

## Unit 2.1.1 and 2.1.2

### Sustainability in the Australian Food System

#### Key Knowledge and Key Skills

##### Key Knowledge 2.1.1

The components and activities that comprise Australian food systems.

##### Key Knowledge 2.1.2

Current environmental and economic sustainability and social trends, issues and influences in Australian food industry sectors, and the impact on food security and food sovereignty.

##### Key Skills 2.1.1

Describe major sectors and explain current developments in Australian food systems.

##### Key Skills 2.1.9

Participate in and reflect on practical activities to explore the history and culture of food in Australia

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## Key Terms and Definitions

**Sustainability** involves maintaining the world we live in to meet the needs of people both now and in the future.

**Economic sustainability** is about using resources efficiently so that economic growth, whether on a global, national, community, or individual level, continues over time.

**Environmental sustainability** focuses on ensuring that the resources in the environment are available for future generations.

**Food security** exists 'When all people at all times have physical and economic access to sufficient, safe and nutritious food to meet dietary needs and food preferences for an active and healthy life.' (*Australia and Food Security in a Changing World, The Prime Minister's Science, Engineering and Innovation Council, 2010, Canberra, p.1*).

**Food sovereignty** occurs when people have developed or are developing a food system that focuses on ecology and sustainability and enables them to choose the food they want to eat, where it comes from, and how it is grown.

**Social sustainability** refers to people having ongoing access to better education and training opportunities, equal rights, political voice, and connections within communities.

# The Australian Food System

The terms paddock to plate or farm to fork refer to food's journey from when it is planted or born to when it is consumed. These terms are often used to describe the food system. However, it is essential to note that the farm-to-fork concept is relatively simple, and our food systems in Australia are significantly more complicated.

The food system comprises the following areas:

1. primary production;
2. processing and packaging;
3. distribution and access;
4. media and marketing;
5. consumption; and
6. waste management of food.

**Watch** this video about the paddock-to-plate process of Smiths Potato Chips: <https://youtu.be/1JvaSTQQtnY>

**Watch** this video about the paddock-to-plate process for Australian lamb: [https://youtu.be/g\\_UBIxhA8Ls](https://youtu.be/g_UBIxhA8Ls)

## Components of the Food System

### **Primary Production**

Primary production involves crops being grown and harvested and animals being raised and slaughtered. It also includes any basic manufacturing processes required to make whole foods ready for consumption, sale, or further processing.

Enough food is produced in Australia to feed 50 million people. The main food crops grown in Australia include barley, canola, fruit, vegetables, and wheat. Australia produces a significant amount of beef and lamb.

### **Processing and Packaging**

Processing is often referred to as secondary processing. This involves changing the state of foods produced during primary production into other products. Australia's food processing and manufacturing employ over 300,000 people; it has an annual turnover of over \$50 billion.

### **Distribution and Access**

Distribution involves the transportation, storage, and sales of food. Food must be transported in a way that keeps it safe. In Australia, food may need to travel long distances across the country to reach its destination and therefore it is important that people transporting food minimise the risk of contamination during this stage.

Depending on the type of food item, it may be the producer or a distributor that transports products to retail facilities and consumers. The producer may sell their food items in smaller settings, such as at a farmers' market, directly from their farm, or online. A food distributor is a company that sells a high volume of products to commercial environments, such as restaurants, cafeterias, large-scale caterers, hospitals, and schools.

### **Media and Marketing**

Food marketing occurs when someone promotes the sale of food products or food services. Food marketing in the media is regulated under a complex range of regulations and codes in Australia.

### **Consumption**

Consumption refers to the act of eating food. Consumption of food can occur anywhere and everywhere. The Australian Bureau of Statistics reported that between 2020 and 2021, Australians consumed less than the recommended amounts of the five food groups. Yet, they increased their consumption of discretionary foods.

### **Waste Management**

Food waste management involves reducing waste produced during production, processing, distribution, and consumption. When food and packaging are lost or wasted, all the resources used to make food, including water, land, energy, and labour, go to waste.

Approximately 312 kg per person is wasted across Australia's supply and consumption chain. This is equivalent to \$2000 to \$2500 per household annually. In 2022, the Australian Government set a goal to halve the food wasted in Australia by 2030. Food waste in Australia contributes to approximately 3% of Australia's greenhouse gas emissions.



Potatoes growing in a field.



Processing of potato chips.



Distribution and Access.



Media and Marketing.



Consumption.



Waste Management.



**Watch** this video about the amount of food Australian's waste each year: <https://youtu.be/Y5smqZ9fTKY>

**Watch** these videos about how energy is produced from organic waste: <https://youtu.be/Tnx49j2FEI8>

## Current Trends, Issues, and Influences

Australia's food system is dynamic – meaning it's constantly changing. Consumer demand for different food products is one factor responsible for causing this change. When consumers find something they want to try or think is beneficial, the demand for this product increases. Food manufacturers and retailers need to meet these consumer needs if they wish to remain profitable. A widespread change in food preference that is long-lasting is referred to as a food trend.

### Food Security and Food Sovereignty

Food security and food sovereignty are concepts that influence trends in our current food system. There is a growing number of people in Australia that are wanting a food system that promotes food security and food sovereignty.

#### Food Security

Global food security exists 'When all people at all times have physical and economic access to sufficient, safe and nutritious food to meet dietary needs and food preferences for an active and healthy life.'

*(Australia and Food Security in a Changing World, The Prime Minister's Science, Engineering and Innovation Council, 2010, Canberra, p.1).*

#### Food Sovereignty

Food sovereignty occurs when people have access to a food system that provides culturally appropriate and nutritious food, where ethics and the environment have been considered at each stage of the food system and where individuals and farmers have greater control over what they choose to eat. It occurs when people have developed or are developing a food system that focuses on ecology and sustainability and enables them to choose the food they want to eat, where it comes from, and how it is grown.

**Watch** this video about food security and food sovereignty: <https://youtu.be/Tuq12mYuNu0>

## Environmental, Economic and Social Sustainability

A current major issue and influence on trends in the food industry is sustainability. Sustainability involves meeting the needs of people, now and in the future.

There are three sustainability dimensions:

1. Environmental sustainability;
2. Economic sustainability; and
3. Social sustainability.

These three sustainability dimensions impact food security and food sovereignty.



**Watch** one of these videos about the dimensions of sustainability:

<https://youtu.be/99VrWNJyJ3E?list=RDLVzx04KI8y4dE> and [https://youtu.be/\\_5r4loXPyx8](https://youtu.be/_5r4loXPyx8)

### Environmental Sustainability

More and more Australians want to purchase sustainable products, including food. A recent survey conducted in Australia found that around 78% of Australian shoppers are more willing to pay an increased price for a sustainable product. When food is sustainable, the production and distribution of the food item are done in a way that uses little energy and impacts the environment.

**Watch** this video about how food impacts the environment: <https://youtu.be/7Rufqoy9R2U>

**Watch** this video about how South Melbourne Market is becoming more sustainable: <https://youtu.be/lnjnGK1DAxk>

### Organic Food

Organic food is considered a sustainable alternative to conventional produce. This is because organic food is produced without synthetic agricultural chemicals such as fertilisers and pesticides. If not applied safely, fertilisers and pesticides can contaminate our water supplies and contribute to poor soil quality. The misuse of fertilisers and pesticides can not only harm our land, but their production also contributes significantly to gas emissions and global warming.

The production of organic produce addresses this environmental issue. The organic food industry is the fastest-growing food category in Australia; it has more than doubled in the past decade. Australia has more certified organic land than any other country in the world. While organic farming is a method of sustainable food production, there is concern that less food is produced using this system compared to conventional agriculture and therefore causes a reduction in food security.

### Local Food

A study by Mintel found that in 2019, 44% of Australians wanted to buy locally grown food. Some people may prefer to buy produce locally because they think it is fresher and better quality than produce purchased at a supermarket. Another reason may be that the food is likely to have travelled less distance. Some people have also reported feeling more connected and positive about their food choices when they buy it locally. It is possible that the production of locally grown foods may provide long-term food security for communities.

### **Plant-Based Meats**

While meat products remain popular in Australia, plant-based alternatives to animal products are increasing in popularity. A study by the Institute for Sustainable Futures found that about 80% of Australians knew about plant-based meats, and nearly half of them have tasted them at some time.

One reason why people may buy plant-based animal products is that they think they are more sustainable compared to animal products. Producing plant-based animal products is considered as a viable way to improve food security because it requires less agricultural land and water, and emits less greenhouse gases during its production.

### **Economic Sustainability**

Economic sustainability involves the efficient use of resources which ensures that economic growth continues over time. This refers to the contribution of food industries to the Australian and global economies, the creation of employment opportunities, and the ability of individuals and families to access affordable food that is nutritious and culturally appropriate (*VCE Food Studies, Study Design, 2023, page 11*).

The food industry is an integral part of keeping Australia financially secure. It accounts for around 20% of domestic manufacturing sales and service income. Australia also has a reputation internationally as a modern, safe, reliable, and sustainable food producer. The overwhelming majority of food sold in Australia is grown and supplied by Australian farmers. We export around 70% of our agricultural produce. More than 90% of fresh fruit and vegetables, meat, milk, and eggs sold in supermarkets are domestically produced. However, economic growth in Australia, employment opportunities, and the ability of individuals and families to access affordable food that is nutritious and culturally appropriate in Australia can be impacted by a range of factors.

### **Conflict and War**

Conflict and war between countries can impact food supplies and economic sustainability. The destruction that war causes can damage crops, food storage facilities, homes, roads, and supermarkets. Farmers may leave their farms to become soldiers or to avoid harm. Conflict can interrupt the production, transport, and distribution of food in the supply chain and cause food shortages.

The conflict between Russia and Ukraine in 2022 significantly impacted the supply and cost of fertiliser, fuel, oil, wheat, and vegetable oil worldwide. Ukraine could not grow and export the amount of food and oil it once supplied. This increased global food prices by one-third, fertiliser by half, and oil prices by two-thirds. While Australia could provide food to Australians, the food still needed to be transported and farmers had to pay an increased price for fertiliser. This increase in the cost of fertiliser and fuel were two factors that contributed to higher food prices at this time.

### **Natural Disasters**

Natural disasters can also impact the cost of food. Natural disasters can destroy crops and farm buildings, equipment, and fences. Animals used for food or labour on farms can be injured or die. Road infrastructure can also be destroyed, making farmers unable to transport their produce.

The increased cost of food in 2022 was also attributed to a series of floods in major growing areas. These floods destroyed crops and the infrastructure required to store and transport produce. The cost of food increased as less food was available.

### **Shortage of Workers**

It has been reported that Victoria will face a shortage of around 400,000 workers in 2025. In 2022, many farmers did not plant crops because they could not hire the workforce to tend and harvest them. It is considered that this worker shortage occurred because of changes to the federal government and Pacific Island seasonal worker schemes, and border closures related to COVID19. This worker shortage may drive up the cost of groceries as suppliers may not be able to meet demand. For some, this may result in not having adequate access to food.

**Watch** this video about workforce shortages on farms: <https://youtu.be/1nmRSdoS6Rs> and <https://youtu.be/O5E53Y33BNg>

## Social Sustainability

The social dimension of sustainability is about ensuring that future generations have access to social resources that impact health and wellbeing. These social resources include connections with communities, education, and human rights, and equal opportunities for all.

**Watch** this video to find out more about social sustainability: <https://youtu.be/y8T7iwIVulk>

### **Community Enterprises and Organisations**

Programs that connect people and focus on providing healthy and sustainable food systems in communities promote social sustainability and food security.

An example of this is The Community Grocer. This not-for-profit group runs fresh produce markets and programs to improve people's social, economic, and physical access to nutritious food. The group works to support people in low-income areas to access healthy food at an affordable price and connect with others at the same time. This program supports both social and economic sustainability.

**Watch** these videos to find out more about The Community Grocer: [https://youtu.be/O87vvxf6\\_XM](https://youtu.be/O87vvxf6_XM) and [https://youtu.be/wF\\_pgb9hOYU](https://youtu.be/wF_pgb9hOYU)

### **Education and Skills Training Programs**

Providing education and skills training programs that help people understand the types of foods that are nutritious and how to source healthy foods at an affordable price is likely to address issues relating to food insecurity.

Providing people with not only the knowledge and skills to grow their own food but also the location in which to do so promotes food sovereignty.

The program featured in the video below addresses food security and food sovereignty for refugees in Australia. Not only does the program promote community connections, but it also addresses issues of inequality.

**Watch** this video about a community group addressing social sustainability: [https://youtu.be/EG\\_kUsqr9PI](https://youtu.be/EG_kUsqr9PI)

### **Human Rights and Equal Opportunities**

The concept of human rights is that all people are entitled to the same basic rights and freedoms regardless of who they are, when, or where they were born. This means that everyone must be able to access a food system that provides enough nutritious and culturally appropriate sustainable food that meets their needs at an affordable price and is easily accessible. It means that all workers, regardless of age, cultural background, education, or gender, have access to fair wages and work conditions that enable them to access affordable and nutritious foods that meet their nutritional needs and preferences.

**Watch** this video that discusses the concept of human rights: <https://youtu.be/6e8m8L9BFa4>

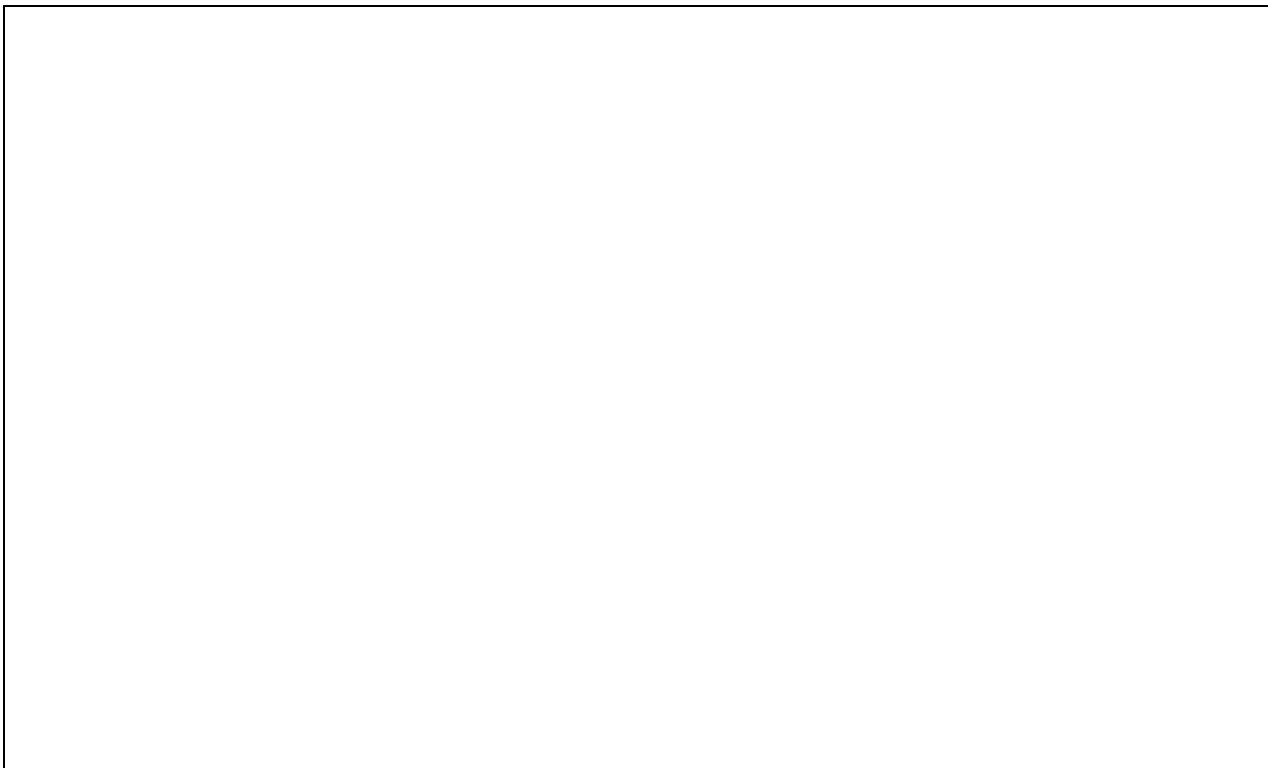
## Written Activity One

### Paddock-to-Plate: Beef

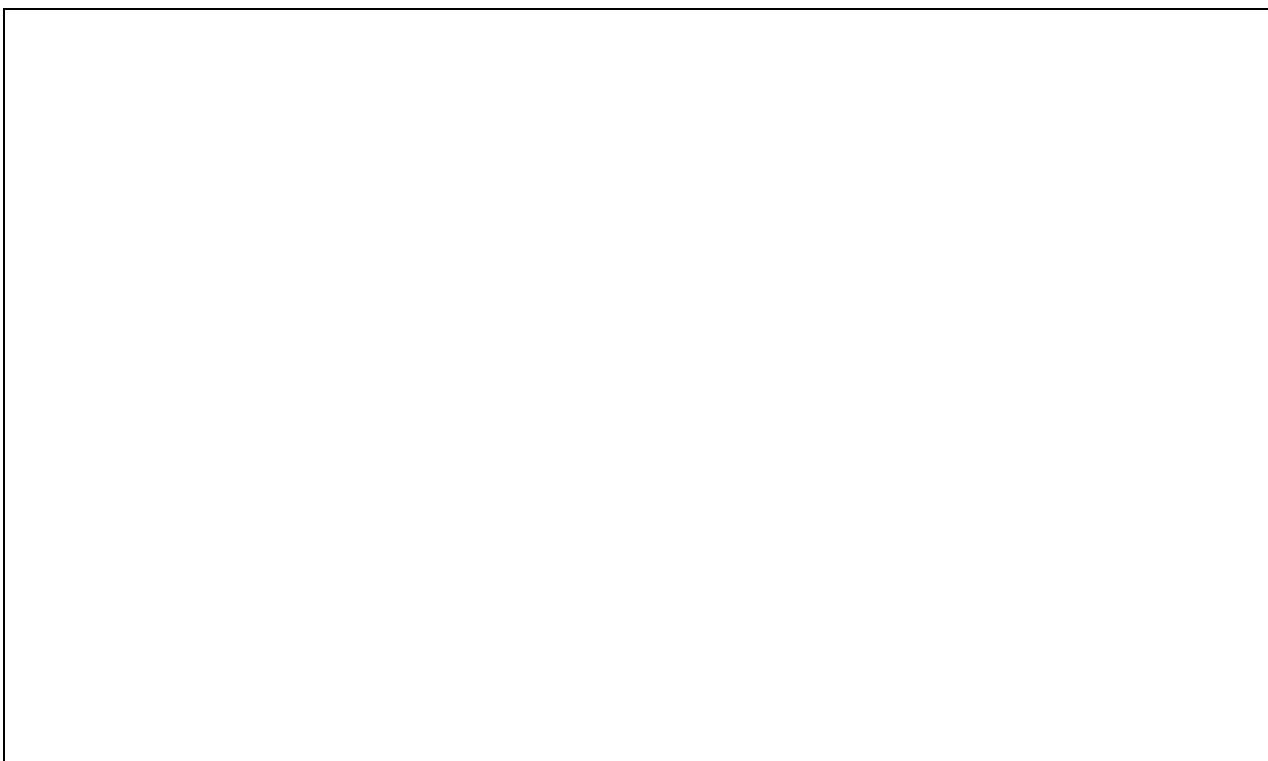
**Watch** the video about beef's paddock-to-plate journey at this link: [https://youtu.be/Fv\\_dbu\\_6k20](https://youtu.be/Fv_dbu_6k20)

In a small group,

- **Draw** a flowchart of the journey beef takes from the paddock-to-plate in the video.



- **Draw** a flowchart of the journey beef may take in a food system that promotes food sovereignty.



## Written Activity Two

### Australian Alternative Protein Industry is Reinventing Food

**Read** the article at this link:

<https://www.abc.net.au/news/2022-09-06/how-australias-alternative-protein-industry-is-reinventing-food/101307234>

**Watch** this video that demonstrates how lab-grown or cultivated meat is produced: <https://youtu.be/hhC9W7NfdZ4>

**Answer** the following questions:

1. What is lab-grown meat?

2. How might the paddock-to-plate food system for lab-grown meat differ from a conventional one?

3. Why type of consumer is likely to demand or desire lab-grown meat?

4. What are the benefits of producing and consuming lab-grown meat?

5. What are the challenges of producing and consuming lab-grown meat?

6. Do you think lab-grown meat will help to reduce food insecurity? Why? Why not?

The six pillars of food sovereignty were developed at the Nyéléni 2007 Global Forum for Food Sovereignty in Mali.

Complete the table below by explaining how the production of lab-grown meat supports the six pillars of food sovereignty.

Six Pillars of Food Sovereignty	How does the production of lab-grown meat support the six pillars of food sovereignty?
<b>Builds knowledge and skills</b> of food providers and producers that conserve, develop, and manage localised food production and harvesting systems and reject technologies that undermine or threaten local food systems. 1	
<b>Focuses on food for people</b> and prioritises people's need for food. It rejects the idea that food is a commodity to be traded by large agricultural businesses. 2	
<b>Localised food systems</b> bring food providers and consumers closer together and allow them to make decisions on food issues ranging from ecology to the nutritional value of food. 3	
<b>Puts control locally</b> of natural resources rather than private companies or government organisations that manage the land through laws and commercial contracts. 4	
<b>Values food providers</b> like small-scale farmers, Indigenous Australians, farm workers, etc. 5	
<b>Works with nature</b> to produce food sustainably and reject methods of food production that do not promote sustainability. 6	

Source: <https://www.lankaweb.com/news/items/2021/10/12/climate-change-and-food-security-in-sri-lanka-towards-food-sovereignty/>

## Written Activity Three

### The Farm Helping Refugees Build a Life in Australia

The term food security is 'when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet dietary needs and food preferences for an active and healthy life.' (*Australia and Food Security in a Changing World, The Prime Minister's Science, Engineering and Innovation Council, 2010, Canberra, p. 1*).

**Watch** the video at this link: [https://youtu.be/EG\\_kUsgr9PI](https://youtu.be/EG_kUsgr9PI)

Answer the following questions:

1. What is Green Connect?

2. Where is Green Connect?

3. Who is involved with Green Connect?

4. What happens at Green Connect?

The five dimensions of food security are listed in the table below.

Complete the table below by explaining how Green Connects supports the five dimensions of food security.

Six Pillars of Food Sovereignty	How does Green Connect support the five dimensions of food security?
<b>Availability</b> – a sufficient supply of food is available for people at all times. <div style="text-align: center; margin-top: 20px;">(1)</div>	
<b>Accessibility</b> – physical and economic access to food at all times is available, which results in equity of access to food. <div style="text-align: center; margin-top: 20px;">(2)</div>	
<b>Acceptability</b> – access to culturally acceptable food produced and obtained in ways that do not compromise people's dignity, self-respect, or human rights. <div style="text-align: center; margin-top: 20px;">(3)</div>	
<b>Adequacy</b> – access to food that is nutritious, safe, and produced in environmentally sustainable ways. <div style="text-align: center; margin-top: 20px;">(4)</div>	
<b>Stability</b> – reliability of food supply. <div style="text-align: center; margin-top: 20px;">(5)</div>	

## Written Activity Four

### The Community Grocer

**Watch** these two videos about The Community Grocer: [https://youtu.be/O87vvxf6\\_XM](https://youtu.be/O87vvxf6_XM) and [https://youtu.be/wF\\_pgb9hOUY](https://youtu.be/wF_pgb9hOUY)

**Answer** the following questions:

1. What is The Community Grocer?

2. Who is involved with The Community Grocer?

3. Where can you find The Community Grocer?

4. Why was The Community Grocer developed?

The three sustainability dimensions that impact food security and food sovereignty are listed below:

**Complete** the table below by explaining how Green Connects supports the three sustainability dimensions that impact food security and food sovereignty.

Six Pillars of Food Sovereignty	How does Green Connect support the five dimensions of food security?
<b>Availability</b> – a sufficient supply of food is available for people at all times.  <span data-bbox="452 516 547 594">1</span>	
<b>Accessibility</b> – physical and economic access to food at all times is available, which results in equity of access to food.  <span data-bbox="452 785 547 864">2</span>	
<b>Acceptability</b> – access to culturally acceptable food produced and obtained in ways that do not compromise people's dignity, self-respect, or human rights.  <span data-bbox="452 1077 547 1156">3</span>	

# Practical Activity One

## More Aussies Eating Fake Meat

**Listen** to the short radio interview about 'fake meat' consumption at this link or QR code:

<https://www.abc.net.au/radionational/programs/breakfast/more-aussies-eating-fake-meat/13247754>



**Conduct** a class discussion about this radio interview.

1. What is happening to consumer demand for plant-based meat products?
2. Why might some Australians be decreasing the amount of meat they consume?
3. Why might some people prefer to eat plant-based meats rather than traditional vegetarian meals like chickpea curries?
4. What are plant-based meats made from? Do you think this is healthy?
5. Why might butchers be producing plant-based meat products?
6. What are some of the environmental and ethical reasons why people might consume plant-based meats?
7. Why might some farmers support the production of plant-based meats?
8. Why might some farmers not support the production of plant-based meats?
9. How might the production of plant-based meats impact food security?

### About the Task

In this practical activity, you will work in small groups to make a recipe that uses mince meat (not bolognese or lasagne). In small groups, you will make one portion of the recipe using mince meat and another portion using plant-based mince meat.

**Select** a recipe from one of these sites:

<https://www.jamieoliver.com/recipes/minced-beef-recipes/>

<https://www.taste.com.au/recipes/collections/beef-mince>

<https://www.australianbeef.com.au/collections/beef-mince-recipes/>

<https://www.kidspot.com.au/kitchen/galleries/17-easy-dinners-using-beef-mince-kids-eat/o42lvctm?page=4>

<https://www.bestrecipes.com.au/budget/galleries/mince-recipes-quick-easy-dinner-ideas/fs7mf4yz>

Make sure you can cook the recipe within class time!

### Let's Plan

**Print** a copy of your recipe or **photocopy** your recipe from a book.

**Seek** approval from your teacher to make this recipe in class.

**Highlight** any terms you do not understand and **research** what these terms mean.

**Estimate** and calculate your recipe's total preparation and cooking time. This ensures you have enough time to make your dish in class.

**Make** any additional notes on the recipe that will help you when you are making your dish.

**Complete** the recipe template.

**Submit** a copy of your recipe and food order to your teacher.

### Let's Cook

**Make** your dish in class.

## Recipe Template

<b>Student Name:</b>	
<b>Recipe Name:</b>	
<b>Source/ Weblink:</b>	
<b>Serves:</b>	
<b>Preparation Time:</b>	
<b>Cooking Time:</b>	
<b>Specialised Equipment:</b>	
<b>Ingredients:</b> (include the quantities required for one or two serves only)	
<b>Method:</b>	
<b>Process/ Term and Definition:</b>	
<b>Principles of safe and hygienic food handling practices:</b>	

**Let's Evaluate**

1. **Write** down a word to describe each of the sensory properties listed.

Remember to use descriptive words rather than words that state how much you like the product, such as delicious.

Product	Appearance	Texture	Taste	Aroma/ Smell
<b>Minced Meat</b>				
<b>Plant-based Meat</b>				

2. Which dish did you prefer?

**Refer** to the sensory properties of each dish in your discussion.

3. **State** whether you believe plant-based meat is a suitable protein replacement for Australians.

**Justify** your viewpoint.

## Practical Activity Two

### How Inflation is Impacting Your Shopping Trolley

Read this article: <https://www.9news.com.au/national/inflation-australia-cost-of-living-price-everyday-supermarket-items-australia-cpi/46d92d1f-f153-45a4-8b5a-6c4524c61a00>

#### Discussion Questions:

1. What grocery items have been identified as increasing in cost?
2. What grocery items have been identified as decreasing in cost?
3. How could people reduce the cost of a recipe they make for dinner?

#### Let's Plan

As a class, add, remove and substitute ingredients in the recipe below to make it more economical:

<https://www.taste.com.au/recipes/butter-chicken/ef787ffc-37c7-4426-b1b3-c5591c74d623>

The recipe must be more nutritious, serve fewer people and cost less money.

#### Let's Cook

Make your dish in class.

#### Let's Evaluate

1. Write down a word to describe each of the sensory properties listed.

Remember to use descriptive words rather than words that state how much you like the product, such as delicious.

Product	Appearance	Texture	Taste	Aroma/ Smell
Butter Chicken				

2. What changes did you make to your recipe to make it healthier, serve fewer people and cost less money?

3. Economic sustainability is about using resources efficiently so that economic growth, whether on a global, national, community or individual level, continues over time.

What things could you do at home to ensure that, at an individual level, you experience economic growth over a period of time?

## Summary Activity

Complete the following tasks.

<b>What is the main idea about this key knowledge and key skills?</b>	
Write two or three sentences in your own words.	
<b>What is a food system?</b>	
<b>Briefly outline what each stage of the food system below involves.</b>	
Primary Production	
Processing and Packaging	
Distribution and Access	
Media and Marketing	
Consumption	
Waste Management	
<b>In your own words, briefly outline what food security and food sovereignty mean.</b>	
<b>Food Security</b>	<b>Food Sovereignty</b>

<b>Define the term sustainability.</b>		
<b>Briefly explain what each of the following terms means. Provide an example of each.</b>		
<b>Environmental Sustainability</b>	<b>Economic Sustainability</b>	<b>Social Sustainability.</b>
<b>Example</b>	<b>Example</b>	<b>Example</b>

## Exam Preparation

### Multiple-Choice Questions (5 marks)

Choose the response that is correct or that **best answers** the question.

#### Question 1

The form of sustainability that focuses on ensuring that resources in the environment are available for future generations is:

- a. Social Sustainability.
- b. Ethical Sustainability
- c. Environmental Sustainability.
- d. Economic Sustainability.

#### Question 2

Which of the following terms is more focused on the provision of sustainable food?

- a. Food security.
- b. Social sustainability.
- c. Food sovereignty.
- d. Food alliance.

#### Question 3

*In 2022, the cost of dairy food increased by 19%, vegetable oils rose up to 50%, cereals increased to 23% and the cost of sugar rose by 33%.*

Source: <https://9now.nine.com.au/today/grocery-prices-expected-to-skyrocket-in-2022/f1cdbe19-edbd-4ab2-ab83-afb828fc9861>

This is an example of a lack of:

- a. Economic sustainability.
- b. Saving money for later use.
- c. Budgeting skills.
- d. Financial sustainability.

#### Question 4

What is food security?

- a. It is another term used to describe food safety.
- b. It is about ensuring that everyone can afford the cost of food.
- c. It relates to people getting the food they need to survive.
- d. It is when people have enough food to meet their needs and preferences.

**Question 5**

*'One huge problem is that organic farming requires far more land than conventional farming to produce the same amount of food.'*

Source: Le Page, M., *If we only ate organic it would be an environmental disaster*, 2017, *New Scientist*, <https://www.newscientist.com/article/2153272-if-we-only-ate-organic-it-would-be-an-environmental-disaster/>.

This statement implies that:

- a. Producing organic food may decrease the incidence of food insecurity.
- b. Producing organic food may increase the incidence of food insecurity.
- c. Organic farmers can produce equal amounts of produce as conventional farmers using the same amount of land.
- d. Conventional farmers produce the same amount of food as organic farmers.

**Short Answer Questions (10 marks)**

**Question 1 (2 marks)**

a. State one characteristic of a food system that promotes food sovereignty. (1 mark)

b. State one characteristic of a food system that promotes food security. (1 mark)

**Question 2 (5 marks)**

a. Identify one environmental trend in the food system and discuss its impact on food security. (5 marks)

**Question 3 (3 marks)**

Every Tuesday afternoon at Wallaroo Primary School in Hastings, a group of 25 students and six parents come together to participate in a weekly Community Kitchen Program. The Community Kitchen Program provides a safe and fun place for them to come together to share knowledge and skills about cooking healthy food and budgeting. The program enables participants to connect and collaborate.

Outline this program's contribution to food security.

