



# Technologies: Design and Technologies

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Teaching, learning and assessment exemplar

Year 9

Food specialisations: Fast and fresh



## **Acknowledgement of Country**

Kaya. The School Curriculum and Standards Authority (the Authority) acknowledges that our offices are on Whadjuk Noongar boodjar and that we deliver our services on the country of many traditional custodians and language groups throughout Western Australia. The Authority acknowledges the traditional custodians throughout Western Australia and their continuing connection to land, waters and community. We offer our respect to Elders past and present.

## **Background**

This teaching, learning and assessment exemplar (the exemplar) has been developed by the School Curriculum and Standards Authority (the Authority) as part of the *School Education Act Employees (Teachers and Administrators) General Agreement 2017* (Clause 61.1–61.3).

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## **Disclaimer**

Any resources, such as texts and websites, that may be referred to in this document are provided as examples of resources that teachers can use to support their learning programs. Their inclusion does not imply that they are mandated or that they are the only resources relevant to the course. Teachers must exercise their professional judgement as to the appropriateness of any resources they may wish to use

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## The Western Australian Curriculum

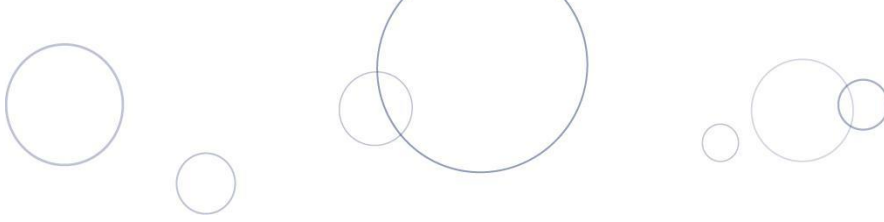
The *Western Australian Curriculum and Assessment Outline* (the *Outline* – <https://k10outline.scsa.wa.edu.au>) sets out the mandated curriculum, guiding principles for teaching, learning and assessment, and support for teachers in their assessment and reporting of student achievement. The *Outline* recognises that all students in Australian schools, or international schools implementing the Western Australian Curriculum, are entitled to be given access to the eight learning areas described in the *Alice Springs (Mparntwe) Education Declaration*, December 2019.

### The Technologies curriculum

The mandated curriculum is presented in the year level syllabus documents.

The Technologies curriculum delivers a sequential and age-appropriate progression of learning with the following key elements:

- a year level description that provides an overview of the context for teaching and learning in the year
- a series of content descriptions, populated through strands and sub-strands, that sets out the knowledge, understanding and skills that teachers are expected to teach and students are expected to learn
- an achievement standard that describes an expected level that the majority of students are achieving by the end of a given year of schooling. An achievement standard describes the quality of learning (e.g. the depth of conceptual understanding and the sophistication of skills) that would indicate the student is well placed to commence the learning required in the next year.



## **This exemplar**

This Technologies exemplar articulates the content in the *Outline* and approaches to teaching, learning and assessment reflective of the Principles of Teaching, Learning and Assessment. This exemplar demonstrates a sequence of teaching and learning, including suggested assessment points, for 10 lessons.

## **Catering for diversity**

This exemplar provides a suggested approach for the delivery of the curriculum and reflects the rationale, aims and content structure of the learning area. When planning the learning experiences, consideration has been given to ensuring that they are inclusive and can be used in, or adapted for, individual circumstances. It is the classroom teacher who is best placed to consider and respond to (accommodate) the diversity of their students. Reflecting on the learning experiences offered in this exemplar will enable teachers to make appropriate adjustments (where applicable) to better cater for students' gender, personal interests, achievement levels, socio-economic, cultural and language backgrounds, experiences and local area contexts.



### **Using this exemplar**

This teaching, learning and assessment exemplar provides suggestions to support the delivery of the mandated curriculum content. The exemplar provides:

- a teaching and learning sequence
- the mandated curriculum content to be taught at each point of the teaching and learning sequence, suggested resources, sample assessment tasks and marking keys
- the number of lessons to deliver the teaching and learning experiences
- learning intentions and support notes that may provide focus questions and additional information and/or examples to assist with the interpretation of curriculum content
- support notes to assist teachers to unpack the content and support teaching and learning experiences
- teaching and learning experiences that outline the structure of the lesson. These explicitly state each activity that the lesson will progress through and the key focus area for that activity.

### **Links to electronic resources**

This sequence of lessons may utilise electronic web-based resources, such as videos and image galleries. Teachers should be present while an electronic resource is in use and close links immediately after a resource, such as a video, has played to prevent default 'auto play' of additional videos. Where resources are referred for home study, they should be uploaded through Connect, or an equivalent system, that filters advertising content.



## Best practice

### Teaching and learning

The teaching and learning opportunities offered in the exemplar are not exhaustive. Thus, teachers are encouraged to make professional decisions about which learning experiences, and the sequence in which they are delivered, are best suited to their classroom context, taking into account the availability of resources and student ability.

This sample may prove a useful starting point for amplifying creativity in the classroom, while presenting embedded expectations of the Western Australian Curriculum: Technologies.

Teachers may find opportunities to incorporate the General Capabilities and the Cross-curriculum Priorities into the teaching and learning program.

**Ways of teaching** – teachers can locate additional information on the Ways of teaching from the School Curriculum and Standards Authority (the Authority) website at <https://k10outline.scsa.wa.edu.au/home/wa-curriculum/learning-areas/technologies/design-and-technologies/p-10-design-and-technologies-teaching/design-and-technologies-ways-of-teaching>.

### Assessing

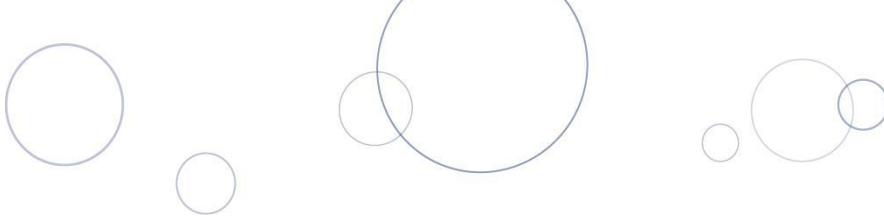
Assessment, both formative and summative, is an integral part of teaching and learning. Assessment should arise naturally out of the learning experiences provided to students. In addition, assessment should provide regular opportunities for teachers to reflect on student achievement and progress. As part of the support it provides for teachers, this exemplar includes suggested assessment points. It is the teacher's role to consider the contexts of their classroom and students, the range of assessments required, and the sampling of content descriptions selected to allow their students the opportunity to demonstrate achievement in relation to the year level achievement standard. Teachers are best placed to make decisions about whether the suggested assessment/s are used as formative or summative assessment and/or for moderation purposes.

**Ways of assessing** – a range of assessment strategies that enables teachers to understand where students are in their learning is available on the Authority website <https://k10outline.scsa.wa.edu.au/home/wa-curriculum/learning-areas/technologies/design-and-technologies/p-10-design-and-technologies-assessing/design-and-technologies-ways-of-assessing>.

### Reflecting

Reflective practice involves a cyclic process during which teachers continually review the effects of their teaching and make appropriate adjustments to their planning. The cycle involves planning, teaching, observing, reflecting and replanning.

This exemplar supports reflective practice and provides flexibility for teachers in their planning. The exemplar shows how content can be combined and revisited throughout the year. Teachers will choose to expand or contract the amount of time spent on developing the required understandings and skills according to their reflective processes and professional judgements about their students' evolving learning needs.



## **Fast and fresh**

This exemplar can be used to further develop students' understanding in Food specialisations and Design thinking skills.

Throughout the teaching and learning sequence, teachers will explicitly teach the design thinking skills students require to complete the assessments at the end of the learning sequence. This includes explicitly teaching food knowledge, project management, and production skills.

If the suggested learning experiences and relevant syllabus content for this exemplar have been studied, students will be well positioned to address the requirements of the assessment task and apply their knowledge and skills to real-life experiences.

This exemplar presents a teaching and learning sequence that will enable students to understand and apply the concepts of wet and dry processing techniques and effect on nutrition, food safety, storage and transport, food enhanced for nutrition and sensory properties, and global tastes and perceptions.



## Year level description

In the middle adolescence phase of schooling, teaching and learning programs encourage students to develop an open and questioning view of themselves as active participants in their society and the world.

Design and Technologies enhances development of the understanding and application of design thinking skills precisely and accurately to describe problems, and the use of functional properties to develop solutions. It also focuses on engaging students with specialised learning, considering enterprising behaviours and entrepreneurial activities.

In Year 9, students have opportunities to learn about technologies in society and ways people consider social, ethical and sustainable factors, and use of specialised technologies in at least one of the following Design and Technologies contexts: Engineering principles and systems, Food and fibre production, Food specialisations, and Materials and technologies specialisations. Students explore ways products, services and environments are designed and developed, considering economic factors and alternative technologies to achieve designed solutions for a specified community need.

Students investigate and analyse problems to define a range of technologies, resources and components required to develop ideas and solutions to design alternative solutions. They consider available technologies, usability, aesthetics and application of appropriate technical terms. Students develop a strong awareness of social, ethical and sustainable considerations for the design and development of engineered products, specialised food and fibre products, food production systems or materials-based products and systems, including consumer values and management of resources to achieve designed solutions for a specified community need. They manage projects, using suitable technologies, with an agile and collaborative approach and use management processes, considering time, risk, economic and sustainable factors. Students evaluate design processes and solutions against student developed criteria, including social, ethical and sustainable considerations.



## Achievement standard

By the end of the year:

Students consider ways social, ethical and sustainable factors affect the development of designed solutions for products, services and environments to meet community needs. In Engineering principles and systems, students consider properties of materials and the influencing factors of force, motion and energy for a designed solution. In Food and fibre production, students consider ways competing factors, including social, environmental and economic, influence design features and function of specialised food and fibre for designed solutions. In Food specialisations, students consider ways nutrition, sensory properties, global tastes, packaging and labelling responsibilities influence development of specialised products to achieve designed solutions. In Materials and technologies specialisations, students identify ways the properties of materials, components, systems and specialised technologies are used to develop designed solutions.

In the Design and Technologies contexts, students ideate a problem and define the needs of an end user to develop a design brief for a solution. They investigate a range of technologies, resources and components required to develop ideas and solutions, with consideration of constraints. Students select, implement and test a range of technologies, techniques and processes to produce designed solutions and/or prototypes. They evaluate design processes and solutions against student-developed criteria including social and ethical factors. Students manage projects, using suitable technologies, an iterative and collaborative approach, and consider time, risk, economic and sustainable factors.





## Lessons 1–10

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## Lesson 1: Fuelling teens fast

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The Western Australian Curriculum content addressed in this lesson is below.

### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes and perceptions

### Design thinking skills

#### Investigating and defining

- Develop a design brief for a solution based on end user needs

#### Designing

- Design alternative solutions considering available technologies, usability and aesthetics, using appropriate technical terms

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### Learning intentions

- Identify key nutrients important for teenage growth and health.
- Evaluate common fast food/takeaway items and suggest alternatives that are more nutritious.
- Identify examples of quick, nutritious meals.
- Understand and apply sensory properties, such as appearance, aroma, texture, flavour and sound in food evaluation.

### Preparation for lesson

- Slides on nutritional needs of teenagers.
- Sensory properties of food evaluation.
- Small food samples for tasting, such as fruit, muffins and vegetables.
- Paper and pens or computer/laptops for students.

### Teacher

#### Activity 1: Fast-food fix

- Show images of popular fast-food items such as a burger, fries or soft drinks to students.
- Ask students to complete a think-pair-share activity considering the following questions:
  - Why do you think these foods are popular with teenagers?
  - What do you think are the health concerns associated with these foods?
- Ask students to consider the questions by themselves, then share their answers with a partner, and then offer them the option to share their answers with the rest of the class.
- Ask students to form pairs and brainstorm healthier swaps for some fast-food items, such as a grilled chicken wrap instead of a fried chicken burger.
- View *Bump the Junk* tool on the [Live Lighter Eating Well Bump the Junk page](https://livelighter.com.au/eating-well/healthy-eating/junk-food) (<https://livelighter.com.au/eating-well/healthy-eating/junk-food>) for inspiration.



### **Activity 2: Nutrient needs for teens**

- Present slides on the key nutrient needs for teenagers.
- Suggested nutrients include:
  - protein – growth, muscle repair (chicken, tofu, eggs)
  - calcium – bone density and teeth (milk, yoghurt, leafy greens)
  - iron – energy and concentration (meat, lentils, spinach)
  - carbohydrates – fuel for the brain and body (wholegrains, fruit)
  - water – hydration.
- Discuss as a class how growth spurts in adolescence increase the demand for certain nutrients.

### **Activity 3: Sensory properties of food**

- Food tasting or virtual evaluation – provide samples of food products for students to taste (or images/descriptions, if food is unavailable).
- Suggested food items include apple slices, air-popped popcorn, cheese, crackers and dip, carrot sticks, mini muffin, or orange segments. Note: foods to be sampled are at the teacher’s discretion.
- Ask students to evaluate the sensory properties of food using the table in Appendix A.2.
- Ask students to discuss their results with a partner.

### **Activity 4: Nutritious meals for teens challenge**

- Ask students to design a range of fast and nutritious meals for teenagers. The meals need to meet the following requirements:
  - contain at least three of the key nutrients required by teenagers
  - can be produced in under 20 minutes
  - have appealing sensory properties.
- Optional: ask students to share an example with the class.

### **Conclusion**

- With a partner, students name all five sensory properties of food.
- Students write one descriptive word for each sensory property of food on a piece of paper and submit as an exit ticket at the end of the lesson. Note: exit tickets provide teachers with a quick assessment of student learning.



## Lesson 2: Heat it up: How cooking changes food

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The Western Australian Curriculum content addressed in this lesson is below.

### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes and perceptions

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### Learning intentions

- Differentiate between wet and dry food processing techniques.
- Explain how processing techniques impact nutrition and the sensory properties of food.
- Apply knowledge of processing techniques by comparing results in a simple cooking experiment.

### Preparation for lesson

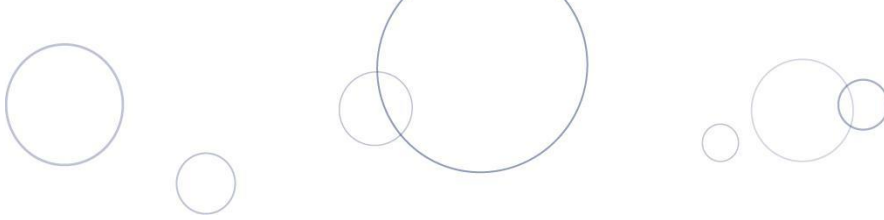
- Exit tickets from previous lesson.
- Images of raw compared to cooked fruit/vegetables.
- Pre-prepared fruit/vegetables such as carrot, potato or apple that has been cooked using a wet and dry processing technique.
- Provide wet and dry processing techniques table (electronic or hardcopy) for each student.

### Teacher

- Use exit tickets from the previous lesson to review vocabulary for discussing sensory properties of food.
- Introduce the topic of wet and dry processing techniques. Explain that wet processing techniques use liquid to transfer heat to food, resulting in softer textures, and dry processing techniques use direct contact or hot air to heat food without moisture, resulting in crispy textures.
- Wet processing techniques include boiling, simmering, poaching, steaming and stewing.
- Dry processing techniques include roasting, baking, grilling, frying and sautéing.

### Activity 1: How heat changes food

- Show students images of raw fruit/vegetables compared to cooked fruit/vegetables, such as baked potato, steamed broccoli, fried onion, grilled tomato or stewed apple.
- Ask students to consider the following questions while viewing the images:
  - How has the raw fruit/vegetable changed because of the heat?
  - What do you think happens to vitamins during cooking?
  - How do processing techniques impact nutrition?
- Think-pair-share – pair up students and allocate each pair a set of the fruit/vegetable images. Ask students to first think about the following by themselves and then discuss with their partner:
  - Do you think your fruit/vegetable is cooked using a wet or dry processing technique?
  - How might this processing technique impact the texture and flavour of the fruit/vegetable?
- Students have the option to share their responses with the class.



### **Activity 2: Processing techniques table**

- Provide information to students in the form of a presentation, video or infographic on how each processing technique impacts nutrition and changes to the sensory properties of food.
- Ask students to complete the table in Appendix A.3 on wet and dry processing techniques.

### **Activity 3: Wet versus dry**

- Have available a range of vegetables or fruits that have been prepared using a wet and a dry processing technique. Ask students to try the foods prepared using both processing techniques and compare the sensory properties and possible effect on nutrition.
- Some example foods to sample may include:
  - carrot – steamed versus roasted
  - potato – boiled versus fried
  - apple slices – stewed versus baked.

### **Conclusion**

- Students each get given a piece of paper with a wet or dry processing technique written on it. Ask students to find another student with the same processing technique as them. Once students have found their partner, ask students to work in pairs to discuss whether they have a wet or dry processing technique and how food changes when heated using this technique.



## Lesson 3: Hot versus cold – spring roll exploration

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The Western Australian Curriculum content addressed in this lesson is below.

### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes and perceptions

### Technologies and society

- People consider social, ethical and sustainable factors, and use specialised technologies for designed solutions to address community needs

### Design thinking skills

#### Project management

- Manage projects, using suitable technologies, with an agile and collaborative approach. Use project management processes to consider time, risk, economic and sustainable factors

#### Producing and implementing

- Select, implement and test a range of technologies, techniques and processes to produce designed solutions and/or prototypes

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### Learning intentions

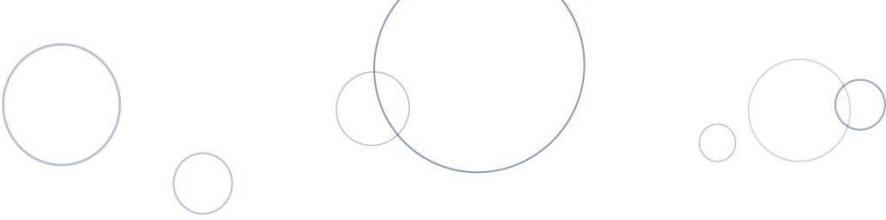
- Prepare and produce two different types of spring rolls while using appropriate techniques and safe food handling practices.
- Compare the sensory and nutritional properties of the two different types of spring rolls.
- Discuss the social, ethical and environmental impacts of food processing techniques.
- Evaluate the sustainability in ingredient sourcing and processing techniques.

### Preparation for lesson

- Prepare *Waste tracking sheet* (Appendix A.4) copies for students (electronic or hardcopy).
- Organise recipes for the two different types of spring rolls.
- Prepare the ingredients and equipment required to produce the spring rolls.

### Teacher

- Introduce the topic of spring rolls.
- Discuss the:
  - origins (fresh originated in Vietnam and deep-fried originated in China)
  - variations (fillings, methods of cooking)
  - cultural significance (in China they are traditionally eaten at New Year and symbolise good fortune).
- Conduct a class discussion on fresh versus fried spring rolls. Why would someone choose one over the other? Possible discussion points: nutrition/fat content, culture, convenience, sensory properties.

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- Explain to students that they will work collaboratively to produce two types of spring rolls. It is at the teacher's discretion to select appropriate recipes that reflect the skill level of the students. One recipe will be for fresh rice paper rolls, and the other recipe will use a processing technique such as frying or baking.

#### **Activity 1: Sustainability, social and ethical considerations**

- Discuss sustainability, social and ethical factors to consider during the production of the spring rolls.
- Possible considerations:
  - fresh spring rolls do not use oil, resulting in less energy use and less waste
  - deep-fried spring rolls use large quantities of oil, which can result in oil disposal issues
  - can use seasonal vegetables to reduce the carbon footprint. Refer to *Seasonal Produce in Perth* guide on <http://seasonalfoodguide.com/perth-wa-seasonal-fresh-produce-guide-fruits-vegetables-in-season-availability-australia.html>.
- Explain to students that they will complete a *Waste tracking sheet* (Appendix A.4) during or after the production of the spring rolls.

#### **Activity 2: Spring roll demonstration**

- Demonstrate to students how to make the two types of spring rolls. Use teacher judgement as to whether it is beneficial to demonstrate the whole process or just the rice paper preparation, assembly and rolling technique.
- Explain to students that half the class will make the fresh spring rolls and half the class will make the cooked spring rolls (option to fry or bake). Students will sample both types of spring rolls.

#### **Activity 3: Spring roll production**

- Support students while they work in pairs or small groups to produce the spring rolls. Half the class to produce the fresh spring rolls and half the class to produce the cooked spring rolls.
- Monitor food safety, hygiene practices, oil temperature if frying, and waste management.

#### **Activity 4: Sensory evaluation and waste tracking sheet**

- Request students to sample both types of spring rolls.
- Ask students to discuss the sensory and nutritional properties of both spring rolls within their pairs or small groups.
- Explain to students how to complete the *Waste tracking sheet* (Appendix A.4), and support those who require it.

#### **Conclusion**

- Small groups to share with the class their learning about the sensory or nutritional properties of the spring rolls.
- Students to indicate which spring roll they prefer using the human graph strategy. Ask students to stand in a line on one side of the room for the fresh spring rolls and the other side for the cooked spring rolls. Option to ask students to justify their choice of spring rolls.



## Lesson 4: From bland to brilliant (salt)

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The Western Australian Curriculum content addressed in this lesson is below.

### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes and perceptions

### Design thinking skills

#### Producing and implementing

- Select, implement and test a range of technologies, techniques, and processes, to produce designed solutions and/or prototypes

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### Learning intentions

- Understand what salt (sodium) is and why it is added to food.
- Identify health risks associated with a high-salt diet.
- Prepare a salt-smart salsa to enhance flavour without added salt, considering global tastes.

### Preparation for lesson

- Have food packaging/nutrition labels for students to review sodium content in food products.
- Organise salsa recipes for students.
- Prepare ingredients and equipment required to produce the salsa recipes.
- Exit tickets.

### Teacher

#### Activity 1: Introduction to salt

- Introduce the nutrient salt/sodium. Discuss the food sources of salt that students are aware of, the role of sodium in the body and health risks associated with overconsumption of salt.
  - As a class, view the information about salt on the Cancer Council website <https://www.cancer.org.au/cancer-information/causes-and-prevention/diet-and-exercise/food-and-nutrition/salt-and-sugar>
- Show students some common food products, such as bread, cereal, soup, pizza, soy sauce
- Ask students to predict which products they think will contain the most salt.
- Reveal the sodium levels in each product and discuss surprising sources of salt.
- Ask students whether they add salt to their food, using thumbs up or thumbs down to indicate.

#### Activity 2: Smart salt swaps

- Create a T-chart on the whiteboard with a list of salty foods, such as chips, soy sauce, cured meats on the left-hand side.
- Ask the class to brainstorm smart swaps for each salty food. List what they could eat as an alternative for each product.



### Activity 3: Make a no-salt salsa

- Explain to students that they will be working in small groups to make a range of flavour-packed salsas without adding any salt. A salsa is a sauce or topping that combines finely chopped ingredients to give flavour to food.
- Allocate each group a global theme for their salsa, such as Mexican, Italian, Thai, Chinese or Indian. The teacher may wish to predetermine the recipes, or students can get creative.
- The Cancer Council website suggests some of the following combinations:
  - Mexican (avocado, fresh tomato, red capsicum and chilli paste)
  - Italian (fresh basil, fresh tomato, onion, pepper, balsamic vinegar and extra virgin olive oil)
  - Thai (fresh coriander, sweet chilli sauce and crushed unsalted peanuts)
  - Chinese (crushed garlic, onion, shallot, crushed ginger, sesame oil and a dash of salt-reduced soy sauce)
  - Indian (cucumber, low-fat natural yoghurt, mint, mango chutney and curry powder or paste).
- Support students during the production of the salsas. Once the salsas have been produced, serve with vegetable sticks or low-salt crackers for sampling.
- Explain to students that they can now sample each salsa, while evaluating the nutritional value and flavour of each salsa (taking special note of the level of saltiness).

### Conclusion

- Ask students the following questions:
  - What surprised you most about salt in food?
  - How did your salsa taste without salt?
- Exit ticket – students to write down one processed food that they commonly consume and a low-salt alternative for that food product.



## Lesson 5: Think global, eat local

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The Western Australian Curriculum content addressed in this lesson is below.

### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes and perceptions

### Technologies and society

- People consider social, ethical and sustainable factors, and use specialised technologies for designed solutions to address community needs

### Design thinking skills

#### Project management

- Manage projects, using suitable technologies, with an agile and collaborative approach. Use project management processes to consider time, risk, economic and sustainable factors

#### Designing

- Design alternative solutions considering available technologies, usability and aesthetics, using appropriate technical terms

#### Evaluating

- Evaluate design processes and solutions against student-developed criteria

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### Learning intentions

- Define what local food is and understand how it differs from imported food.
- Explain how storage and transportation affect food freshness and flavour.
- Evaluate how food choices impact the environment (carbon footprint).

### Preparation for lesson

- Link for YouTube® video and projector.
- Picture of a familiar meal.
- Interactive presentation on local foods.

### Teacher

#### Activity 1: What's on my plate?

- Show students a picture of a familiar meal, such as spaghetti Bolognese, a pizza or a burger.
- Ask students where they think each ingredient in the meal came from.
- Use a map to trace the journey of each ingredient.
- Ask students to discuss in pairs – how far did their dinner travel?



## Activity 2: Interactive presentation on local versus imported food

- Discuss the following topics with students (option to create an electronic presentation):
  - definitions, examples and benefits of local versus imported foods
  - carbon footprint – emissions from transport and packaging
  - freshness and flavour
  - sustainability – food miles
  - native ingredients – what is grown in this region and indigenous foods.
- Show the following video to students:
  - ABC Science – How to reduce your food’s carbon footprint  
<https://youtu.be/BJnUTckj1As?si=cRAgVeQNejoo-gwg>

## Activity 3: Design a local lunchbox

- Ask students to work in small groups to design a lunchbox that uses only local ingredients.
- Ask students to consider ingredients that are in season, how the food will be stored/transported, the environmental impact, and incorporation of native ingredients, if possible.
- Each group will then present their local lunchbox design to the class and explain why their choices are sustainable.
- Ask students to give feedback to each group on their lunchbox design.

## Conclusion

- Ask students to write on a sticky note one small change they could make to eat more locally or sustainably (for example, ‘Eat fruit that’s in season’ or ‘Buy from a local farmers market’).
- Students may share their small change with the class verbally or stick them onto the whiteboard for the teacher to read aloud.



## Lesson 6: The veggie verdict

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The Western Australian Curriculum content addressed in this lesson is below.

### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes and perceptions

### Technologies and society

- People consider social, ethical and sustainable factors, and use specialised technologies for designed solutions to address community needs

### Design thinking skills

#### Producing and implementing

- Select, implement and test a range of technologies, techniques and processes to produce designed solutions and/or prototypes

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### Learning intentions

- Compare the nutritional value of a range of protein sources, including vegetarian and vegan options.
- Evaluate sustainability and ethical considerations of dietary choices.
- Safely produce vegetarian and meat versions of burrito bowls.

### Preparation for lesson

- Organise meat and vegan burrito bowl recipes for students.
- Prepare ingredients and equipment required to produce the burrito bowls.

### Teacher

- Introduce the topic of alternative protein sources and discuss this with the class. Explain the difference between a vegetarian and vegan diet.
- Possible questions:
  - What is the role of protein in the body?
  - Why is protein an important nutrient for teenagers?
  - Which sources of food are typically rich in protein?
  - What alternative sources of protein are you currently aware of?
  - What are the benefits of including plant-based foods in your diet?
- Discuss the questions verbally or use an online tool to collate student responses and then share with the class.



### Activity 1: Meat versus vegan burrito bowls

- Explain to students that they will be working in groups to produce a meat or vegan version of a burrito bowl, to compare the sensory properties and the nutritional value of the two meals. The meat version could include any animal product, such as beef or chicken, and the vegan version could include protein sources, such as beans, tofu, lentils or vegetarian mince.
- Discuss sustainability, and social and ethical factors to consider during the production of the burrito bowls. Possible considerations:
  - carbon footprint – meat, especially beef, has a high greenhouse gas emission footprint due to methane production and energy-intensive farming. Plant-based proteins (beans, lentils, tofu) generally have a lower carbon footprint
  - land use – raising animals requires more land than plant-based alternatives; it also contributes to deforestation
  - nutrition education – there is often a lack of consumer knowledge about how to meet nutritional needs through plant-based diets
  - animal welfare – ethical concerns about factory farming and animal confinement.

### Activity 2: Burrito bowl production

- Divide the class into small groups and give each group the burrito bowl recipe. Decide who will produce which version of the burrito bowl (all students will have the opportunity to sample both versions).
- Instruct students to collect their ingredients and begin producing the recipes.
- Monitor food safety, hygiene practices, stove safety and waste management during production.

### Activity 3: Comparison of burritos

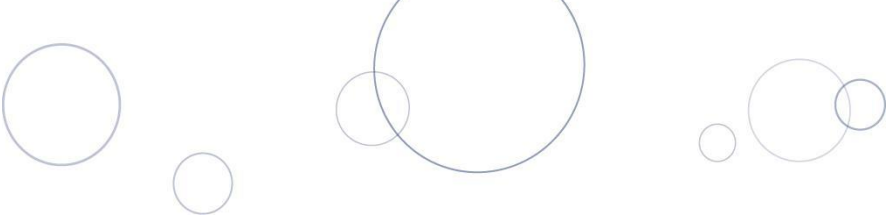
- Request students to sample both burrito bowls in their small groups.
- Ask students to discuss within their groups the sensory and nutritional properties of both versions.
- Ask students to use a Venn diagram to chart the similarities and differences of the burrito bowls in nutritional, ethical, environmental and social aspects.
- Allow students the opportunity to contribute their insights to the class if they wish.

### Activity 4: Mini debate ‘To meat or not to meat?’

- Split the class into two groups: Team Meat and Team Vegan.
- Each team gets five minutes to prepare two to three arguments.
- Debate rules:
  - Two minutes per team to present
  - One minute each for rebuttals
  - Class votes on the most persuasive case, not the ‘right’ one.

### Conclusion

- Exit ticket – ask students the following question: ‘What was one thing that you learned about how food choices impact more than just our health?’
- Set students a challenge to try one meat-free meal prior to the next lesson.



## Lesson 7: Bao in a blink (Designing)

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The Western Australian Curriculum content addressed in this lesson is below.

### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes and perceptions

### Technologies and society

- People consider social, ethical and sustainable factors, and use specialised technologies for designed solutions to address community needs

### Design thinking skills

#### Designing

- Design alternative solutions considering available technologies, usability and aesthetics using appropriate technical terms

---

### Learning intentions

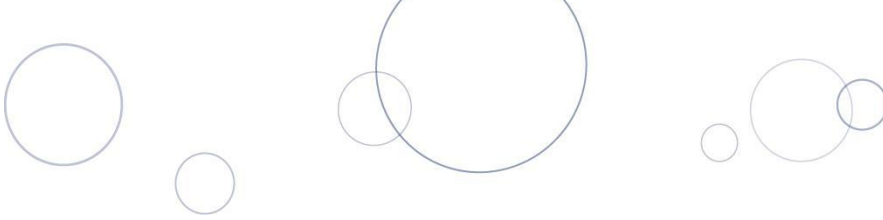
- Understand the requirements for *Bao in a blink* task.
- Complete the designing and technologies and society questions.

### Preparation for lesson

- Prepare task booklets or electronic option for *Bao in a blink* task.

### Teacher

- Introduce the *Bao in a blink* task to students.
- Explain to students that their task is to design and produce an innovative bao bun that appeals to hungry teenagers. This product must be nutritious, delicious and quick to produce, making it suitable for an after-school snack.
- Provide students with the *Bao in a blink* task (Appendix B). Read through the task booklet with students.
- Using the curriculum content, guide students to consider student-developed criteria that they may use to evaluate the design processes and solution in this task. Students to select two criteria that may be used to evaluate the bao bun.
- Ask students to do the following:
  - using the ingredients list (Appendix B), design three different bao bun fillings that consider the task objectives and requirements. Students are to label each component of their designs, using appropriate technical terms
  - describe how each design meets the task criteria (considers the nutritional needs of teenagers, has appealing sensory properties, uses wet/dry processing techniques and can be produced in under 40 minutes)



- select a bao bun design to produce. Justify the design selection against the task criteria and explain why it was preferred over the alternative designs
- describe a social, ethical and sustainable factor that may be considered during the production of the bao bun
- describe a specialised technology that can be used during the production of the bao bun.
- Provide equipment and materials for recording written answers and sketching, such as pencils and paper, if required. Provide ongoing support or guidance as the students complete the investigating and defining section of the task.

### **Conclusion**

- Ensure students have completed all questions.
- Inform students that in the next lesson they will complete a food order and a production plan in preparation for the practical.



## Lesson 8: Bao in a blink (Project management)

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The Western Australian Curriculum content addressed in this lesson is below.

### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes, and perceptions
- Social, ethical and sustainable considerations for the design and development of specialised food products and systems, including consumer and/or producer values and management of resources to achieve designed solutions for a specified community need

### Design thinking skills

#### Project management

- Manage projects, using suitable technologies, with an agile and collaborative approach. Use project management processes to consider time, risk, economic and sustainable factors

---

### Learning intentions

- Finalise bao bun design and complete the *Recipe template* in Appendix A.5.
- Produce a detailed *Production plan template* (Appendix A.6) to be used during the bao bun production process.

### Preparation for lesson

- Organise *Recipe templates* (Appendix A.5) for all students.
- Organise *Production plan templates* (Appendix A.6) for all students.

### Teacher

- Check with students to ensure that the task questions on Designing and Technologies and society from the previous lesson have been completed.
- Ask students to explain their selected bao bun design to a partner. Option to ask students to give each other feedback on their design and indicate if there are any aspects that could be improved.
- Explain to students that they now need to choose their final bao bun design (this will be produced in Lesson 10).
- Show students the *Recipe template* (Appendix A.5) and *Production plan template* (Appendix A.6).
- Ask students to complete the *Recipe template*. They will need to select ingredients from the list (Appendix B). All sections of the *Recipe template* need to be completed including ingredients, quantities, equipment and method.
- Ask students to complete the *Production plan template*, outlining the processes that need to be completed to produce the bao bun in a 40-minute period. All sections of the table need to be completed including times, processes, equipment required and safety factors.
- Ask students to submit both templates before the end of the lesson.

### Conclusion

- Inform students that in the next lesson they will be designing packaging and labelling for the bao bun.



## Lesson 9: Bao bun in a box – packaging and labelling

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The Western Australian Curriculum content addressed in this lesson is below.

### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes and perceptions

### Technologies and society

- People consider social, ethical and sustainable factors, and use specialised technologies for designed solutions to address community needs

### Design thinking skills

#### Designing

- Design alternative solutions considering available technologies, usability and aesthetics, using appropriate technical terms

---

### Learning intentions

- Understand food safety considerations for packaging ready-to-eat food.
- Identify suitable, sustainable packaging materials for a bao bun.
- Apply food labelling laws to *Bao in a blink* task.
- Design creative and functional bao bun packaging.

### Preparation for lesson

- Images of takeaway packaging from real Australian businesses (on a Microsoft® PowerPoint® or printed).
- Optional: physical examples of different types of packaging.

### Teacher

#### Activity 1: What's in the box?

- Show four to five images of takeaway food packaging from real Australian businesses (e.g. bao buns, sushi trays, burger wraps).
- Ask students the following questions:
  - What kind of food is inside?
  - Is this packaging suitable for the food? Why/why not?
  - Is it sustainable or recyclable?
- Conduct a class discussion on the single-use plastics ban in many Australian states, and the push for compostable or recyclable packaging (e.g. bamboo, bioplastics).



### Activity 2: Food labelling and packaging

- Show and discuss with students the Food Standards of Australia and New Zealand (FSANZ) food labelling requirements <https://www.foodstandards.gov.au/business/labelling>.
- As a class, discuss the following food labelling requirements:
  - name of the food
  - ingredients list
  - allergens declaration
  - use-by or best-before date
  - storage instructions
  - name and address of the supplier
  - country of origin labelling
  - nutrition information panel.
- Explore bao bun packaging options:
  - Bao buns are soft and moist; the packaging should be breathable and insulating.
  - Eco-friendly options: sugarcane pulp trays, bamboo steam boxes or cardboard with biodegradable lining.

### Activity 3: Bao box design

- Ask students to work in pairs or small groups to design a bao bun takeaway box for an imaginary food business or the school canteen.
- The design must include:
  - drawing or sketch of the packaging
  - list of materials used and reasons for choice (e.g. compostable, insulating)
  - food label, considering the Australian food labelling requirements
  - storage instructions.
- Optional: A few groups may present their design to the class.
- Ask students:
  - What makes your packaging safe, sustainable and user-friendly?
  - How did you include the Australian labelling requirements?

### Conclusion

- Inform students that in the next lesson they will be producing and evaluating their bao bun design.
- Check if students have any questions and run through expectations for the bao bun production.



## Lesson 10: Produce and evaluate bao bun

---

The Western Australian Curriculum content addressed in this lesson is below.

### Design thinking skills

#### Project management

- Manage projects, using suitable technologies, with an agile and collaborative approach. Use project management processes to consider time, risk, economic and sustainable factors

#### Producing and implementing

- Select, implement and test a range of technologies, techniques, and processes to produce designed solutions and/or prototypes

#### Evaluating

- Evaluate design processes and solutions against student-developed criteria
- 

### Learning intentions

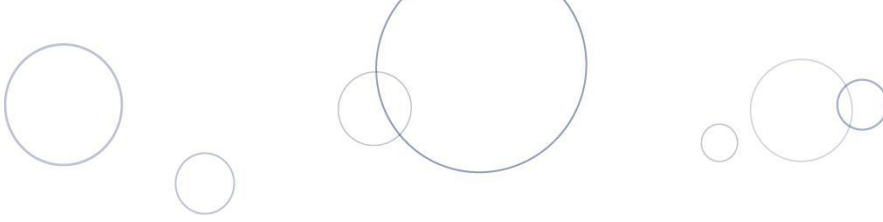
- Produce the designed bao bun filling while following the production plan and implementing project management skills.
- Review the production processes and evaluate the design process and solution against student-developed criteria.

### Preparation for lesson

- Ensure all required ingredients and equipment are available for students to produce bao buns.
- Have copies of the *Recipe template* and *Production plan template* for students to use during the practical.

### Teacher

- Support students to individually produce their bao bun designs.
- Hand *Recipe template* and *Production plan template* back to students.
- Guide students while they produce their bao buns.
- Advise students that once they have produced their bao bun and cleaned up their area, they may sample and evaluate their bao bun.
- Explain to students that they need to complete the *Bao evaluation task* (Appendix C) during the remainder of the lesson.
- The following activities need to be completed:
  - state two student-developed criteria identified in the previous lessons. Describe how the bao bun meets each criteria
  - describe how the bao bun filling considers the sensory properties of food
  - explain how the bao bun considers the nutritional needs of a teenager
  - describe how production processes can increase efficiency
  - explain how a sustainability and an ethical factor were considered during the production of the bao bun
  - explain how project management skills were applied during this task.



## **Conclusion**

- As a class, review the production process. Students to discuss with a partner one thing that went well during production and one area for improvement.
- Collect completed tasks from all students.



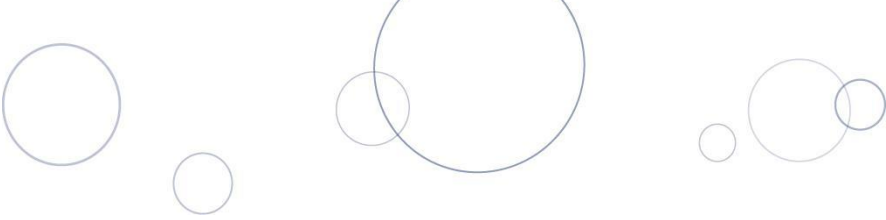
# Appendix A

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## Resources

## Appendix A.1: Resources

Lesson	Resource	Link/information
1	Live Lighter – Bump the junk [website]	<ul style="list-style-type: none"><li><a href="https://livelighter.com.au/eating-well/healthy-eating/junk-food">https://livelighter.com.au/eating-well/healthy-eating/junk-food</a></li></ul>
3	Seasonal Food Guide Australia - Perth and Western Australia Seasonal Produce [website]	<ul style="list-style-type: none"><li><a href="http://seasonalfoodguide.com/perth-wa-seasonal-fresh-produce-guide-fruits-vegetables-in-season-availability-australia.html">http://seasonalfoodguide.com/perth-wa-seasonal-fresh-produce-guide-fruits-vegetables-in-season-availability-australia.html</a></li></ul>
4	Cancer Council – Salt and Sugar [website]	<ul style="list-style-type: none"><li><a href="https://www.cancer.org.au/cancer-information/causes-and-prevention/diet-and-exercise/food-and-nutrition/salt-and-sugar">https://www.cancer.org.au/cancer-information/causes-and-prevention/diet-and-exercise/food-and-nutrition/salt-and-sugar</a></li></ul>
5	ABC Science - How to reduce your food's carbon footprint [YouTube video]	<ul style="list-style-type: none"><li><a href="https://youtu.be/BJnUTckj1As?si=cRAgVeQNejoo-gwg">https://youtu.be/BJnUTckj1As?si=cRAgVeQNejoo-gwg</a></li></ul>
9	Food Standards Australia and New Zealand – Labelling [website]	<ul style="list-style-type: none"><li><a href="https://www.foodstandards.gov.au/business/labelling">https://www.foodstandards.gov.au/business/labelling</a></li></ul>



## Appendix A.2: Sensory properties of food evaluation – Lesson 1

### Sensory properties of food

- Appearance – colour, shape, presentation
- Aroma – smell
- Texture – crunch, softness, creaminess
- Flavour – sweet, salty, umami, bitter, sour
- Sound – crunch, slurp, sizzle

Students to record their responses below.

Food sample	Appearance	Aroma	Texture	Flavour	Sound



## Appendix A.3: Wet and dry processing techniques table – Lesson 2

### Suggested content

#### Wet processing techniques (moist heat): Boiling, steaming, poaching, braising

- Nutrient impact: water-soluble vitamins (like Vitamin C and B) can leach into water
- Sensory impact: softens texture, dulls colour if overcooked, reduces crunch

#### Dry processing techniques (no moisture): Baking, roasting, grilling, frying

- Nutrient impact: some fat-soluble vitamins preserved; can lead to fat absorption
- Sensory impact: enhances browning, crispiness, aroma and flavour (Maillard reaction)

Processing technique	Wet/dry	Impact on nutrients	Sensory changes

## Appendix A.4: Waste tracking sheet – Lesson 3

Name: \_\_\_\_\_

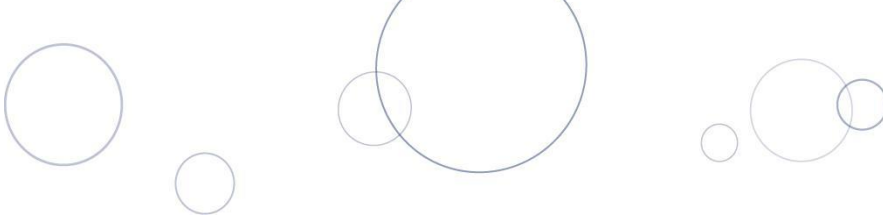
Partner/s: \_\_\_\_\_

### Ingredient waste tracking

Ingredient	Amount provided	Amount used	Amount wasted	Reason for waste (e.g. over-prep, spoilage)
Carrot				
Cucumber				
Lettuce				
Tofu/chicken				
Vermicelli noodles				
Rice paper				
Spring roll wrappers				

### Packaging waste tracking

Packaging type	Recyclable (✓/X)	Reused (✓/X)	Thrown away (✓/X)	How could this be reduced or reused?
Vegetable bags				
Noodle packaging				
Tofu/chicken wrap				
Rice paper wrap				



**Reflection questions**

1. What was the main source of food waste during production?

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2. How could you reduce this waste in future lessons or at home?

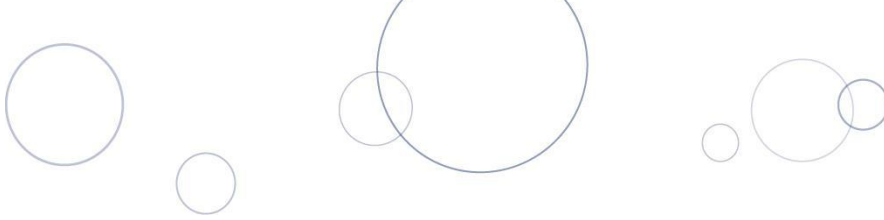
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3. Did you notice any packaging that could be replaced with a more sustainable option?

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4. What would you do with leftover ingredients (if any)?

- Compost     Take home     Reuse next class     Other: \_\_\_\_\_



## Appendix A.5: Recipe template – Lesson 8

**Serves:** One

**Time:** 40 minutes

List the:

- ingredients required to produce the bao bun filling
- quantities of each ingredient using standard kitchen measurements (select your ingredients from the list in Appendix B).

Quantity:	Ingredients:

List the kitchen equipment required.

Equipment:

Explain the method required to prepare the bao bun.

Method:



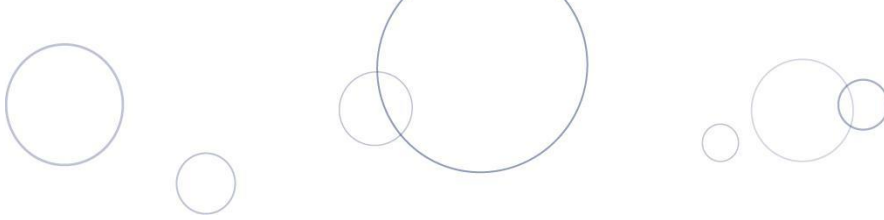


## **Appendix B**

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Formative assessment task

Bao in a blink



## Task details

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<b>Title</b>	Bao in a blink
<b>Description</b>	Students will design and produce a bao bun to demonstrate understanding of wet and dry processing techniques, food safety, nutrition and sensory properties
<b>Type of assessment</b>	Formative
<b>Ways of assessing</b>	Observation, practical evidence, written work
<b>Evidence to be collected</b>	Photos, observations and discussions with students, and written answers to questions
<b>Suggested time</b>	Two one-hour lessons in class
<b>Differentiation</b>	Teachers should differentiate their teaching and assessment to meet the specific needs of their students, based on their level of readiness to learn and their need to be challenged. Where appropriate, teachers may either scaffold or extend the scope of the assessment task.

## Content descriptions

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### Food specialisations

- Wet and dry processing techniques and effect on nutrition, considering demographic groups, food safety including regulatory responsibilities for packaging and labelling; storage and transport of food; food enhanced for nutrition and sensory properties, global tastes and perceptions
- Social, ethical and sustainable considerations for the design and development of specialised food products and systems, including consumer and/or producer values and management of resources to achieve designed solutions for a specified community need

### Technologies and society

- People consider social, ethical and sustainable factors, and use specialised technologies for designed solutions to address community needs

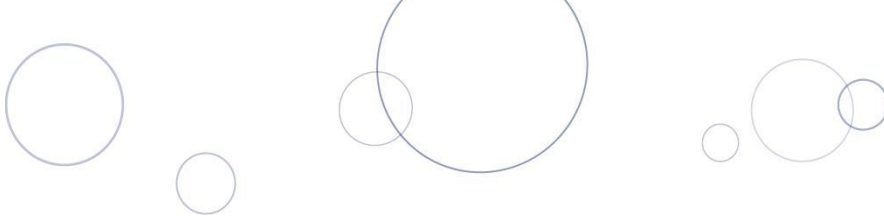
### Design thinking skills

#### Project management

- Manage projects, using suitable technologies, with an agile and collaborative approach. Use project management processes to consider time, risk, economic and sustainable factors

#### Designing

- Design alternative solutions considering available technologies, usability, and aesthetics, using appropriate technical terms



## Key concepts

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Wet and dry processing techniques, food safety, nutrition and sensory properties of food.

## Task preparation

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### Prior learning

Students have completed the previous set of lessons.

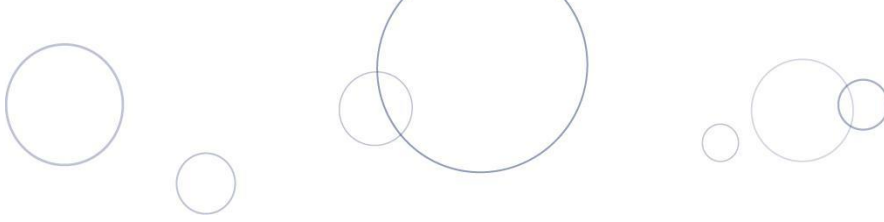
Students have been provided with opportunities to learn the following syllabus content:

- sensory properties of food
- wet and dry processing techniques and effect on nutrition
- food safety and regulatory responsibilities for food packaging and labelling
- global tastes and perceptions
- social, ethical and sustainable considerations.

### Resources

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- *Bao in a blink* task questions (Appendix B)
- Ingredients and equipment required to produce the recipe



## **Bao in a blink**

### **Overview**

Your task is to design and produce an innovative bao bun that appeals to hungry teenagers. This product must be nutritious, delicious and quick to produce, making it suitable for an after-school snack.

### **Objective**

Create a bao bun that:

- meets the nutritional needs of teenagers (demographic group)
- appeals to their taste preferences using well-balanced sensory properties (taste, texture, aroma, appearance)
- can be produced efficiently using appropriate wet and dry food processing techniques
- takes less than 40 minutes and uses the ingredients from the list provided.

### **Criteria**

1. Target market:
  - a) Focus on teenagers aged 13–18 who need a filling, satisfying and enjoyable meal or snack after school.
2. Nutrition:
  - a) Ensure the bao provides a balanced combination of macronutrients (protein, carbohydrates, fats) and includes essential vitamins and minerals.
  - b) Consider common dietary preferences or restrictions among teenagers (e.g. vegetarian, low sugar, high protein).
3. Sensory appeal:
  - a) Develop a filling that has a strong visual appeal, pleasing aroma, texture contrast and bold but balanced flavours.
4. Production efficiency:
  - a) Use appropriate wet (e.g. boiling, steaming) and dry (e.g. baking, frying) processing techniques.
  - b) Aim for a recipe that can be produced in under 40 minutes, with minimal waste.

## Designing

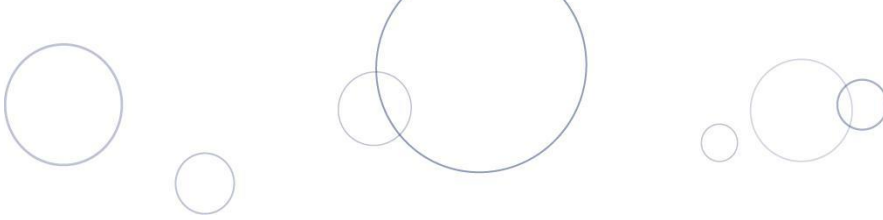
You have arrived home from school, and the following ingredients are available in your fridge/pantry to create a filling for a quick and nutritious bao bun.

Notes: teachers may edit this list to consider ingredient availability, dietary requirements and the context of the school. Each student will be provided with a pre-made bao bun.

Meat/alternative protein	Vegetables	Sauces/flavours	Pantry items	Garnishes
Chicken thigh	Carrot	Soy sauce	Flour	Sesame seeds
Beef mince	Cucumber	Sesame oil	Egg	Fried shallots
Pork strips	Capsicum	Honey	Breadcrumbs	Coriander (fresh)
Tofu	Red onion	Ginger	Salt	Spring onion
Vegetarian mince	Spinach	Garlic	Pepper	
	Red cabbage	Chilli flakes	Oil	
		Lime juice		
		Mayonnaise		

- Using the ingredients available in the list above, design three different bao bun fillings that consider the task objectives and requirements. Label each component of your designs using appropriate technical terms. (6 marks)

Design 1	Design 2	Design 3



2. Describe how each design meets the task criteria. (6 marks)

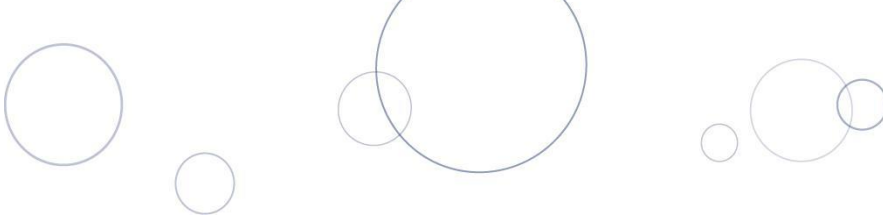
Design 1 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Design 2 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Design 3 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Select a bao bun design to produce. Justify the design selection against the task criteria and explain why it was preferred over the alternative designs. (5 marks)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



4. Describe a social, ethical and sustainable factor that may be considered during the production of your bao bun. (6 marks)

Social: \_\_\_\_\_

\_\_\_\_\_

Ethical: \_\_\_\_\_

\_\_\_\_\_

Sustainable: \_\_\_\_\_

\_\_\_\_\_

5. Describe a specialised technology that can be used during the production of the bao bun. (2 marks)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Marking key

Description	Marks
<b>1. Using the ingredients available in the list above, design three different bao bun fillings that consider the task objectives and requirements. Label each component of your designs using appropriate technical terms</b>	
Design 1 considers the task objectives and requirements. The design is labelled using appropriate technical terms	2
Design 1 considers some of the task objectives and requirements. The design is partially labelled	1
<b>Subtotal</b>	<b>/2</b>
Design 2 considers the task objectives and requirements. The design is labelled using appropriate technical terms	2
Design 2 considers some of the task objectives and requirements. The design is partially labelled	1
<b>Subtotal</b>	<b>/2</b>
Design 3 considers the task objectives and requirements. The design is labelled using appropriate technical terms	2
Design 3 considers some of the task objectives and requirements. The design is partially labelled	1
<b>Subtotal</b>	<b>/2</b>
<b>2. Describe how each design meets the task criteria</b>	
Describes how Design 1 meets the task criteria	2
Outlines how Design 1 meets the task criteria	1
<b>Subtotal</b>	<b>/2</b>
Describes how Design 2 meets the task criteria	2
Outlines how Design 2 meets the task criteria	1
<b>Subtotal</b>	<b>/2</b>
Describes how Design 3 meets the task criteria	2
Outlines how Design 3 meets the task criteria	1
<b>Subtotal</b>	<b>/2</b>

Description	Marks
<b>3. Select a bao bun design to produce. Justify the design selection against the task criteria and explain why it was preferred over the alternative designs</b>	
Thoroughly justifies the selected design against the task criteria	2
Partially justifies the selected design against the task criteria	1
<b>Subtotal</b>	<b>/2</b>
<b>Explains why the selected design was preferred over the alternative designs</b>	
Explains why the selected design was preferred over the alternative designs	3
Describes why the selected design was preferred over the alternative designs	2
Outlines why the selected design was preferred over the alternative designs	1
<b>Subtotal</b>	<b>/3</b>
<b>4. Describe a social, ethical and sustainable factor that may be considered during the production of your bao bun</b>	
<b>Describes a social factor that may be considered during the production of the bao bun</b>	
Describes a social factor that may be considered during the production of the bao bun	2
<b>Outlines a social factor that may be considered during the production of the bao bun</b>	
Outlines a social factor that may be considered during the production of the bao bun	1
<b>Subtotal</b>	<b>/2</b>
<b>Describes an ethical factor that may be considered during the production of the bao bun</b>	
Describes an ethical factor that may be considered during the production of the bao bun	2
<b>Outlines an ethical factor that may be considered during the production of the bao bun</b>	
Outlines an ethical factor that may be considered during the production of the bao bun	1
<b>Subtotal</b>	<b>/2</b>
<b>Describes a sustainable factor that may be considered during the production of the bao bun</b>	
Describes a sustainable factor that may be considered during the production of the bao bun	2
<b>Outlines a sustainable factor that may be considered during the production of the bao bun</b>	
Outlines a sustainable factor that may be considered during the production of the bao bun	1
<b>Subtotal</b>	<b>/2</b>
<b>5. Describe a specialised technology that can be used during the production of the bao bun</b>	
<b>Describes a specialised technology that can be used during the production of the bao bun</b>	
Describes a specialised technology that can be used during the production of the bao bun	2
<b>Outlines a specialised technology that can be used during the production of the bao bun</b>	
Outlines a specialised technology that can be used during the production of the bao bun	1
<b>Subtotal</b>	<b>/2</b>
<b>Total</b>	<b>/25</b>



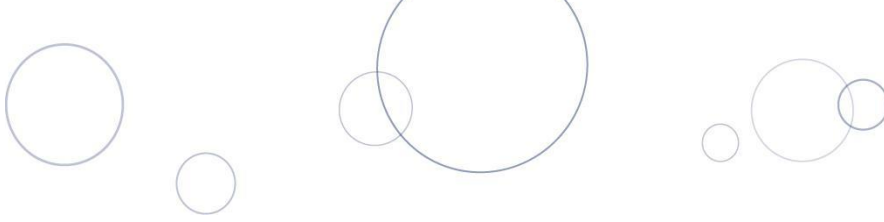


## **Appendix C**

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Summative assessment task

Bao evaluation



## Task details

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<b>Title</b>	Bao evaluation
<b>Description</b>	After producing the bao bun designed in the <i>Bao in a blink</i> task, students will evaluate the design process and end product. The design process will be evaluated against student-developed criteria.
<b>Type of assessment</b>	Summative
<b>Ways of assessing</b>	Evaluation, written work.
<b>Evidence to be collected</b>	Written responses, observations and photos
<b>Suggested time</b>	One one-hour lesson in class
<b>Differentiation</b>	Teachers should differentiate their teaching and assessment to meet the specific needs of their students, based on their level of readiness to learn and their need to be challenged. Where appropriate, teachers may either scaffold or extend the scope of the assessment task.

## Content descriptions

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### Design thinking skills

#### Project management

- Manage projects, using suitable technologies, with an agile and collaborative approach. Use project management processes to consider time, risk, economic and sustainable factors

#### Producing and implementing

- Select, implement and test a range of technologies, techniques, and processes, to produce designed solutions and/or prototypes

#### Evaluating

- Evaluate design processes and solutions against student-developed criteria

## Task preparation

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### Prior learning

Students have completed the previous set of lessons and formative assessment.

Students have been provided with opportunities to learn the following syllabus content:

- sensory properties of food
- wet and dry processing techniques and effect on nutrition
- food safety and regulatory responsibilities for food packaging and labelling
- global tastes and perceptions
- social, ethical and sustainable considerations.

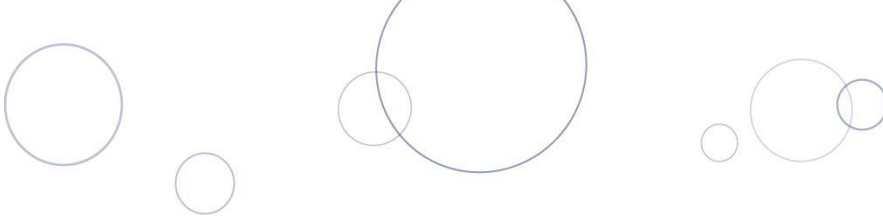




## Marking key

Description	Marks
<b>1. State two student-developed criteria identified in the previous lessons. Describe how the bao bun meets each criterion</b>	
States two student-developed criteria	2
States one student-developed criteria	1
<b>Subtotal</b>	<b>/2</b>
<b>2. Describe how the bao bun meets the first criteria</b>	
Describes how the bao bun meets the first criteria	2
States how the bao bun meets the first criteria	1
<b>Subtotal</b>	<b>/2</b>
<b>3. Describe how the bao bun meets the second criteria</b>	
Describes how the bao bun meets the second criteria	2
States how the bao bun meets the second criteria	1
<b>Subtotal</b>	<b>/2</b>
<b>2. Describe how the bao bun filling considers the sensory properties of food</b>	
Describes how the bao bun filling considers desirable sensory and physical properties of food	2
Outlines how the bao bun filling considers desirable sensory and physical properties of food	1
<b>Subtotal</b>	<b>/2</b>
<b>3. Explain how the bao bun considers the nutritional needs of a teenager</b>	
Explains how the bao bun considers the nutritional needs of a teenager	3
Describes how the bao bun considers the nutritional needs of a teenager	2
Outlines how the bao bun considers the nutritional needs of a teenager	1
<b>Subtotal</b>	<b>/3</b>
<b>4. Describe how production processes can increase efficiency</b>	
Describes how production processes can increase efficiency	2
Outlines how production processes can increase efficiency	1
<b>Subtotal</b>	<b>/2</b>
<b>5. Explain how a sustainability and an ethical factor were considered during the production of the bao bun</b>	
Explains how an ethical factor was considered during the production of the bao bun	3
Describes how an ethical factor was considered during the production of the bao bun	2
Outlines how an ethical factor was considered during the production of the bao bun	1
<b>Subtotal</b>	<b>/3</b>

Description	Mark
Explains how a sustainable factor was considered during the production of the bao bun	3
Describes how a sustainable factor was considered during the production of the bao bun	2
Outlines how a sustainable factor was considered during the production of the bao bun	1
<b>Subtotal</b>	<b>/3</b>
<b>6. Explain how project management skills were applied during this task</b>	
Explains how project management skills were applied during this task	3
Describes how project management skills were applied during this task	2
Outlines how project management skills were applied during this task	1
<b>Subtotal</b>	<b>/3</b>
<b>Total</b>	<b>/22</b>



## Acknowledgements

### Lesson 4

#### Activity three

Sub dot points 1–5 from: Cancer Council Australia. (n.d.). *Salt and Sugar*. Retrieved October, 2025, from <https://www.cancer.org.au/cancer-information/causes-and-prevention/diet-and-exercise/food-and-nutrition/salt-and-sugar>

