Stage 4 technology mandatory – nutrients and food for health

## Summary

Students source information on the recommended dietary guidelines and apply this information to produce a meal plan for adolescents.

## Duration

2 weeks (approximately 5 x 1 hour lessons). The teacher may supply the booklet to their students or break the workbook up into individual lessons to upload on their online learning platform.

## Outcomes

**TE4-1DP** designs, communicates and evaluates innovative ideas and creative solutions to authentic problems or opportunities

**TE4-6FO** explains how the characteristics and properties of food determine preparation techniques for healthy eating

[Technology Mandatory 7-8 Syllabus](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/technologies/technology-mandatory-7-8-new-syllabus) © NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2017

## Unit overview

Students will research nutrients and the Australian Healthy Eating Guidelines and outline the nutritional needs of adolescents. Students will develop a success criteria for a meal plan and create a meal plan for adolescents. Students will then evaluate their menu plan against their success criteria. Students will examine a range of preparation techniques and their effect on nutritional value.

## Resources overview

The resources and links listed below are referenced within the program but is not an exhaustive list of resources available. Teachers can add to these resources as needed.

### Physical resources

* Access to the internet
* Student workbook

### Websites

* [health.gov.au/internet/publications/publishing.nsf/Content/canteen-mgr-tr1~nutrients](https://www1.health.gov.au/internet/publications/publishing.nsf/Content/canteen-mgr-tr1~nutrients)
* [eatforhealth.gov.au/guidelines/australian-guide-healthy-eating](http://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating)
* [eatforhealth.gov.au/guidelines/australian-dietary-guidelines-1-5](https://www.eatforhealth.gov.au/guidelines/australian-dietary-guidelines-1-5)
* [eatforhealth.gov.au/food-essentials/how-much-do-we-need-each-day/recommended-number-serves-children-adolescents-and](https://www.eatforhealth.gov.au/food-essentials/how-much-do-we-need-each-day/recommended-number-serves-children-adolescents-and)
* [betterhealth.vic.gov.au/health/HealthyLiving/food-processing-and-nutrition](https://www.betterhealth.vic.gov.au/health/HealthyLiving/food-processing-and-nutrition)

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| Content | Teaching and learning | Evidence of learning  | Adjustments and registration |
| **Lesson 1*** investigate the characteristics and properties of a variety of nutritious foods
 | **Students*** Using reliable sources identify the 6 major nutrient groups.
* Outline primary food sources of the each of nutrient groups.
* Outline the purpose of the Australian guide to healthy eating.
* Complete the pie chart of the Australian guide to healthy eating by adding images of foods that belong to each identified food group.
* Outline the 5 principle recommendations featured in the Australian dietary guidelines.
 | * Students will have listed the 6 nutrient groups and outline the primary food sources of each.
* Students outline the 5 principle recommendations featured in the Australian dietary guidelines.
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| **Lesson 2*** explore the nutritional needs of a group of people, for example adolescents, toddlers
 | **Students*** Outline the recommended dietary intakes for males and females aged 11 – 18 and collate this information in a table.
* Use the data from the recommended dietary intake table to populate a spreadsheet and generate a chart to represent the data.
* Make a food diary of their own dietary intake and analyse their intake compared to the Australian guide to healthy eating and recommended dietary intakes.
 | * Students will create a pie chart from a data source.
* Students identify food in their own diet and where they fit in the Australian dietary guidelines.
* Student evaluate their own diet.
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| **Lesson 3*** develop criteria to evaluate design ideas, processes and solutions, the functionality, aesthetics and a range of constraints, for example accessibility, cultural, economic, resources, safety, social, sustainability, technical
* assess the solution against the predetermined criteria
 | **Students*** Outline how people could determine if they are eating a healthy and balanced diet.
* Brainstorm criteria that could be used to determine if a diet met the Australian guide to healthy eating and recommended dietary intakes.
* Design a meal plan for a whole day for an adolescent.
* Evaluate the meal plan they have designed in reference to the success criteria already established.
* Suggest modifications to the meal plan to ensure all dietary requirements are being met.
 | * Students develop a criteria for successful meal planning.
* Students will devise a meal plan for an adolescent.
* Students will have provided a value judgement on.
* Student will identify how the meal plan can be modified to ensure all dietary requirements are being met.
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| **Lesson 4*** identify a range of food preparation techniques and analyse the impact on nutrient value
 | **Students*** Outline the reason for and benefits of processing foods.
* Identify how individuals can preserve the nutrients of foods.
* Identify and outline the vulnerability of water soluble vitamins.
* Describe and outline the effect a range of process techniques has on food.
 | * Students will identify the benefits of processing foods.
* Students will describe and outline the effect a range of process techniques has on food.
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| **Lesson 5*** investigate and communicate how a recipe can be improved to enhance nutritional value, and justify the recipe adjustment
 | **Students*** Research a recipe for a dinner meal.
* Identify the servings of each food group present in the meal (as a whole and for an individual serving).
* Explain how the meal could fit into the Australian guide to healthy eating and recommended dietary intakes.
 | * Students will analyse a recipe and suggest how it may be modified to ensure individuals eat the recommended dietary intakes of all food groups.
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## Evaluation

Evaluation of learning activities should be an ongoing process that happens throughout the delivery of this unit. Teachers should document their evaluation of learning activities throughout the program. The space provided below is to evaluate the overall unit of work.

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