that is needed to answer the question. Read the information for part A of this short response question. These points focus on better responses and give you an idea of what the markers think a good answer looks like. So just going over what you can see on the screen, ‘correctly outline nutritional considerations for a specific group’ and ‘recognise course terminology and include specific foods, nutrients, and dietary diseases related to their specific group’.

[Slide reads:

In better responses, students were able to:

* provide characteristics and features of a strategy to improve health outcomes, for example, education programs, government subsidies, cooking classes, social media apps
* provide strategies suited to the specific group chosen such as Aboriginal and Torres Strait Islander, adolescent girls, elderly
* link the strategy back to health outcomes citing dietary diseases prevalent, for example diabetes, anaemia, osteoporosis.
* Areas for students to improve include providing:
* strategies rather than nutritional advice for a group
* a range of relevant examples.]

A good answer would have the following: characteristics and features of a strategy that improve health outcomes, the strategies, plural, are appropriate to the specific group, and clear links are made between the strategies, health outcomes, and relevant dietary diseases. This feedback also outlines areas that students should focus on improving strategies rather than nutritional advice for a group and providing a range of relevant examples.

Now that we've unpacked the question and the marker feedback, the next step is to identify relevant content from the Contemporary nutrition issues unit. The following slides will do that.

Let's go back to the feedback from the HSC markers, they’ve highlighted the confident use and interpretation of syllabus terminology. Understanding these three terms will assist with preparing an answer. You would have seen the terms consideration and vulnerability in other contexts. It is important in your answers that you relate them to nutrition. Nutritional considerations are things that we need to think carefully about to make a decision for or to improve health. Nutritional vulnerability is when someone's health is affected due to a reduced dietary intake of one or more nutrients. For example, not eating dairy products can reduce a person's intake of calcium, which could in later years lead to low bone density or even osteoporosis, resilience to illness or other health related concerns can be lower, and the time taken to recover longer. Prevalent dietary disorders are those health conditions commonly experienced by a specific group of people.

Specific groups within our community can be nutritionally vulnerable. This presentation will focus on two groups from the list on the screen and that is adolescent girls and Aboriginal and Torres Strait Islanders. For each group we are going to look at the following questions: Why are they identified as nutritionally vulnerable? Identify prevalent diet related disorders and how this affects their food choices, and what foods and nutrients are needed to improve their health?

The first group of people that we will look at are Aboriginal and Torres Strait Islander people. Remember our definition for nutritional vulnerability. Think about how these factors could affect dietary intake. We will look at these in more detail on the next slide. Aboriginal and Torres Strait Islander communities may be more disadvantaged across a range of social and economic factors that can lead to poor nutrition. Some of these factors include low levels of education, low income and high unemployment. Geographic location impacts food supply for rural and remote communities in a number of ways. Food costs are higher due to the higher cost of transporting food and healthy foods are less available aand during the wet season, remote areas can be without food for lengthy periods due to weather or road conditions. I'm thinking Northern Territory. Adults from this group experience over nutrition, which is eating more kilojoules than required, and undernutrition which is eating a diet deficient in one or more nutrients or energy.

Dietary risks contribute to the burden of disease for this group with an increased risk of developing chronic diseases such as diabetes, heart disease, and obesity. So how do the factors on the previous slide affect their food choices? Aboriginal and Torres Strait Islanders or any other group with low incomes or who are unemployed are at more risk of poor health due to their diet. How? By filling up on high kilojoule, lower cost, relatively nutrient poor foods such as flour and sugar, rather than choosing nutritious whole foods such as lean meats, fresh vegetables and fruits.

Geography: that was the second point on the screen before. How remote a town is. This further reduces access to healthy food items, especially fresh fruit and vegetables, whole grain cereals, lean meats, and low fat dairy products. Finally, the physical environment. This can include substandard or overcrowded housing and can affect the ability to prepare healthy food due to limited access to equipment to store and prepare food and water for drinking. Any or all of these can contribute to an unbalanced diet. One that if consumed for an extended period will lead to diet related disorders, including diabetes, heart disease, and obesity.

Another food choice experienced by many Aboriginal and Torres Strait Islander people is related to a loss of traditional knowledge and skills in food preparation, cooking methods, food management, and feeding children. Two reasons for this can include firstly becoming dependent on European foods such as flour, sugar, tea, jam, and less often meat. And this could be fresh, tinned, or salted. These foods became more available from European settlement in 1788, and many Aboriginal people were prevented from collecting and eating their traditional foods. Being paid with food, tobacco, and housing rather than money when working on cattle stations happened up until 1969 and that's the second reason. Most of these foods are easy to transport and store. They're cheap and simple to cook, making them popular choices even now in some regional and remote areas.

The Australian dietary guidelines provide recommendations for healthy eating for all Australians. Specific recommendations for Aboriginal and Torres Strait Islander people were included in 2015. These include, to enjoy traditional foods whenever possible and when choosing store foods, that means those purchased from a shop, choose those most like traditional bush foods, such as fresh plant foods, whole grain cereal foods, seafood, lean meats, and poultry.

Stop the video now and have a go at answering the question that you can see on the screen relating content to adolescent females through discussions with your teacher.

[Slide reads:

Activity 2-Nutritional considerations for adolescent girls

Why are they identified as nutritionally vulnerable? (include prevalent diet-related disorders)
How does this affect their food choices?
What foods (and nutrients) do they need to improve their health?]

I'm sure that there are a lot of great answers that you've all written down. Let's go through a few points together. So, what exactly makes adolescent girls nutritionally vulnerable? Most importantly, it is the need for extra nutrients caused by growth at this stage of the lifecycle and menstruation. Other contributing factors can include concerns about body image which can lead to skipping meals and following strict diets and lifestyle choices, including vegetarian and veganism. In more serious cases, anaemia for iron deficiency and osteoporosis and low bone density from calcium deficiency can be experienced.

How does this affect their food choices? Firstly, adolescent girls require increased amounts of energy compared to adult females due to this being a period of growth and development. The recommended intake for an adolescent female is between 8,100 and 13,500 kilojoules depending on physical activity. Breads, grains, and cereals are carbohydrates that provide energy for brain and muscle development and a source of fibre and B vitamins. Without enough carbohydrates, feeling tired and being rundown can be experienced. Meat, chicken, fish, eggs, nuts, and legumes, such as beans and lentils are good sources of protein and iron. Adolescents with low intakes of iron are often tired, lack concentration and are prone to infection. The recommended daily intake for an adolescent girl age fourteen to eighteen is eight to fifteen milligrams, depending on the individual. Iron is needed to make red blood cells which carry oxygen around your body. Menstruation leads to a regular monthly loss of iron. Insufficient levels of iron can lead to anaemia and that's a condition that can make you feel tired, lightheaded and short of breath. For adolescent girls following a vegetarian or vegan diet, there are other ways to meet these iron requirements. For example, baked beans, pulses, lentils, nuts, and seeds.

We touched on the foods and nutrients adolescent girls need to improve their health briefly on this previous slide and start with protein. This nutrient is required for building body tissue such as muscles during growth and development stages. Not eating enough protein during growth periods especially puberty can lead to delayed or stunted growth, height and weight. Not enough protein is common when on strict diets. Both being in a period of growth and following a strict diet makes the adolescent go even more nutritionally vulnerable. Nutritional advice is to include meat, chicken, fish, or eggs in the diet at least twice a day and fish is considered important for the brain, eyes and skin. Try to eat fish two to three times a week. The B group vitamins are needed in increased levels to assist with the synthesis of protein and releasing energy from nutrients including protein, lipids and carbohydrates. Fruit and vegetables are high in vitamins and minerals, which help boost the immune system. They're also very important for healthy skin and eyes. It is recommended that two serves of fruit and five serves of vegetables be eaten daily.

Finally, minerals. Adolescent girls require high levels of calcium and phosphorus for bone development, strength, and mass. Dairy foods, such as milk, cheese, and yogurt help build bones and teeth and maintain a healthy heart, muscles and nerves. The recommended daily intake is three and a half serves of dairy food a day.

Let's think back again to the marker feedback. One of the areas students could improve was to provide strategies rather than nutritional advice for a group. Understanding the difference between these two terms is important when preparing and justifying an answer to a HSC question like this one. So what's the difference between these two terms? A nutritional strategy is a plan or series of steps for achieving a specific goal to improve health outcomes. Whereas nutritional advice is the provision of information, including recommendations of the types of foods and the amounts that should be eaten. On the previous slide, a number of examples of nutritional advice was provided. The recommended daily intake, three and a half serves of dairy food a day, was one such example. A community program that offers health assessments and runs cooking and nutrition education classes is a great example of a strategy that could be designed to improve the health outcomes for a specific group of people.

To develop an effective nutritional strategy focus on answering the following questions about the group that you've selected. What is the purpose of this strategy? What health outcome are you trying to address for the identified group? How will the strategy work? What are the steps involved and who is involved? And finally, what is your strategy going to look like?

Let's look at Aboriginal and Torres Strait Islander people first. You will develop your own strategy in activity three for adolescent girls. What do we want this strategy to do? Let's look at improving community knowledge and skills to prepare healthy and affordable meals for a remote community. Why do we want to do this? People with low incomes or unemployed are more at risk of poor health due to poor diet. This strategy will provide a safe community space where nutrition, education and food preparation skills can be shared. Being able to make more informed choices when purchasing food will improve general nutrition for the people within the community. How will the strategy work, who's going to be involved, and what steps would need to be taken?

So in this strategy, people would be able to come together on a regular basis to plan, cook and share healthy affordable meals. Having regular meetings makes it a social occasion as well, which is really important. Allowing people to get to know each other, share their stories and develop friendships. How would it be promoted? By inviting elders from the community to support the community kitchen and attend the meetings is one part of the plan. We also prefer to hear from people from our own community. So by training Aboriginal and Torres Strait Islander people to deliver the lessons and meetings, there would be more support from the community rather than listening to strangers. It also increases job prospects and employment opportunities for this group. What is the strategy going to look like? Have you worked out what it is yet? That's right. It's a community kitchen.

I'll just give you a bit more information. It operates weekly in a local community centre or school. Why a school or community centre? Because it will have the space and access to resources to allow a large group of people to meet and prepare food safely. Now it's your turn. Stop the video and develop a strategy for adolescent girls using the same set of questions. Your teacher will set a time for you to complete this task and might even ask you to work in small groups. The questions will be left on the slide there to assist you.

[Slide reads:

Designing appropriate strategies:

* What is the purpose of this strategy? (What health outcome are you trying to address for the identified group?)
* How will the strategy work? (What are the steps involved? Who is involved?)
* What is your strategy going to look like?]

What strategy did you come up with? Let's see if we had similar ideas. What is the purpose of the strategy that we've come up as an example for you, to promote the development of healthy nutrition practices for young teenage girls. This strategy is going to focus a little bit deeper on the younger adolescent girl and those that are not feeling comfortable talking about what they're experiencing, especially with all of these changes they're going through. So how will the strategy work? Think about the target market. Do young girls or just young people in general listen to the radio or even watch free to air TV? So that means advertising would need to take place on social media platforms, endorsement by celebrities or social influencers would be nice too. There would be a team of people needed to make this happen starting with an app designer. Then you would need content designers. They would need to develop an interactive food diary, healthy foods, and a recipe section, information on nutritional needs, anaemia, healthy eating, safe weight loss, a chat feature, exercise programs, and challenges. That's not a bad app, I'd really like to see this in practice.

So what is this strategy going to be? It's a health app designed for teenage girls and their health needs. You could get creative and come up with a name for your app. There are many food and fitness apps available. However, your answer would need to stress that this one is focused on teenage girls and their needs and in the strategies or the explanation, link as to what would be more specific to them than someone that's a little older.

Attached to this presentation are links to the following: A glossary of HSC syllabus terms, a list of YouTube and website resources, summary of key points for the units: the Australian food industry, contemporary nutrition issues, food manufacturer, and food product development. For further information regarding Food Technology please see your teacher and most importantly, good luck with your HSC.

End of Transcript