

## Processed food activity

This activity uses food cards, and there is an activity for each of the four food groups. Ideally we should be basing our diets around as many whole foods that are close to nature as possible. As a food like fruit or corn becomes more processed, it gradually becomes less nutritious. This activity helps to visually show how food products that are derived from everyday ingredients lose their nutrients and become less beneficial for our body as they become more processed. It emphasises the importance of reading labels to understand what is in processed foods.

### Objectives

1. To demonstrate how food processing and ways of cooking can impact the nutritional value of different foods.
2. To encourage students to critically think about what has been added, and removed during the food manufacturing process.
3. To support a step-wise approach to healthy eating.

### Introduction

This is a good follow-on activity after learning about the four food groups.

Before beginning the food processing activity, discuss the four food groups ('everyday foods') and remind your students of the 'sometimes foods', which are less nutritious. Once students are confident with this concept, explain that sometimes foods are often more processed, and have unhelpful ingredients like salt, sugar and oil added, or helpful nutrients like fibre, vitamins and minerals removed. This processing changes the food from how it was in nature – you won't find any chocolate bars growing on trees!

Explain that some food processing is important to extend the life of food like pasteurising milk, freezing vegetables or canning fish so that we can safely store and eat different foods.

Now begin the food processing activity, where the order of food cards from least processed to most processed will demonstrate how an ‘everyday’ food can become a ‘sometimes food’ as it becomes more processed.

## Processed food activity

<b>Curriculum</b> <b>level 1</b>	<p>Choose one food group and order the food cards from the least procesed to the most processed.</p> <p>Choose 2-3 food cards and ask students whether each card is an ‘everyday’ food or a ‘sometimes’ food.</p> <p><i>Links to curriculum</i></p> <ul style="list-style-type: none"><li>- <i>Science - interacting systems; nature of science</i></li><li>- <i>Mathematics and Statistics - shape</i></li><li>- <i>Health and Physical Education</i></li></ul>
<b>Curriculum</b> <b>level 2-3</b>	<p>Choose one food group and order the food cards from the least procesed to the most processed.</p> <p>As you talk through each food card, ask students if each food is an ‘everyday’ or a ‘sometimes’ food.</p> <p>Talk about what has been added or removed from each food and how this changes the nutritional value.</p> <p><i>Links to curriculum</i></p> <ul style="list-style-type: none"><li>- <i>Health and Physical Education - healthy communities and environments</i></li><li>- <i>Science - living world; material world; nature of science</i></li></ul>

<b>Curriculum level 3-4</b>	<p>Place students into five groups, and give each group a different set of food cards. Ask each group of students to sort the cards from least processed to most processed.</p> <p>Ask each group to present their completed activity to the class and talk through what nutrients have been added or removed from each food to change their nutritional value.</p> <p><i>Links to curriculum:</i></p> <ul style="list-style-type: none"> <li>- <i>English - speaking, writing and presenting</i></li> <li>- <i>Health and Physical Education - personal health and physical development; healthy communities and environments</i></li> <li>- <i>Science - nature of science; material world</i></li> </ul>
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## Additional activities

- **Marketing madness:** Discuss the advertising of processed foods (i.e. examples of where/when/how processed foods are advertised). Ask students to choose a food and design a new package, which more accurately reflects what is in the food. Students can choose an everyday food (i.e. ‘bananas fuel our brain!’) or a sometimes food (‘these potato chips are as salty as the sea’). *Curriculum links: Health and Physical Education; The Arts.*
- **D.I.Y ordering:** Ask students to select an everyday food and create their own food processing order, from the least to most processed version of a food. Encourage use of an everyday food that hasn’t been included in the activity (e.g. bananas, nuts, chicken etc). *Curriculum links: Science; English.*
- **Label-reading legends:** Collect packets for processed foods. Look at the amount of sugar, saturated fat and/or sodium (salt) on these packages

per 100g. Which has the most sugar? Which has the most salt? Which has the most saturated fat? *Curriculum links: Mathematics and Statistics.*

- **Unpacking processed food:** Discuss the history of processed food (food safety and preservation) and ask students to write an inquiry on a method of food processing. Some examples of food processing include refrigeration, canning, pickling, curing, smoking, drying, cooking, fermenting, canning etc. *Curriculum links: Social Sciences; Science; English.*
- **Food court:** Split class into an even number of groups. Half the groups will write a debate 'for' food processing, while the other groups will write a debate 'against' food processing. *Curriculum links: English; Science; Health and Physical Education.*
- **Fermenting fun:** Fermenting is a form of food processing that has been used for hundreds of years to preserve food, so that it can be eaten throughout the year. As a class, work through the [Heart Foundation's Fermenting Activity](#), to make your own fermented food! *Curriculum links: Science.*

## Glossary

**Calcium:** a mineral that helps build strong bones and teeth. As children grow, so do their bones, so they need plenty of calcium.

**Everyday foods:** these are the foods that we want to be eating every day with most meals, because they give us everything our body needs to be able to move, learn, grow and play. Eat a wide range of these foods every day.

**Fibre:** is found in plant foods, like stringy celery or seedy bread. Fibre acts like a broom, sweeping food all the way through our gut. It helps us poo, feel full for longer and feed the bacteria that live in our gut.

**Four Food Groups:** these include fruit and vegetables; milk and milk products; grain foods; and plant/animal protein foods. Eat foods from each food group every day.

**Nutrients:** helpful parts of food, which our body can use to grow, think, move and thrive. Protein, fat, vitamins, minerals and fibre are all examples of nutrients.

**Oil/Fat:** found in many different foods. We should aim to eat more heart healthy fats found in olive oil, nuts, seeds, avocado and oily fish such as salmon; and less animal fats like the white fat on meat, skin on chicken, butter and cream (including coconut cream).

**Processed food:** any food that has been changed during preparation. This can include: pickling, frying, freezing, drying, packaging and adding ingredients. Food processing has been practiced for centuries and is often needed to make food tasty and safe to eat. However, processed foods can also contain large amounts of sugar, saturated fat, salt, and minimal amounts of fibre, vitamins, minerals and protein. Processing everyday foods can turn them into sometimes foods.

**Protein:** found in foods like meat, fish, poultry, eggs, legumes, nuts and seeds. Our bodies are made of protein, and it helps us grow taller, build strong muscles and keeping us full for longer.

**Salt:** also called ‘sodium’, is not good for our body in big amounts. Many sometimes foods like snacks that come in packets and takeaways foods are high in salt.

**Sometimes foods:** these foods still have a place in a balanced diet, but they don’t fuel our bodies as well as everyday foods. So, it is best to eat more everyday foods and less sometimes foods.

**Sugar:** eating too much sugar is not good for our health (including our teeth and our heart health).

**Vitamins and minerals:** are in a lot of different everyday foods, and when we eat them, our body uses them to do all the things it needs to do. For example, calcium helps build strong bones and vitamin A is good for our

eyes. Vitamins and minerals help our brain, skin, teeth and heart to thrive, as well as protecting us from getting sick.

**How to talk to children about food:** the aims of these lessons are to be fun and for children to be excited about and interested in food. Fostering positive relationships with food is essential because when the joy goes out of eating our nutrition can suffer.

- Avoid labelling foods as “good” or “bad”.
- Avoid using words such as ‘junk food’, ‘treat foods’ – instead call them ‘sometimes’ or ‘once in a while foods’.
- Avoid discussing diets, body weight, and good vs bad/healthy vs unhealthy with or in front of children.
- We want kids to know that all foods are part of a healthy diet – it’s all about balance and proportions.
- Focus on the benefits of food e.g. learning, running fast, growing tall, and feeling full instead of labelling foods as healthy/unhealthy.
- Avoid using food as a reward – stick with non-food rewards.

## Milk and milk product activity answers

Plain milk	Plain yoghurt	Fruity yoghurt	Chocolate dairy food	Ice cream
				
- High in calcium, protein, and vitamins	- High in calcium, protein and vitamins	- High in sugar - High in calcium, protein and vitamins	- High in sugar - High in calcium, protein and vitamins	- High in fat and sugar - Low in calcium and vitamins

## Animal/plant protein activity answers

Plain fillet	Canned tuna, spring water	Canned tuna, flavoured	Baked fish fingers	Deep-fried fish
				
- High in protein, vitamins, minerals and contains healthy fats	- High in protein, vitamins, minerals and contains healthy fats - May contain added salt	- High in salt - High in protein, vitamins and minerals	- High in salt - Contains added fat - Low in protein	- High in fat and salt - Vitamins lost in deep frying process

## Grain food activity answers

Fresh corn	Canned corn	Plain popcorn	Cornflakes	Corn chips
				
<ul style="list-style-type: none"> <li>- High in fibre, water, vitamins and minerals</li> </ul>	<ul style="list-style-type: none"> <li>- High in fibre, vitamins and minerals</li> <li>- Contains added salt (preserved in brine)</li> </ul>	<ul style="list-style-type: none"> <li>- High in fibre</li> <li>- Store-bought popcorn is higher in fat, sugar or salt (pop it yourself instead!)</li> </ul>	<ul style="list-style-type: none"> <li>- No fibre</li> <li>- High in sugar and salt</li> </ul>	<ul style="list-style-type: none"> <li>- Low in fibre, vitamins and minerals</li> <li>- High in fat (deep fried) and salt</li> </ul>

## Fruit activity answers

Fresh pineapple	Canned pineapple	Dried pineapple	Pineapple juice	Pineapple lumps
				
<ul style="list-style-type: none"> <li>- High in fibre, water, vitamins and minerals</li> </ul>	<ul style="list-style-type: none"> <li>- High in fibre, vitamins and minerals</li> <li>- Contains sugar (in juice or syrup) which can be drained</li> </ul>	<ul style="list-style-type: none"> <li>- Low in vitamins and minerals</li> <li>- High in sugar</li> </ul>	<ul style="list-style-type: none"> <li>- Fibre removed</li> <li>- High in sugar</li> </ul>	<ul style="list-style-type: none"> <li>- No fibre, vitamins and minerals</li> <li>- High in sugar and fat</li> </ul>

Vegetable activity answers				
Boiled potato	Roasted potato	Oven-baked wedges	Deep-fried chips	Potato crisps
				
- High in fibre, vitamins and minerals	- May contain fat and salt depending on seasoning and oil used - High in fibre, vitamins and minerals	- High in fat and salt - Some fibre if skins left on	- High in fat and salt	- High in fat and salt - No fibre, vitamins and minerals

## Links to other supporting nutrition resources

**NZ Nutrition Foundation, Nutrition Facts.** More information about food groups, vitamins and minerals:

<https://nutritionfoundation.org.nz/nutrition-facts>

**Ministry of Health, The Four Food Groups.** More info about the four food groups, recommended number of servings and serving size examples: <https://www.health.govt.nz/your-health/healthy-living/food-activity-and-sleep/healthy-eating/four-food-groups>