

## CHAPTER 8

# Eggs and dairy products

### ACCESS PRIOR KNOWLEDGE

- 1 Explain the difference between cage eggs, barn eggs, free-range eggs and organic eggs.
- 2 Name the different types of dairy milk consumed around the world.
- 3 Describe how you can tell whether an egg is fresh without breaking it.
- 4 Everybody can boil an egg, can't they? Suggest the best way to boil an egg.
- 5 Outline why it is important to include dairy foods in your everyday diet.

## 8.1 Eggs: The basics

Eggs are one of the most versatile ingredients you can use in cooking. They are economical, and they come with their own fragile packaging and with different parts that can be used for different purposes, or you can use the whole lot together. They can be served very simply as boiled eggs, or as one of most admired and honoured dishes in cooking – a soufflé.



Some people believe that eating eggs could help treat acne, due to lowering the glycaemic load of the diet.



**Figure 8.1** The versatile egg helps you produce many dishes, from a simple boiled egg to an elegant chocolate soufflé.

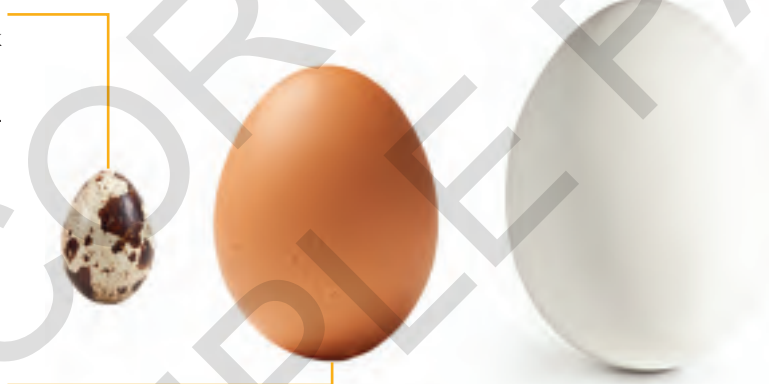


### 8.1 LET'S COLLABORATE

Have you ever tried an egg other than a hen's egg? If you have, describe what you ate, how it was served and how it tasted. If not, brainstorm when you might eat a different kind of egg, how it might be served and how it might taste.

Quail eggs are tiny compared with duck eggs. Often used in fine dining for their delicate appearance.

Hen eggs are the most commonly available and most frequently used egg. These eggs are usually sold in supermarkets.



Duck eggs are slightly larger than hen eggs. These can be substituted for hen eggs and are great for baking.

Remember that these are bigger, so use one duck egg for every two hen eggs.

**Figure 8.2** The eggs most commonly used in cooking.



### 8.2 LET'S COLLABORATE

Explain what the size of an egg represents. Suggest different uses for the different-sized eggs. Do you know which is the standard-sized egg used in cooking? Compare your answer with those of others in the class.

All hen eggs are classified according to size. In the supermarket, 50 g is the most common smallest size and 75 g is the largest. If a very small egg is needed, particularly as the feature of a special dish, **bantam** or **quail** eggs can be used.

**bantam** A breed of chicken that is small and produces much smaller eggs.

**quail** Small, plump, wild bird in the pheasant family; popular for roasting.



Some people think brown and white eggs are different; however, they are nutritionally and structurally the same.

## CREATE A SOLUTION

Your next-door neighbour is going on holiday and has brought you the contents of her fridge. One of the food items is a dozen eggs that are very close to their best-before date. Generate recipe ideas that use eggs and design a healthy breakfast, lunch or dinner solution to prevent the eggs being wasted. For a totally sustainable approach, come up with a way to utilise the egg shells as well, ensuring there is no landfill waste.

## History of eggs

Originally, the source of eggs was non-domesticated birds. Since the beginning of civilisation, eggs have been enjoyed as a food and a special symbol in festivities. Eggs are often a symbol of birth and fertility, such as an Easter egg.

Eggs were the protein that was affordable to even the poorest people in early times, but equally enjoyed by the rich. In Roman recipe books, eggs were a recognised part of lunch. The advantages of eggs were that they were available all year round and storage was not a problem.

An ancient Chinese delicacy, 100-year-old eggs, continues to be famous today. They are not really 100 years old; they just look old. They are raw duck eggs preserved in salt, lime and pine ash for 100 days. When they are ready to be eaten, they are firm, like a boiled egg, but a translucent blue and green colour. They have a strong flavour with a slightly fishy taste.



**Figure 8.3** The original Easter egg was a coloured and decorated hard-boiled egg, given as a gift at Easter time. The giving of coloured, decorated real eggs continues to be a tradition at Greek Easter – this egg is decorated with a classical powder blue and gold motif.



**Figure 8.4** A 100-year-old egg that is really only 100 days old



**Figure 8.5** Eggs come in many shapes. These are the world's most expensive eggs: caviar, or fish eggs.

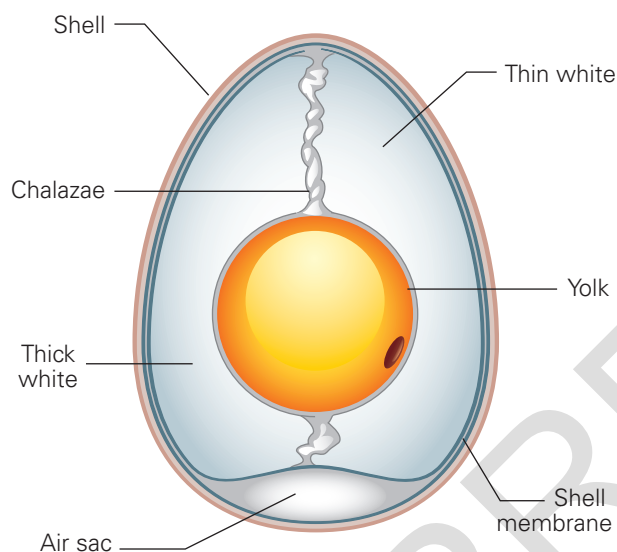
**Tasty Trivia**

An eggshell can contain as many as 17 000 tiny pores on its surface.

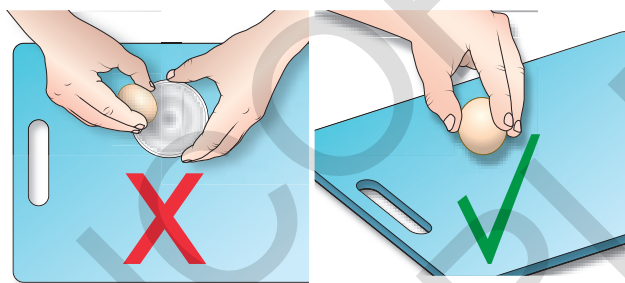


## 8.2 Structure of eggs

Have you ever thought of the structure of the egg representing the four elements of the Earth? Ancient philosophers believed the shell represented earth, the air was the air under the shell at the round end of the yolk, the yolk was fire and the white was water.



**Figure 8.6** Structure of an egg.



**Figure 8.7** How to crack an egg correctly. A sharp edge may drive shell fragments and germs deep into the egg.

## 8.3 ACTIVITY

### Which egg eggsactly (exactly)?

Oh no! Someone has mixed up your hard-boiled egg with your fresh eggs in the fridge. How can you tell the difference between a cooked egg and a raw egg?

- 1 Design an experiment to determine how you can tell which egg is raw and which egg is cooked. No eggs can be cracked or broken; they must remain fully intact.
- 2 Conduct your experiment. You will need one raw and one boiled egg.
- 3 Have you been able to determine which egg is which?
- 4 Can you explain this using your egg structure knowledge?
- 5 Discuss your findings as a class and decide the best way to identify your eggs.

### Tasty Trivia

If you have leftover raw egg whites, you can freeze them to use later. Egg yolks are harder to freeze due to the gelatinous nature of the yolk, which makes them thicken when frozen.

#### Cage eggs

Eggs are produced by hens kept in small cages (standing space with a minimum 450 cm square to walk around in). Until relatively recently, the most commonly purchased egg in the supermarket.

#### Barn-laid eggs

Eggs laid by hens that roam free in large barns. There can be as many as 1000 hens in a barn.

#### Classification of eggs

#### Free-range eggs

Eggs produced from hens that can roam free in a field or paddock and can scratch in grass. Sales are increasing rapidly due to consumer demand.

#### Organic eggs

Eggs produced without the use of chemicals, both in the chicken and the soil, to reduce toxins on consumption and also to reduce harmful impact in the environment.

**Figure 8.8** There are a number of different systems or methods used to produce eggs.



## 8.4 ACTIVITY

### Ethical eggs

For many, egg production is an issue of **ethics**. Complete a research investigation to understand more about the issue of caged eggs.

**ethics** The science of how we should live to attempt to live. Behaviours and decisions that reflect right or wrong.

- 1 Identify the range of eggs available for consumers to purchase.
- 2 Woolworths has made a commitment to remove battery hen eggs from its shelves by 2018. Explain why the company has made this decision.
- 3 Describe the impacts of this decision for:
  - a consumers
  - b Woolworths
  - c egg producers.
- 4 There are other ethical production issues being addressed by supermarkets. State what two of these might be.
- 5 Woolworths isn't the only supermarket making changes to food products sold. Suggest why other supermarkets are also making these changes.
- 6 Research the conditions of a caged hen. Describe these conditions.
- 7 Explain how this information makes you feel.
- 8 Discuss why eggs from caged hens are an ethical food issue.



## 8.5 INVESTIGATE IT

### Josh's Rainbow Eggs

Visit the Josh's Rainbow Eggs website to discover more about this young farmer who was inspired to produce his own ethical eggs. You may have seen these eggs in the supermarket, or even found them in your fridge at home!

Use the information on the website to answer the following questions.

- 1 State where in Australia Josh's eggs are produced.
- 2 How old was Josh when he started selling eggs?
- 3 Describe how Josh's hens are raised.
- 4 Outline the five behaviours Josh believes make a chicken happy.
- 5 Define the term 'forage'.
- 6 Provide the justification for Josh's decision to call his eggs 'ethical eggs'.
- 7 Do you agree with Josh and his egg philosophy? Explain your response.



**Figure 8.9** Which eggs are in your fridge at home?

## Quality considerations

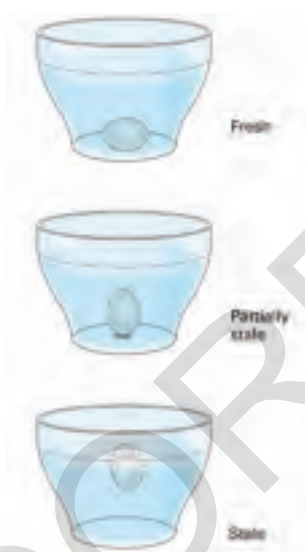
Eggs are often in their own package that you cannot see through, so it can be difficult to tell whether they are fresh or stale. It is a good idea to open the package gently to see whether any of the eggs are damaged before you buy them.



### 8.6 ACTIVITY

#### Testing eggs

When you are at home, the easiest test for selecting good eggs is to place them in a clear bowl or jug.



**Figure 8.10** How to test the freshness of eggs.

- 1 Identify the part of the structure of the egg that has changed to create this difference.
- 2 The shell of the egg is hard. Explain the structure of the shell that allows air to pass through.
- 3 Safely store a raw egg for one month and then retest the egg. Describe the differences between each test. (You may like to use a diagram with annotations.)

Eggs are best stored in the fridge in their egg carton. Cartons are designed to sit the egg with the point facing downwards, keeping the yolk in the centre of the egg. But remember, when cooking with eggs, use them at room temperature for the best results.

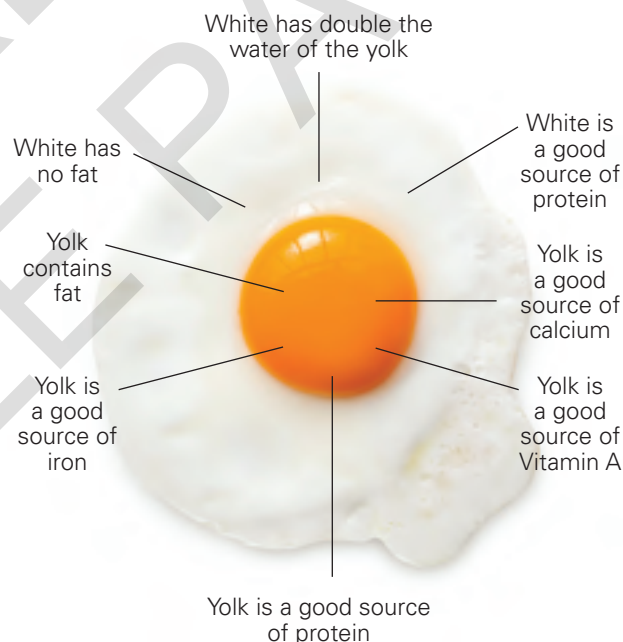
## 8.3 Nutritional value of eggs: Chemical properties

Eggs, along with milk, are almost the perfect food; indeed, they are both often referred to as 'super foods' because they contain many nutrients in one complete package. The only nutrient not in either of these foods is dietary fibre. Eggs have all the nutrients necessary for a chick to develop – in particular, high protein content.

The nutritional content of the yolk and that of the white are slightly different, and this means they can be used differently in cooking and that they cook at a different rate.

**Tasty Trivia**

Eggs have the highest nutritional quality protein of all food sources.



**Figure 8.11** Nutrient differences in the white and the yolk of eggs.



### 8.7 ACTIVITY

#### White vs yolk

Complete a Venn diagram to compare the nutrient differences between the white and the yolk of eggs. Try and think of all the differences and similarities, such as chemical, physical, sensory and functional.

## REFLECT ON LEARNING

- 1 List four different types of eggs available for human consumption.
- 2 State two nutrient (chemical) property differences between the white and yolk of an egg.
- 3 Describe how to test whether your egg is old without breaking the shell.
- 4 Outline two physical (colour, shape or size) property differences between the white and yolk of an egg.
- 5 Explain the differences between the different classifications of eggs.

## 8.4 Cooking with eggs

During the cooking process, eggs change significantly because of their high protein content. As shown in Figure 8.11 on p.197, the yolk and white have a slightly different nutrient content, which influences how they cook. This is most noticeable when you fry an egg; the white sets before the yolk does.

The white has a higher protein content, so cooks at a lower temperature (about 65°C), cooks more quickly and will toughen very quickly when overcooked. The yolk contains fat and iron, so sets at a slightly higher temperature (about 70°C). Note that this is well below boiling point.

The protein content makes eggs useful in cooking, but it also means it is necessary to understand what changes occur because the protein in eggs can trap air and also sets when heated. This means they can be used for lots of different purposes in cooking.

### Tasty Trivia

The greatest height from which an egg has been dropped and remained intact is 213 m. This was from a helicopter onto a golf course, where the egg landed in a perpendicular position on a steep slope.



**Figure 8.12** In the soft-boiled egg (top), the white has set and the yolk is still runny. In the hard-boiled egg (bottom), both the white and the yolk have set.

## 8.8 LET'S COLLABORATE

List the many different ways eggs can be cooked, both in their raw form and also mixed with other ingredients. See whether you can generate a list of 10 or more methods.



# Chocolate soufflé



## Main tools and equipment

Measuring spoons, measuring cup, ramekins, electric beater, metal spoon, medium bowl, pastry brush

## Production skills

Melting, beating, greasing

## Cooking processes

Baking

## Ingredients

				
Butter for greasing	2 teaspoons caster sugar, extra	30 g butter	50 g cooking chocolate	1 egg, separated
				
Pinch salt	2 tablespoons caster sugar	1 tablespoon plain flour	icing sugar for dusting	

## SERVES 2



Production time: 20 minutes



Cooking time: 15–20 minutes



Serving and presentation time: 3 minutes



Total time: 38–43 minutes

## Method

- 1 Prepare two ramekins by brushing the butter across the inside bottom of each ramekin and up the sides. Sprinkle each ramekin with the extra caster sugar. Tip out any excess sugar.
- 2 Preheat oven to 180°C. Place a baking tray into the oven to warm up.
- 3 Melt the butter and chocolate in the microwave. This should only take a minute.
- 4 Beat the egg white and pinch of salt until soft peaks form. Sprinkle over the caster sugar and continue beating until firm peaks form.
- 5 Stir egg yolk and flour into chocolate mixture. Mix well to combine.





# Chocolate soufflé – continued

- 6 Fold the egg white into the mixture until just combined. Try to be as gentle as possible so the white holds its air bubbles.
- 7 Divide the mixture between the two ramekins.
- 8 Take the baking tray out of the oven and put it onto the stove top. Place ramekins onto the warm tray and then bake for 15–20 minutes or until risen.
- 9 Dust with icing sugar to serve.

## Evaluating

- 1 Describe how to prepare the ramekin for your soufflé.
- 2 Suggest why it is important to ensure you have prepared this correctly.

- 3 Explain the increase in egg white volume.
- 4 Describe what would happen if you mixed your soufflé rather than folded your mixture.
- 5 Describe the sensory properties of your soufflé.
- 6 Name three other ingredients you could add or substitute in this recipe.
- 7 Identify the process that is responsible for thickening your roux.
- 8 Describe how you could serve this product to make it a healthy evening meal.
- 9 Identify the most challenging component of this recipe. Discuss your success in this area and suggest possible reasons for this.

## Uses of eggs in cooking



- Eggs set or coagulate when heated, so are good for omelettes and quiches.



- Eggs in liquid thicken when heated, which is good for sauces and custards.



- Egg white traps air when beaten and sets when heated, holding the shape; it is therefore good for sponge cakes, meringues and soufflés.



- Eggs hold ingredients together, which is good for hamburgers.



- Eggs coat foods so breadcrumbs will stick, which is good for crumbed fried fish.



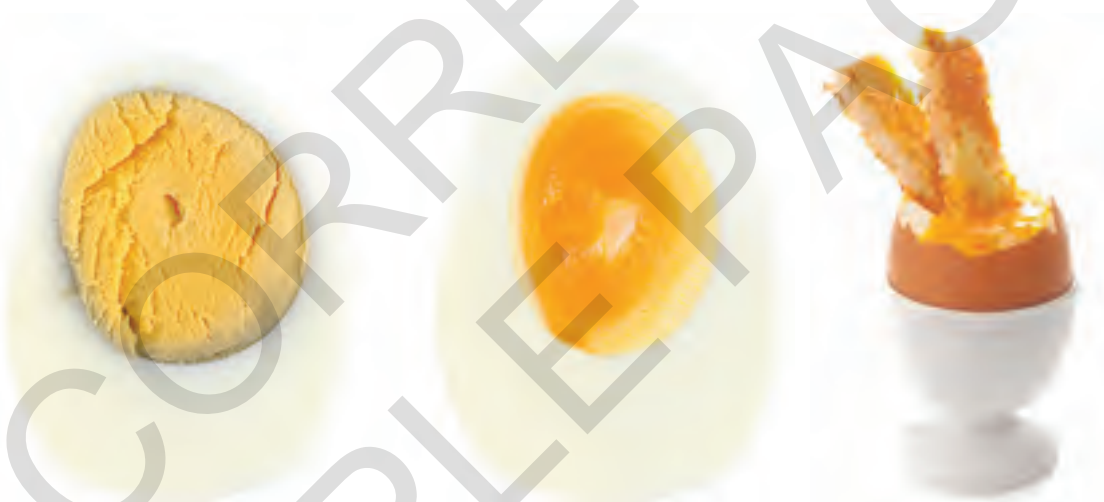
## 8.9 ACTIVITY

### What is the best way to boil an egg?

Work in a group of four. Each person has a 50 g egg. Each person takes a number between 1 and 4, and boils their egg according to the instruction for their number in the table below. The eggs can be used as a garnish for the Nasi Goreng dish on p.203 or as part of a salad. If a thermometer is available for each group, it will help to ensure more reliable results. When the eggs are completely cool, remove their shells and cut them in half lengthwise. Share your results with your group members. Make the following observations and record your results:

- 1 State which egg/s are easiest to shell.
- 2 A common sight in hard-boiled eggs is a greenish-black ring around the yolk. This is an iron sulphide build-up caused by the iron in the yolk reacting with sulphur in the white. The egg can still be eaten, but it affects the appearance of the eggs. Identify the eggs that have this ring.
- 3 Identify the eggs with the tougher white and the drier yolk. You may wish to taste a tiny bit to check the **mouthfeel**.
- 4 From your observations, suggest which is the best way to cook a hard-boiled egg. Use your observations to support your answer.

**mouthfeel** How food or drink feels in the mouth – the sensory evaluation of impressions on the palate.



Cooking instructions for a hard-boiled egg	Instructions once cooked	Cooling instructions
<b>Person 1:</b> Place the egg in cold water and bring to the boil and reduce heat to a very gentle simmer for seven minutes.	Crack the shell gently when cooked.	Cool in cold water.
<b>Person 2:</b> Place the egg in cold water and bring to the boil and reduce heat to a very gentle simmer for seven minutes.	Do not crack the shell when cooked.	Leave in the air to cool.
<b>Person 3:</b> Place the egg in cold water and bring to the boil and boil rapidly for seven minutes.	Crack the shell gently when cooked.	Cool in cold water.
<b>Person 4:</b> Place the egg in cold water and bring to the boil and boil rapidly for seven minutes.	Do not crack the shell when cooked.	Leave in the air to cool.



## 8.9 ACTIVITY continued

- 5 Evaluate the effectiveness of your group in completing this task. In your books, complete the sentence for each of the following:
  - a Our group produced ... work. (Comment on the quality.)
  - b All members of our group contributed ... (Comment on how well all members of the group contributed.)
  - c Our group managed the time for the task ... (Comment on how well your group managed the time.)
  - d Our group focused on the task ... (Comment on how well your group remained focused on the task.)
  - e Our group worked ... together. (Comment on how well the group worked together.)

Egg is often used as a garnish for Nasi Goreng, a traditional Indonesian rice dish. The egg can be fried, boiled or a sliced omelette. (You could use the plain omelette recipe later in the chapter.) The egg is placed

on top of the rice, where it is not only a garnish but it also adds nutrients to the dish and is an ideal quick, economical, vegetarian lunch.





# Nasi Goreng



## Main tools and equipment

Wok or large frying pan, measuring spoons, measuring cup, wooden spoon, chef's knife, chopping board.

## Production skills

Measuring, slicing

## Cooking processes

Stir-frying

## SERVES 2



Preparation time: 10 minutes



Cooking time: 10 minutes



Serving and presentation time: 7 minutes



Total time: 27 minutes

## Ingredients

					
1 tablespoon peanut oil	2 spring onions, finely sliced	1 clove garlic, finely chopped	1 tablespoon tomato sauce	1 tablespoon soy sauce	½ teaspoon sambal oelek or chilli sauce
					
¼ cup frozen peas	5 cherry tomatoes, cut in half	½ cup bean sprouts	1½ cups cooked rice	1 teaspoon mint leaves, chopped	
					
1 teaspoon parsley or coriander leaves, chopped	4 iceberg lettuce leaves, shredded	2 hard-boiled eggs, sliced			

## Method

- 1 Heat the oil in a wok or large frying pan over a medium heat.
- 2 When hot, add the spring onions and garlic, and fry for 30 seconds.
- 3 Reduce the heat to medium, then add the tomato sauce, soy sauce and sambal oelek (or chilli sauce), peas, tomatoes and bean sprouts.



# Nasi Goreng – continued

- 4 Stir-fry gently for 2 minutes or until the peas soften slightly. Do not overcook the tomatoes.
- 5 With your hands, scatter the rice over the top, breaking up any clumps.
- 6 Stir-fry until hot and well combined. Add the fresh herbs.
- 7 Serve with the shredded lettuce to the side and the boiled eggs as a garnish.
- 3 Suggest an additional ingredient for non-vegetarians. Remember the other requirements for the lunch.
- 4 List two additional vegetables that could be included. Describe the properties that each vegetable will add to the dish. How could you make an omelette to feed a family of four from one egg? With an ostrich egg – it is eight to 10 times larger than a chicken egg.

## Evaluating

- 1 Describe two properties that egg adds to this dish. Refer back to p.40 to review what 'properties' means.
- 2 Justify whether Nasi Goreng is suitable for a quick vegetarian lunch.

### Tasty Trivia

An ostrich egg is the equivalent of about 24 chicken eggs. An emu egg is about half that size.



## DESIGN BRIEF: OMELETTES

An omelette is a quick, tasty meal that is a traditional dish in many countries. Omelettes can be savoury or sweet. The main ingredient is beaten egg, which is quickly and lightly fried. It can be eaten for breakfast, a light lunch or as a starter for a meal or a snack.

Each country has a slight variation, usually with regard to the filling, but omelettes can also vary in the way they are cooked. For example, a plain omelette is folded and a Spanish omelette is flat. A Swiss omelette is a variation that uses cheese.

You are planning to have an omelette for lunch, as it is economical, but you want a variation as you are having friends join you. You want the omelette to be filling and tasty.

The following websites (which can all be accessed via the link at [www.cambridge.edu.au/foodyou1weblinks](http://www.cambridge.edu.au/foodyou1weblinks)) – Australian Eggs, Farm Pride and Pace Farm – have recipe sections that you can use to investigate different types of omelettes or frittatas to help you get started with your omelette design.





## 8.10 ACTIVITY

### Design your own omelette

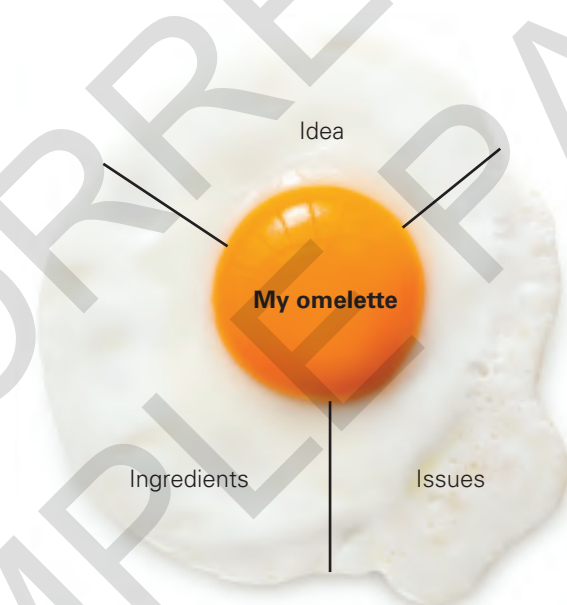
#### Investigating

- 1 Prepare three criteria for success using the information in the design brief.
- 2 A plain omelette is one of the fastest meals you can cook **from scratch**. Omelettes cook quickly, so any filling must also cook quickly. Suggest three different fillings for an omelette for breakfast or lunch.
- 3 Different fillings suit different occasions. Generate three ideas for fillings suitable for a lunch omelette.
- 4 Investigate the other main ingredient in a Spanish omelette.
- 5 Frittatas are like Spanish omelettes. List three different flavouring ideas for frittatas.

**from scratch** Prepared from fresh ingredients, without the use of anything pre-cooked or packaged.

#### Generating

Design your own omelette. Draw an egg like the one illustrated below. Write your idea, suggest what the ingredients could be, justify your choice and include possible issues. For example, if you select tomato, it would need to be firm or the omelette will be watery.



#### Planning and managing

Create a production plan as a flow diagram for your omelette production.

Create a design sketch to show how you will present your omelette.



# Plain omelette

## Main tools and equipment

Fork, measuring spoons, frying pan

## Production skills

Measuring, beating

## Cooking processes

Frying

## Ingredients

				
2 eggs	1 tablespoon milk	Salt and pepper	1 teaspoon butter	Small sprig parsley (garnish)

## Method

- 1 Lightly beat the egg and milk, add the salt and pepper.
- 2 Melt the butter in an omelette pan or small non-stick frying pan over a moderate heat.
- 3 Pour the egg mixture into the pan and gently stir, moving the cooked mixture away from the edge of the pan and allowing the raw mixture to flow to the edge while rolling the pan. Only do this 3 or 4 times.
- 4 Allow the mixture to set. If flavourings are being used, these can be placed on one half of the omelette. Fold the omelette over in half.
- 5 Slide the omelette onto a plate. Garnish with parsley and serve immediately.
- 6 The omelette can be flavoured with 2 tablespoons of tasty cheese, 2 slices of chopped ham or 1 tablespoon of fresh herbs such as parsley, basil and/or thyme. A traditional Japanese-style omelette includes fried rice, like Nasi Goreng, as filling and chicken and seafood can be added. It is often served with tomato sauce over the top.

## SERVES 1



Preparation time: 3 minutes



Cooking time: 3 minutes

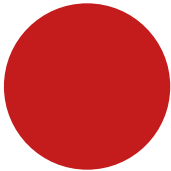




Total time: 6 minutes



## Evaluating

- 1 Evaluate your omelette by answering your criteria for success questions.
- 2 Reflect on your project-management skills. Complete a self-assessment of work in the investigation and production of the omelette by copying and completing the traffic lights graphic organiser shown in Figure 8.13.

		
<p>My progress and learning stopped when ...</p> <p>To avoid this again I need to ...</p>	<p>I had to think before proceeding to ... because ...</p>	<p>The part I was most comfortable with and could continue was ... because ...</p>

**Figure 8.13** How well did this investigation go?

## REFLECT ON LEARNING

- 1 Discuss the reasons why there is a difference in the cooking time of the egg white compared with the egg yolk.
- 2 Describe the best way to boil an egg.
- 3 An egg is often called a 'super food'. Explain why.
- 4 Describe two uses of eggs in cooking and give an example of a food for each use.
- 5 Eggs are a perishable food item. Define this term and explain the best way to store perishable items.



## 8.5 Milk: The basics

**micro-organism** A tiny single-celled organism that is only visible under a microscope. Three types connected with food are yeast, moulds and bacteria.

**pasteurisation** A process in which milk is heated to a temperature just below boiling point and held at that temperature to kill micro-organisms. The milk is not boiled as this would also destroy nutrients.

This destroys any micro-organisms, but retains the nutrients.

In other countries, a range of animals such as buffalo, camels, mares, reindeer, ewes and yaks are a source of milk. Milk can be made into an extensive range of products that have all become a part of daily eating patterns. These are **butter**, cheese and yoghurt.

**butter** A dairy product that is produced by churning milk or cream until the fat solidifies and forms a spread.

Milk is the one food newborn mammals need to live and thrive for the first few months of their lives. It is white in colour and is the secretion from the mammary glands of all mammals after a baby is born. In Australia, cows are the main source of commercial milk, with goats also supplying milk to a lesser extent. Milk contains many naturally occurring **micro-organisms**, so in Australia all milk must undergo heat treatment, called **pasteurisation**, before it is sold.



**Figure 8.14** The purpose of milk is to feed a newborn mammal.

### Tasty Trivia

In Kazakhstan, the popular milk drink, called *koumiss*, is fermented horse milk. Refrigeration is not available and the local Kazakhs are used to the taste and love it, but to most Western tastes it is really unpleasant.



Soy milk



Rice milk



Almond milk

**Figure 8.15** These products are called 'milk', but they are not really milk according to the official Australian standards for milk, which state that it must come from an animal. These products contain no lactose, so they are suitable for people who are lactose intolerant.



## History of milk

Since animals have become domesticated, they have become a source of milk, and other dairy products evolved from the milk.

For **nomadic** people in many African countries and northern China, camels and yaks were ideal animals with

**nomadic** Describes people of no fixed abode who move according to the seasons from place to place in search of food and water.

which to travel because they not only supplied milk, which could be drunk, churned into butter and fermented for yoghurt, but also provided meat when needed.

The skin became clothing and lining for the walls of their houses. The animals were like a moving mini-department store.

Milk is now usually purchased in cartons and plastic containers from a shop, but up until the late 1960s it could be delivered daily to your door. You supplied empty glass bottles that the milkman replaced with full ones. The milk was delivered daily because not everyone had refrigerators, but as they became common in households the need for a daily delivery decreased.



## Primary production: Milk

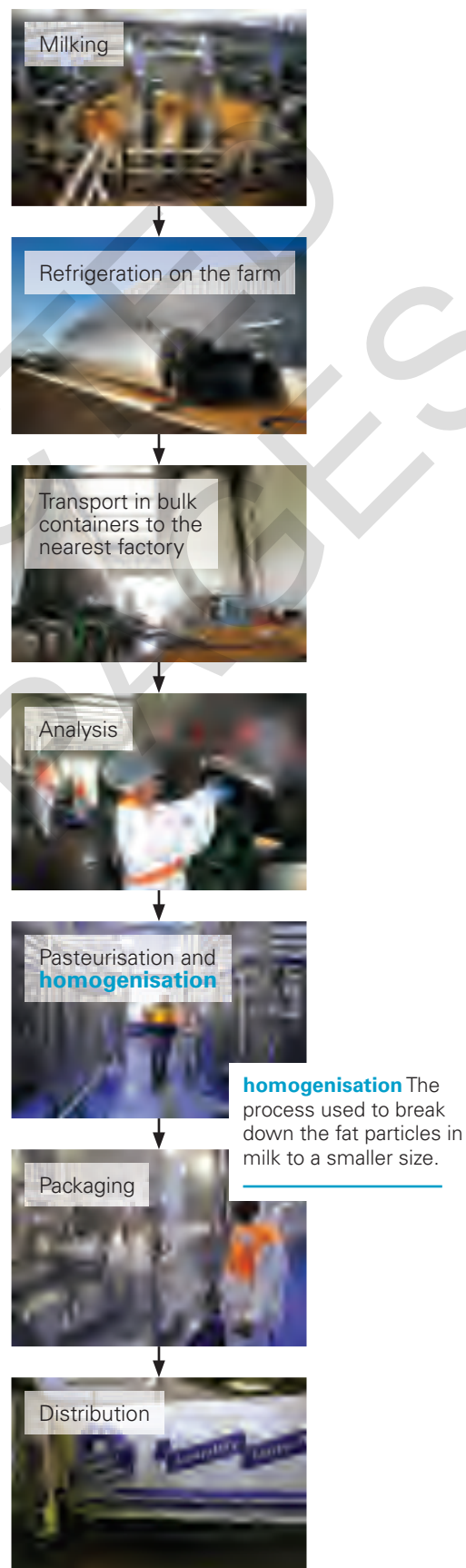


Figure 8.16 Milk production process

## Tasty Trivia

In the 1960s, primary-school children were supplied with a small bottle of milk every day for morning tea. The milk was provided by the government as part of a public health scheme because of concerns that children in many households were not receiving their recommended daily dose of calcium. Although the scheme was well intentioned, the milk often sat unrefrigerated in the playground for several hours, so was warm and not very pleasant to drink.

### 8.11 INVESTIGATE IT

There are many varieties of milk available to purchase. These milks, such as no-fat or reduced-fat milk, all begin as full-fat milk.

- 1 Investigate the processing that occurs when producing no-fat or reduced-fat milk.
- 2 Design a flow chart to show the steps in milk processing, from milking the cow to the milk being available in the supermarket.

## Types and properties of milk

Dairy milk has gone from being available only as the traditional full-cream variety to many different product types. Not only are there several varieties, but also several different ways of buying milk:

- powdered milk
- condensed milk
- **ultra heat treated (UHT)** long-life milk
- evaporated milk.

**ultra heat treated (UHT)** Milk that is heated to a very high temperature for a short time, which means that it does not need to be refrigerated and has a long shelf life.

Why would customers buy these products rather than fresh milk?

### 8.12 LET'S COLLABORATE

Do you drink milk? Name the type of milk you drink. How many other varieties of liquid milk can you think of? Try to name at least 10, then compare your results with those of the person next to you.

#### Ways to purchase milk

##### Powdered milk



A dried form of milk made by evaporating milk until it becomes a powder. It then does not require refrigeration and is light and easy to transport. Water is added to the powder to turn it back into drinkable milk.

##### Condensed milk in a can or tube



Canned or tubed milk made by evaporating some of the water and adding sugar, making it very thick and sweet.

##### UHT milk (ultra heat-treated)



Milk that is heated to a very high temperature for a short time, which means that it does not need to be refrigerated and has a long shelf life.

##### Evaporated milk



Canned milk made by removing some of the water to concentrate the flavour. In many tropical countries, this is the favoured type of milk. It is easily transported and stored.

**Figure 8.17** These four types of milk will all be available at your local supermarket.

## Quality considerations



**Figure 8.18** Things to consider when purchasing milk



### 8.13 ACTIVITY

#### Milk tasting

Compare the physical and sensory properties of different varieties of milk by copying and completing this table and then answering the following questions.

Milk	Appearance	Aroma	Taste	Mouthfeel
Full-cream milk				
No-fat milk				
Reduced-fat milk				
Pauls Smarter White Milk				
Soy milk				
Rice milk				
Almond milk				
Lactose-free milk				
Goat's milk				
Organic milk				
A2 milk				



### 8.14 INVESTIGATE IT

#### What is the standard?

The sale of 'raw' (unpasteurised) milk for human consumption is illegal in Australia.

- Visit the Food Standards Code on the FSANZ website and find the definition of milk.
- See whether you can also find out the differences between 'milk' and a 'milk drink', or 'milk beverage'. List three examples in your response.

## 8.6 Nutritional value of milk: Chemical properties

Like eggs, milk is also an almost perfect food; it is called a 'super food' because of the number of nutrients that can sustain life and growth, the most important of these being protein and calcium. Dietary fibre and iron are two significant nutrients that are lacking.

Life starts with milk being a critical food, and the importance of milk or milk-product consumption continues for the rest of our lives. Milk is a major source of protein, which is essential for body growth, as well as of calcium, which is also essential for bone growth and maintenance.

### 8.15 INVESTIGATE IT

Lactose is the main sugar found in milk. It is broken down and digested in the body by an enzyme called lactase. People who are **lactose intolerant** are unable to digest the lactose found in milk and dairy products so they need to consume alternative similar products. They are the biggest consumers of soy products, such as milk, yoghurt and ice-cream.

- 1 Visit the So Good website to discover more about lactose-free products.
- 2 Create a poster that displays lactose-free alternatives for people who are lactose intolerant.

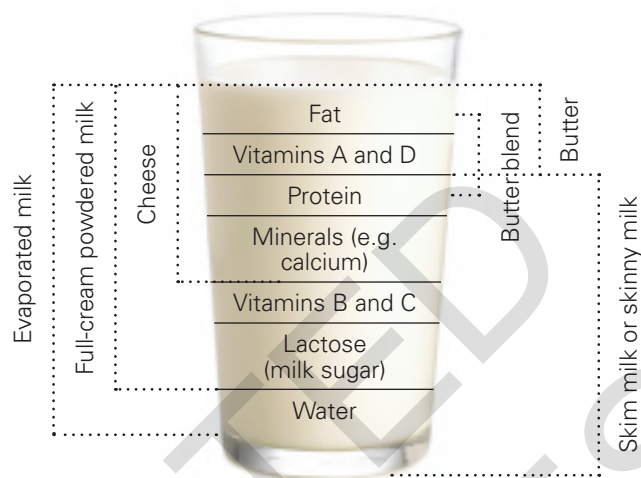
**lactose intolerant** Unable to digest lactose (milk sugar), such as that found in milk and cheese.

### 8.16 LET'S COLLABORATE

Cream is not on the diagram in Figure 8.17 on p.210. Using the information shown, what nutrient do you think it contains? Is this an 'everyday' or a 'sometimes' food? Discuss with a partner.

**Tasty Trivia**

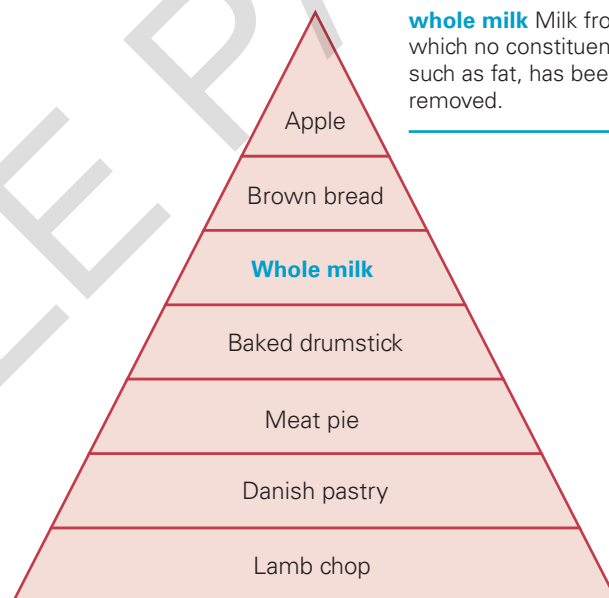
How else can you get one serve of dairy if you do not like milk? A 'serve' of dairy is equal to a 250 ml glass of milk, a 200 g tub of yoghurt or 40 g (2 slices) of cheese.



**Figure 8.19** Nutrients in full-cream fresh milk and other milk products

Young children up to the age of two should have full-fat milk because it is an excellent source of vitamin A, which is important for brain development. After the age of two, low-fat milks are acceptable. Weight-conscious people can choose low-fat varieties, although many other popular foods have a much higher fat content than milk.

**whole milk** Milk from which no constituent, such as fat, has been removed.



**Figure 8.20** Don't stop drinking milk because you think you will put on weight. Compare the amount of fat per 100 g of these foods.

### 8.17 LET'S COLLABORATE

Which stage of the lifespan requires the greatest amount of milk? Explain why and discuss with your partner.





## 8.18 ACTIVITY

### Which milk is best?

Copy this table into your workbook and write your milk varieties in the left-hand column. Compare the nutrient content of the different milks.

Milk variety	Protein content	Calcium content	Sugar	Fat content	Any added nutrient such as iron
Full-cream milk					
No-fat milk					
Reduced-fat milk					
Pauls Smarter White Milk					
Soy milk					
Rice milk					
Almond milk					
Lactose-free milk					
Goat's milk					
Organic milk					
A2 milk					

- Rank each milk according to its protein content, calcium content, sugar content and fat content, as well as added nutrients (such as iron).
- Use a drawing of a ladder to rank the milks. Put the milk with the most of each nutrient at the top of the ladder and the lowest at the bottom of the ladder.
- Identify the target market for each of the milks tasted.
- Using the information from this chapter, suggest the type of milk or milks that would be best if you have the following requirements (justify your choice):
  - You are vegan.
  - You would like to consume no-fat milk.
  - You are a 15-year-old and you want to make sure your bones develop as well as possible.
  - You are lactose intolerant.
  - Your grandpa likes the taste of real milk.
  - You are making a milk drink for your two-year-old brother.
  - You are calcium deficient.



## CREATE A SOLUTION

Your younger sister hates milk and fights with your parents every day when they pour her milk to drink. They know it is important for her to include milk and dairy every day to ensure she is consuming a balanced and nutritious diet. You need to design a high-calcium drink featuring milk for your sister. Your drink still needs to be healthy and nutritious, but it should not taste like milk so your sister will drink it without a fuss. It also needs to be quick and easy to prepare so she doesn't see you making it with milk.

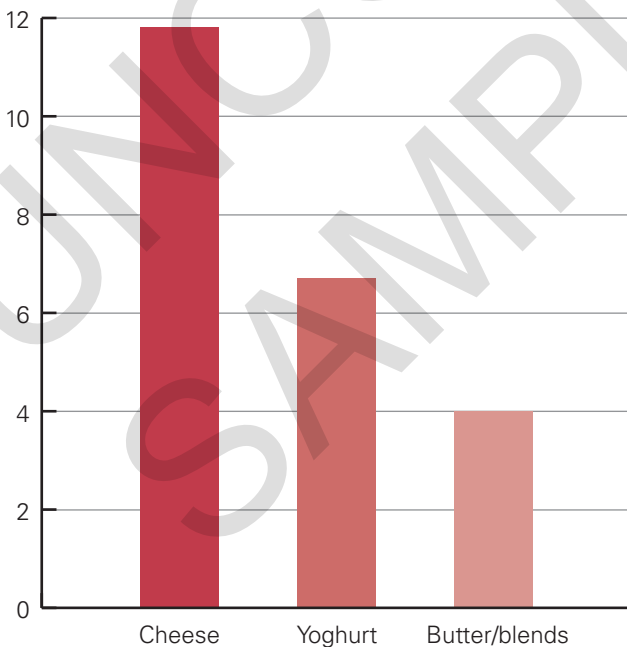
## Milk products

There are many varieties of milk products. These are foods made from milk and are available to buy to help vary your diet and act as milk substitutes. Milk products on the market are also referred to as dairy products.

Figure 8.21 displays the three most popular milk products. Other well-known milk products are different

**buttermilk** The liquid that remains after butter is made from cream. It has a tangy, almost sour, taste and is used to make muffins, pancakes and some breads.

types of cream and ice-cream, and dairy desserts like custard. All the main products are available in low-fat, no-fat, low-salt and high-calcium versions. A less well-known milk product is **buttermilk**.



**Figure 8.21** This graph shows the most popular milk products consumed per person in Australia.

## REFLECT ON LEARNING

- 1 Name the source of the majority of milk consumed in Australia.
- 2 Describe two important steps in the processing of milk.
- 3 Outline why it is important for children to have full-fat milk, but many adults choose to consume reduced-fat or no-fat milk.
- 4 You want to store milk in a cupboard for emergency use. Suggest three types of milk that make this possible and list the advantages and disadvantages of each milk.
- 5 Identify the type of milk that is a suitable choice for an elderly person who needs to maintain strength in their bones. Justify your response.



# Apple pikelets



UNITED KINGDOM

## Main tools and equipment

Whisk, medium bowl, grater, frying pan, egg lift, measuring cup, measuring spoons

## Production skills

Measuring, melting, sifting, whisking, coring, grating

## Cooking processes

Frying

## Ingredients

			
1 egg, beaten	250 ml buttermilk	1 tablespoon caster sugar	2/3 cup (100 g) plain flour
			
1/2 teaspoon baking powder	15 g butter, melted	1/2 small Granny Smith apple, cored and grated	Extra butter

## Method

- 1 Whisk the egg, buttermilk and sugar to combine.
- 2 In a medium bowl, sift the flour and baking powder. Make a well in the centre.
- 3 Pour into well the egg mixture, melted butter and grated apple. Mix until well combined with no lumps.
- 4 Heat a frying pan with a little bit of the extra butter to grease the pan.
- 5 When hot, pour 1/4 cup of the batter into the pan. When bubbles appear on the surface of your pikelets and it is golden brown underneath, turn over using an egg lift. Cook until brown.
- 6 Remove from pan.
- 7 Add another small amount of butter and, when melted, repeat steps 5 and 6.

## SERVES 2



Preparation time: 10 minutes



Cooking time: 10–15 minutes



Serving and presentation time: 3 minutes



Total time: 23–28 minutes



## CREATE A SOLUTION

Your pikelets are ready to eat, but there is no garnish or topping included in the recipe. Design a garnish or topping to complement your apple pikelets.

### 8.19 LET'S COLLABORATE

Since the mid-1980s until the last four years, the average annual milk consumption has been around 100 litres per person. With a partner, suggest why we have not seen dramatic increases in milk consumption, even though science and nutrition knowledge provide more and more evidence that we need milk for bone growth. What changes do you predict for the future?

### 8.20 ACTIVITY

What dairy products do you consume?

- 1 Using Survey Monkey, design a survey to gather data on the types of milk and milk products households buy. Set up survey questions to get the answers you will need to complete the task. Each group could survey a different product and the class could then compile the results. If households buy more than one variety of each product, record all varieties.
- 2 Graph the results using a bar graph via an ICT graphing program.
- 3 Write a conclusion about the most popular variety of milk and the most popular milk products consumed in your class.
- 4 Compare the proportions of milk, cheese, yoghurt and butter consumed by the Australian population and your class. Suggest reasons for the similarities and/or differences.



## Check out cheese

**starter** A culture that starts the process of coagulation of the protein.

**rennet** Made from rennin, an enzyme used for clotting milk. It occurs naturally in the stomach lining of mammals. It coagulates or clots the protein in milk, making it easier to digest.

Cheese is made from the coagulated milk of cows, goats, buffalo and sheep. The milk needs a **starter** such as **rennet** to start the coagulation process. Like eggs, because cheese contains a lot of protein it will toughen and go rubbery if over-cooked. As there are many different cheeses produced in different ways, you need to select the best type for food preparation. For example,

have you noticed that when you have a good pizza, the cheese has melted and it stretches into very thin strands? This is often a soft cheese called mozzarella. A very hard cheese such as parmesan is best for grating on top of a lasagne or for flavouring cheese sauces.

**Tasty Trivia**

The early Greeks used fig tree branches as rennet to start the coagulation of the milk.



Cheese is made by adding rennet to milk. This sets the milk solids, and **curds** and **whey** form. The curds

**curds** The solids in milk, formed when the protein has coagulated after the addition of rennet or lactic acid.

**whey** The liquid in milk, left when cheese is made.

are drained and salt is added, resulting in soft, fresh cheese. The cheese is then pressed; the amount of pressing determines whether you get a soft cheese or a hard cheese. A hard cheese has been firmly pressed over a period of time and then left to mature to

develop flavour and texture. Have you ever tried blue-vein cheese? Some cheeses such as blue-vein varieties are injected with harmless moulds that spread throughout the cheese, giving it a sharp flavour.

You could conduct a cheese tasting of one of each of the cheeses mentioned in Figure 8.22. This is dealt with

## DESIGN THINKING

Have you ever eaten junket (like Little Miss Muffet's curds and whey)? It is very easy to make. Investigate what ingredients you will need to make junket. Produce your junket and enjoy!

### Tasty Trivia

It takes about 10 litres of milk to make 1 kilogram of cheese.

in more detail in the extended response activity at the end of this chapter.

Type of cheese	
<p><b>Fresh cheese:</b> unripened curd. Eaten while fresh. Examples are cottage cheese, ricotta, mozzarella, feta.</p> 	<p><b>Soft cheeses:</b> briefly ripened, usually have a high percentage of fat and moisture. Spread easily. Examples are brie, camembert, feta.</p> 
<p><b>Semi-hard cheeses:</b> matured with less moisture. Can be grated and melt easily. Easy to cut. Examples are cheddar, edam, gouda.</p> 	<p><b>Hard cheeses:</b> matured for a long time, have a low moisture content and a higher fat content. Good for grating and melt easily. Examples are parmesan, pecorino.</p> 
<p><b>Blue and smoked cheeses:</b> have a strong flavour; they may be soft, semi-hard or hard. Examples are Castello Blue, stilton, gorgonzola.</p> 	

Figure 8.22 Types of cheese

## DESIGN BRIEF: PIZZA

Decide for yourself which is best: your homemade pizza or frozen supermarket-bought pizza. Using the Perfect pizza recipe on p.218, produce your own homemade pizza. Time how long it takes for you to prepare and produce it.

# Perfect pizza



ITALY

## Main tools and equipment

Small bowl, rolling pin, measuring spoons, measuring cups, measuring jug, pizza tray, spatula





## Production skills

Activating yeast, slicing, kneading, rolling, proving

## Cooking processes

Baking

## SERVES 2

-  Preparation time: 30 minutes
-  Cooking time: 15–20 minutes
-  Serving and presentation time: 2 minutes
-  Total time: 47–52 minutes

## Ingredients

					
1 tablespoon olive oil	1 teaspoon yeast	½ teaspoon sugar	½ teaspoon salt	½ cup warm water	1 cup plain flour
					
2 tablespoons tomato paste	¾ cup grated cheese (mozzarella)	¼ onion, grated	¼ cup pineapple pieces	1 slice ham, thinly sliced	
					
1 slice salami, thinly sliced	¼ capsicum, diced	½ teaspoon mixed herbs			

## Method

- Grease a pizza tray with a tiny amount of oil.
- Combine the yeast, sugar, salt and water in a small bowl. Cover and stand for 10 minutes until frothy.
- Sift the flour into a large bowl.
- Add the yeast mixture and olive oil. Mix to form a dough.
- Flour your bench and knead the dough until smooth and elastic.



- 6 Lightly oil a bowl. Place dough in bowl, cover and prove for 15 minutes or until it has doubled in size.
- 7 Turn dough onto floured surface and roll into a round shape to fit the pizza tray. Line the tray with the dough.
- 8 Spread the base with the tomato paste. Do not spread the tomato paste all the way to the edge as it will burn.
- 9 Top with cheese, onion, pineapple, ham, salami, capsicum and mixed herbs.
- 10 Bake at 200°C for 15–20 minutes or until ready.

## Evaluating

Purchase a frozen pizza and prepare it according to the instructions provided. Copy and complete the table below, then answer the questions that follow to

help you investigate and compare the two pizzas and evaluate which is your preferred option.

	Homemade pizza	Frozen pizza
Time taken to prepare		
Appearance		
Aroma		
Flavour		
Texture		
Give each pizza a rating out of 5 (with 5 being the highest score)		

- 1 Identify which pizza presentation you preferred and explain why.
- 2 Identify which pizza you think had the best flavour and explain why.
- 3 List the ingredients you used to make your pizza.
- 4 List the ingredients used to make the frozen pizza as written on the label.
- 5 Identify which pizza is the healthier option.
- 6 Compare the time taken to prepare both pizzas. Discuss which pizza was the more time-efficient.
- 7 Determine which pizza was your favourite. Explain why.



## 8.21 ACTIVITY

### Changing milk

- 1 Put 3 tablespoons of milk into a small saucepan.
- 2 Heat the milk until it boils. Observe and record what happens when milk boils.
- 3 Remove the saucepan from the stove. Add ½ teaspoon lemon juice. Observe and record what happens when an acid like lemon juice is added to milk. The changes that occur are:
  - a The skin on boiling milk is coagulated milk protein.
  - b Adding lemon juice curdles the milk and creates curds and whey. The solid curd you see is what is created first in cheese making.
- 4 Discuss whether you think it would be possible to make a milkshake with milk and lemon juice.



## 8.22 ACTIVITY

### Heat and cheese

- 1 Use a griller to test the impact of heat on cheese. Place the griller rack as high as possible and preheat the griller on high.
- 2 Cut three slices of low-fat cheese 3 mm thick and approximately 3 cm square.
- 3 Cut three slices of full-fat cheese the same size.
- 4 Place on foil.
- 5 Place under the griller for 1 minute on high.
- 6 Observe the changes.
- 7 Place the cheese back in the griller and continue cooking for 1 minute.
- 8 Observe the changes.
- 9 Place back under the griller and cook for a further 1 minute.
- 10 Observe the changes.
- 11 Write a conclusion about the impact of dry heat such as a griller on cheese.
- 12 Make a recommendation to a beginner cook about how long it is necessary to melt cheeses on an open sandwich.

A similar test can be conducted in a microwave:

- 1 Cut three slices of cheese 2 mm thick and approximately 3 cm square.
- 2 Place on kitchen paper.
- 3 Microwave for 15 seconds on high.
- 4 Observe the changes.
- 5 Place the cheese back in the microwave and heat for a further 10 seconds.
- 6 Observe the changes.
- 7 Place back in the microwave and heat for a further 5 seconds.

Describe the differences between the cheese heated in the microwave and the cheese heated under the griller.

## DESIGN BRIEF: MINI FRITTATAS

Use cheese to add the properties of flavour, taste, texture and nutrients to a popular egg dish. The recipe below is for Mini Frittatas, but it can be made as one frittata, like an omelette, and served cut into wedges. Frittatas can be made using a variety of vegetables – for example, spinach, broccoli or a mixture of cooked vegetables such as potato, capsicum, onion, peas, tomatoes and pumpkin. It is a good way to use up leftover cooked vegetables. It can be served for breakfast, lunch or dinner.



# Mini frittatas



## Main tools and equipment

Muffin tin, frying pan, fork, measuring spoons, measuring cup, garlic crusher, fork, large bowl, wooden spoon

## Production skills

Measuring, slicing, greasing, beating, combining

## Cooking processes

Stir-frying, baking

## MAKES 12



Preparation time: 20 minutes



Cooking time: 10–15 minutes



Serving and presentation time: 3 minutes



Total time: 33–38 minutes

## Ingredients

					
2 teaspoons olive oil	1 spring onion, finely sliced	1 clove garlic, crushed	Pinch of dried oregano	1 small zucchini (100 g), coarsely grated	¼ cup frozen peas
					
2 semi-dried tomatoes, diced	3 eggs	¼ cup smooth cottage cheese	1 tablespoons parmesan or tasty cheese		
					
Salt and pepper	25 g ham, diced (optional)	1 teaspoon chopped parsley (optional)			

## Method

- 1 Preheat the oven to 190°C.
- 2 Lightly brush a ½ cup muffin pan with olive oil.
- 3 Heat the oil in a frying pan over moderate heat.
- 4 Stir-fry the spring onion, garlic and oregano for 2–3 minutes, being careful not to let it burn.

# Mini frittatas – continued

- 5 Squeeze any excess liquid from the zucchini using a clean tea towel and add to the pan with the peas and tomato and stir for 2 minutes.
- 6 Remove from the heat and place in a bowl.
- 7 Beat the eggs with a fork and beat the cottage cheese until it is smooth, then stir in the egg and 2 teaspoons cheese.
- 8 Combine the egg mixture and the zucchini mixture. Add ham if desired. Flavour with salt and pepper. Stir thoroughly.
- 9 Spoon the mixture into the muffin pan.
- 10 Sprinkle the cheese on top. Bake at 190°C for about 10–15 minutes, until the frittatas are cooked through and lightly browned.

## Evaluating

- 1 Describe the changes to the cheese on top of the frittatas before cooking and after cooking.
- 2 Using your knowledge of cooking eggs, explain the changes to the frittatas before cooking and after cooking.
- 3 Suggest two vegetables you could add to the frittatas to change the texture of the frittatas. Describe the texture change you would expect from your addition.

## REFLECT ON LEARNING

- 1 Name three of the most common milk products.
- 2 When cooking, heat has a similar impact on egg and cheese. Describe these similarities.
- 3 Identify the nutrient that causes the changes in cheese while heating.
- 4 Explain the differences in processing between fresh cheese like ricotta and hard cheese like parmesan.
- 5 Describe the properties cheese adds to a meal like an omelette when sprinkled on top.



## Check out yoghurt

Yoghurt is a **cultured** milk product to which two types of bacteria are added. These cultured bacteria act on the lactose and the protein found in milk to give it a soft curd with a slight acidic taste. Yoghurt is rich in protein and calcium, making it a tasty and nutritious snack option as well as being a great addition to meals.

**cultured** Grown or propagated in an artificial medium.



### 8.23 LET'S COLLABORATE

Suggest ways you could incorporate more yoghurt into your diet. Highlight any current ingredients and recipes where you could make modifications for yoghurt.



## DESIGN THINKING

Yoghurt is a quick and easy snack that can also be used in many different ways in cooking. It is also very easy to make your own homemade yoghurt.

- 1 Research the main ingredients used in yoghurt.
- 2 Investigate how to make natural yoghurt at home.
- 3 Research three different flavourings you could use for your yoghurt.
- 4 Create a production plan, including the equipment you will need to produce your yoghurt and the time it will take.

### Producing

Produce your flavoured yoghurt.

### Evaluating

- 1 Complete a sensory analysis of your yoghurt.
- 2 Complete a cost analysis of your homemade yoghurt compared with a commercially available version. Describe which is the most cost-effective.
- 3 Reflect on your project-management skills. Outline what you did well in your production today and two areas on which you should focus when needed in the kitchen.

## LOOKING BACK

- 1** Eggs are one of the most versatile ingredients used in cooking.
- 2** Eggs and milk are both described as almost perfect foods because they can sustain life with a high protein content and many other nutrients (but not dietary fibre).
- 3** The high protein content influences cooking of eggs and cheese, as protein sets when heated (coagulation) and becomes tough and rubbery when overcooked.
- 4** Eggs can be purchased in different sizes and different types, depending on how the hens or other birds are kept.
- 5** Milk is also available in many different types, and many popular products, like cheese, butter, yoghurt, cream and ice-cream, are made from milk.
- 6** Cheese is the most popular processed milk product and comes in many varieties, depending on the production process, from very fresh and unripened to very hard and mature.
- 7** Yoghurt is a cultured milk product, rich in protein and calcium.

## TEST YOUR KNOWLEDGE

### Multiple choice

- 1** When cooking eggs:
  - a** the white and yolk cook at the same time
  - b** the white cooks first
  - c** the yolk cooks first
  - d** they cook from the inside out.
- 2** Skimmed powdered milk has had:
  - a** the water removed
  - b** the water and fat removed
  - c** the fat removed
  - d** the lactose or sugar and water removed.

- 3** Coagulation is the process of:
  - a** adding rennin to milk and heating to get curds and whey
  - b** the process used to break up the fat particles in milk
  - c** heating milk to just below boiling point to kill micro-organisms
  - d** the changing of a protein from a liquid to a solid when heated or agitated.

### True/false

- 1** Dietary fibre is one nutrient that is not present in milk or eggs.
- 2** Overcooked protein in eggs is soft and moist.
- 3** Yoghurt is a 'sometimes' food because it is high in saturated fat.

### Short answer

- 1** Following is some information about the milk and milk products we consume and the changes that have occurred in the patterns of what we eat or drink. Select one of the changes and explain possible reasons for this change.
  - a** From the mid-1990s, we have been drinking less and less milk.
  - b** The amount of cheese we eat has stayed about the same, with a shift from cheddar to non-cheddar varieties.
  - c** The amount of butter we ate slowed during the 1970s and 1980s; however, this has changed over the last 10 years and we are now eating more butter.
  - d** The amount of yoghurt we eat has shown the biggest and steadiest increase from the 1990s.
- 2** Eggs are used for many different purposes in cooking. Select one purpose, give an example of a meal or recipe that uses an egg in this way and describe what happens to the egg in this meal/recipe.



## Extended response

Conduct a cheese tasting in a group of four. The same process can be used for a milk tasting. For milk, try different milk varieties in a 'blind tasting' (put the milk in a plain glass so no one can see the milk container).

You will need:

- four plates
- four different cheeses, if possible: one fresh or soft, one semi-hard, one hard and one flavoured
- one glass of water each
- one celery stick each.

### Method

- 1 Copy the table below to record the cheese-tasting results.

Name of the cheese	Appearance	Texture	Taste	Ranking (individual preference)

- 2 Cut each variety of cheese into four.
- 3 Label each variety of cheese.
- 4 As a group, brainstorm descriptive words for the appearance, texture and taste of the cheese.
- 5 Taste the cheeses one at a time, starting from the fresh or soft and working up to the flavoured cheese. Record your results. It is important to have a drink of water and a bite of celery to cleanse your palate before you taste the next cheese.
- 6 Individually rank each cheese. Give an explanation of why you have ranked the selected cheese as number 1. Use your descriptive words from the tasting in your response.
- 7 Compare your ranking with the ranking of the group. What was the most popular cheese in the group and in the class?
- 8 Complete a KWLH for the cheese tasting. Circle the word representing the letter:
  - a K – What do you *know* about cheese?
  - b W – What do you *want* to find out about cheese?
  - c L – What have you *learned* about cheese from this tasting?
  - d H – *How* did you learn during the tasting?