



Curriculum Level 3 Unit Plan

SNACK ATTACK



An inquiry-based unit plan that aims to educate students about the importance of healthy snacking and how to choose healthier options.

The unit provides links to the curriculum and national standards assessment.

FUELLED
4 LIFE

Introduction

Everyone loves snacks, however when faced with the huge array of snack foods on offer, it's hard to know which snacks are healthy. This unit plan aims to educate students on the importance of choosing healthy snacks from the four food groups. We know students bring packet snacks to school as these are perceived as convenient, popular, durable and more cost effective than everyday foods. These snacks are also commonly sold at school canteens. The unit plan therefore teaches students how to identify healthier packet snacks by reading the nutrition information panel. The unit plan contains activities suitable for students at level 3 of the curriculum, but it is our expectation that teachers will adapt these specific learning objectives and learning outcomes to meet the needs of their diverse learners.

Heart Start: Toitōi Manawa*

The unit plan supports the Heart Foundation's Heart Start: Toitōi Manawa programme. This is an introductory heart health programme partially funded by the Ministry of Health. It provides resources and support for schools to build an environment that supports healthy eating and physical activity.

The unit plan is part of a set of unit plans designed for curriculum levels 1–4. These unit plans show teachers how they can use nutrition education to assist students to meet numeracy and literacy standards.

Attending the Heart Foundation's professional development workshops and implementing these unit plans means your school will have already completed part of the Heart Start programme and is well on the way to achieving a Heart Start chart.

To access further resources and achieve recognition from the Heart Foundation, contact your local Heart Foundation Health Promotion Coordinator or go to www.heartfoundation.org.nz.

Fuelled4life

The unit plan includes links to the Heart Foundation's fuelled4life, the brand name for the Food and Beverage Classification System (FBCS). The FBCS is based on the Ministry of Health's food and nutrition guidelines for children and young people. The system is designed to inspire schools to provide tasty and nutritious products in the canteen, at school camps and events. Foods and beverages are classified according to their nutrient profile and divided into three categories: **everyday**, **sometimes** and **occasional**.

Healthy snacks ideally should come from the **everyday** category. **Everyday** products come from the four food groups: vegetables and fruit, breads and cereals, milk and milk products and lean meat, poultry, seafood, eggs, legumes, nuts and seeds.



Everyday foods and drinks are lower in energy, saturated fat and salt than the other two categories so are appropriate for everyday consumption.



Sometimes foods and drinks are still good choices but are a bit higher in energy, saturated fat and salt and so should be consumed in moderation. **Sometimes** foods and drinks should not dominate the choices available.



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Occasional foods or beverages do not fit into the previous two categories as they contain high levels of fat, salt or energy. These include deep fried foods, full sugar drinks and confectionery. These are not recommended for provision in the school canteen nor are they a good option for the school lunchbox.

The FBCS nutrient criteria framework has specific criteria for each food category and this is how products are registered with fuelled4life.

Nutrition information panel

This unit plan includes a range of activities to teach your students how to identify healthier products by reading nutrition information panels. Students will also gain an understanding of the persuasive advertising techniques used to market unhealthy products and how this impacts on their food choices.

Label reading guidelines

The label reading guidelines below are referred to in this resource to assist students to identify healthier products. These are general label reading guidelines across all food and beverage categories. Please be aware that different products will have varied nutrient profiles due to the nature of the food composition. For example, it will be difficult to find a breakfast cereal containing less than 15g of sugar per 100g if this cereal contains dried fruit.

Table 1: Label reading guidelines to help identify healthier products

Nutrient	Qty Per 100g
Fat – total	Less than 10g
Fat – saturated	Less than 2g
Sugar	Less than 15g
Sodium (salt)	Less than 400mg
Fibre	Greater than 5g

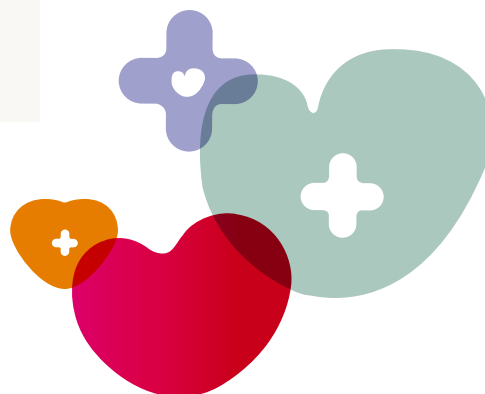
Inquiry-based learning – designing your own snack

This unit plan contains an inquiry-based learning activity that encourages students to survey their peers to identify their favourite snacks. Using all of the knowledge they have gained, students are then asked to design a healthy snack that would be a popular addition to their classmates' lunchboxes or for the school canteen.

The snack needs to include at least one fruit or vegetable. It could be a healthy smoothie, muesli bar, crackers and topping, fruit muffins or vegetable sticks and dip. The opportunities are endless.

Once students have designed their snack and tested it on their classmates, they can send it to the Heart Foundation's education team to showcase to other schools across New Zealand. Please send us a photo of the snack, the recipe used and a poster advertising the snack to education@heartfoundation.org.nz

Good luck and happy healthy snacking!



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Key



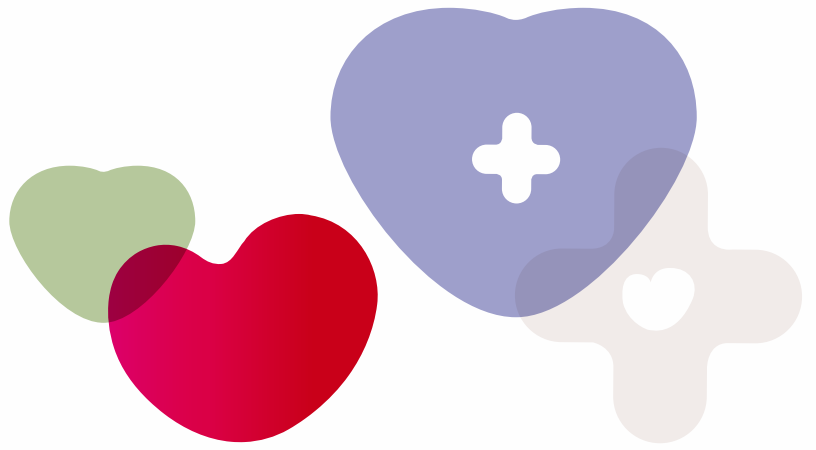
Online activity



Resource



Snacktivity



Links to the New Zealand Curriculum (NZC)

Purpose: To engage students in exploring and developing an understanding about healthy choices including snacks.

Curriculum Level 3

Curriculum areas incorporated		Achievement objectives Relevant to the activity, including possible links	Specific learning objectives Students will be able to:
Health and Physical Education	Health	Personal Health and Physical Development <i>Personal growth and development</i> Identify factors that affect personal, physical, social and emotional growth and develop skills to manage changes.	<ul style="list-style-type: none"> Demonstrate an understanding of good nutrition in relation to snack food (HP SLO 1) Identify and justify the best snack choices for themselves (HP SLO 2).
		Personal identity Describe how their own feelings, beliefs and actions and those of other people contribute to their personal sense of self-worth.	<ul style="list-style-type: none"> Explore snack food content and marketing. Evaluate findings and use this as a basis to design their own healthy snack (HP SLO 3).
		Healthy Communities and Environment <i>Societal attitudes and values</i> Identify how health care and physical activity practices are influenced by community and environmental factors.	<ul style="list-style-type: none"> Consider the challenges people face choosing a healthy snack to meet energy requirements before an activity and discuss ways to overcome these (HP SLO 4).
English		Listening, Reading and Viewing <i>Processes and strategies</i> Integrate sources of information, processes and strategies with developed confidence to identify, form and express ideas. <ul style="list-style-type: none"> Integrates sources of information and prior knowledge with developing confidence to make sense of increasingly varied and complex texts Selects and uses a range of processing and comprehension strategies with growing understanding and confidence. 	<ul style="list-style-type: none"> Demonstrate an ability to gather, read, understand and effectively use nutrition information for a specific purpose (E SLO 1).

Key

HP SLO 1: Health and Physical Education Specific Learning Objective 1

E SLO 1: English Specific Learning Objective 1

M SLO 1: Mathematics and Statistics Specific Learning Objective 1

T SLO 1: Taumata Specific Learning Objective 1

Curriculum areas incorporated		Achievement objectives Relevant to the activity, including possible links	Specific learning objectives Students will be able to:
English		Speaking, writing and presenting <i>Processes and strategies</i> Integrate sources of information, processes and strategies with developing confidence to identify, form and express ideas. <ul style="list-style-type: none"> • Uses a developing understanding of the connections between oral, written and visual language when creating texts • Creates a range of texts by integrating sources of information and processing strategies with developing confidence • Is reflective about the production of own texts: monitors and self-evaluates progress, articulating learning with growing confidence. 	<ul style="list-style-type: none"> • Construct texts that show a growing awareness of purpose and audience through careful choice of content, language and text form (E SLO 2) • Forms and expresses ideas and information with increased clarity, drawing on a range of resources to develop packaging (E SLO 3) • Uses oral, written and visual language features to create meaning and effect and engage interest in the snack designed (E SLO 4).
Mathematics and Statistics	Statistics	In a range of meaningful contexts, students will be engaged in thinking mathematically and statistically. They will solve problems and model situations that require them to: <i>Undertake statistical investigation</i> Conduct investigations using the statistical enquiry cycle: <ul style="list-style-type: none"> • posing and answering questions • gathering, sorting and displaying category and whole number data • communicating findings based on the data. 	<ul style="list-style-type: none"> • Gather, sort, analyse, compare and summarise data on snack choices by participants from a range of backgrounds (M SLO 1) • Display data in an appropriate form (M SLO 2).
Te Aho Arataki Ma-rau mō te Ako Te Reo Māori	Taumata	Students should be able to: <ol style="list-style-type: none"> 3.1 Communicate, including comparing and contrasting about habits, routines and customs 3.2 Communicate survey and results 3.3 Give and follow directions to survey participants 3.4 Communicate, including comparing and contrasting, the survey data 3.5 Communicate immediate past survey activities. 	<ul style="list-style-type: none"> • Asking and answering questions about their snack food survey results (T SLO 1) • Requesting, accepting or declining to participate in snack food survey (T SLO 2) • Discussing, planning, recording a checklist of what group members will do to select participants in their snack food survey (T SLO 3) • Summarise what they have found in terms of the most popular snack foods (T SLO 4) • Seek agreement from participants to take part in their snack food survey (T SLO 5).

Links to curriculum

To be encouraged, modelled and explored (NZC p8–10).

What aspects of the values does this activity explore, encourage or model?

Vision	Principles	Values	Key competencies	Pedagogical approaches
<p>What we want for our young people</p> <ul style="list-style-type: none"> • Confident • Connected • Actively involved • Lifelong learners. 	<p>Beliefs about what is important</p> <ul style="list-style-type: none"> • High expectations • Treaty of Waitangi • Cultural diversity • Inclusion • Learning to learn • Community engagement • Coherence • Future focus. 	<p>Expressed in thought and actions</p> <ul style="list-style-type: none"> • Excellence • Innovation, inquiry and curiosity • Diversity • Equity • Community and participation • Ecological sustainability • Integrity. 	<p>Using the key competencies (NZC p12–13)</p> <ul style="list-style-type: none"> • Thinking • Using language, symbols and texts • Managing self • Relating to others • Participating and contributing. 	<p>Based on the Health Promoting Schools Inquiry Model (see http://hps.tki.org.nz/What-are-Health-Promoting-Schools/HPS-Inquiry-Based-Learning-Model).</p> <p>All units follow this process. Aspects of effective pedagogy (NZC p34–36) are highlighted in the activity.</p> <ul style="list-style-type: none"> • Creating a supportive learning environment • Encouraging reflective thought and action • Enhancing the relevance of new learning • Facilitating shared learning • Making connections to prior learning • Providing sufficient opportunities to learn • E-learning • Engaging Māori/Pasifika students and their communities.

Achievement objectives, specific learning objectives and learning outcomes

Achievement objectives are taken from the New Zealand Curriculum

Specific learning objectives (SLO) for this unit of work have been derived from the achievement objectives in the New Zealand Curriculum

Learning outcomes are successfully achieved when students can demonstrate the specific learning processes, skills and knowledge detailed for each lesson in the right hand column

It is our expectation that teachers will adapt these specific learning objectives and learning outcomes to meet the needs of their diverse learners.

National standards assessment

The New Zealand Curriculum reading, mathematics and writing standards for years 1–8

The reading standard – By the end of year 6, students will read, respond to and think critically about texts in order to meet the reading demands of the New Zealand Curriculum at level 3. Students will locate, evaluate and integrate information and ideas within and across a small range of texts appropriate to this level as they generate and answer questions to meet specific learning purposes across the curriculum.

The writing standard – By the end of year 6, students will create texts in order to meet the writing demands of the New Zealand Curriculum at level 3. Students will use their writing to think about, record and communicate experiences, ideas and information to meet specific learning purposes across the curriculum.

The mathematics standard – Statistics

In contexts that require them to solve problems or model situations, students will be able to:

- Investigate summary and comparison questions by using the statistical enquiry cycle:
 - gather or access multivariate category and whole-number data
 - sort data into categories or intervals, display it in different ways and identify patterns
 - interpret results in context, accepting that samples vary.
 - Order the likelihoods of outcomes for situations involving chance, considering experimental results and models of all possible outcomes.
-

Planned assessments

Assessments should include both formative and summative assessments and any suggestions made in this unit need to be cognisant of student needs and abilities. Within the inquiry model, assessment should be ongoing reflecting understanding at key points along the way.

Spotlight on: Inquiry-based learning, e-learning

Inquiry Learning – Developing Rubrics <http://www.galileo.org/research/publications/rubric.pdf>

Useful inquiry templates including assessment ideas – http://centre4.interact.ac.nz/modules/folder/folder.php?space_key=368&module_key=28260&link_key=28136&group_key=0

Digistore

<http://digistore.tki.org.nz/ec/search?topic=Column+graphs/>

Heart Foundation

Education – <http://www.heartfoundation.org.nz/education>

Fuelled4life – <http://www.fuelled4life.org.nz>

Other relevant sites

Māori Health Models – <http://www.health.govt.nz/our-work/populations/maori-health/maori-health-models>

Breakfast Eaters – <http://www.breakfast-eaters.org.nz>

Lesson 1

Introduction and Hauora

Overview: We are using pictorial images to generate discussions around health and well-being and introduce the concept of Hauora (HP SLO 3).

Opportunities for assessment	Structure	Curriculum and resource links
<p>Learning outcomes</p> <p>We are successful in our learning when we can:</p> <ul style="list-style-type: none"> Identify the factors that influence our well-being and Hauora Explain how the environment and people around us influence our well-being and Hauora Identify and explain how health and well-being impact on the quality of our everyday lives Identify the things that keep us happy and healthy: physical (taha tinana), mental/emotional (taha hinengaro), social (taha whānau) and spiritual (taha wairua) Understand that all four elements above need to be in balance for us to feel happy, healthy and safe. <p>Te Reo</p> <p>Learning intentions and success criteria rubrics for Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Learning-intentions-and-success-criteria</p> <p>Te wā Kai</p> <p>Using success criteria and assessment rubrics at http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Learning-intentions-and-success-criteria</p>	<p>Prepare</p> <ul style="list-style-type: none"> Resources and snackactivities listed below. <p>Connect</p> <ul style="list-style-type: none"> Introduce the concept of Hauora through diagram (see resource 1) Discuss the importance of having four walls in a house and how they support each other. Relate to students and how each of the headings/four walls support our health and well-being. <p>Activate</p> <ul style="list-style-type: none"> Read through the activity in snackactivity 1 with the students Ask students to work in pairs to discuss answers to the questions in this activity. <p>Demonstrate</p> <ul style="list-style-type: none"> Students record answers on the sheet. <p>Consolidation</p> <ul style="list-style-type: none"> Have a class discussion on how the different aspects of Hauora could be affected in the scenario. 	<p>Refer to http://www.maorihealth.govt.nz/moh.nsf/pagesma/196 or Health and Physical Education Curriculum 1999.</p> <p>Pedagogical links:</p> <ul style="list-style-type: none"> Creating a supportive learning environment Encouraging reflective thought and action Enhancing the relevance of new learning Facilitating shared learning Making connections to prior learning Engaging Māori/Pasifika students and their communities. <p>Key competencies:</p> <ul style="list-style-type: none"> Thinking Using language, symbols and texts Managing self Relating to others Participating and contributing. <p>Literacy:</p> <p>Integrate different sources of information, processes, and strategies to inform, shape and express ideas about health and well-being.</p> <p>Te Reo:</p> <p>Ongoing opportunities to assess Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Assessment-opportunities</p> <p>Te wā Kai:</p> <p>http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Assessment-opportunities</p>



Well-being and Hauora

Well-being

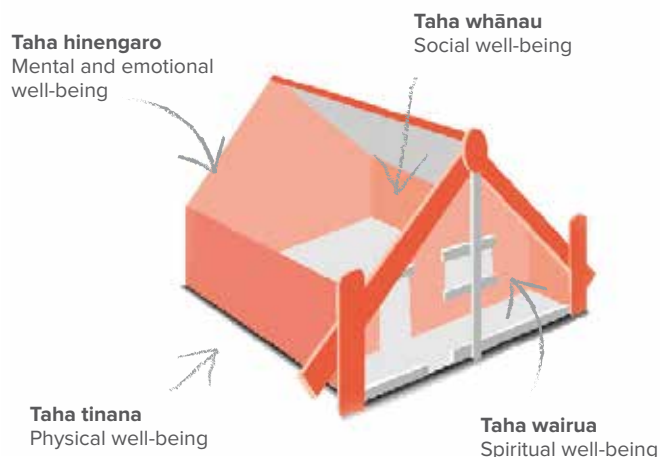
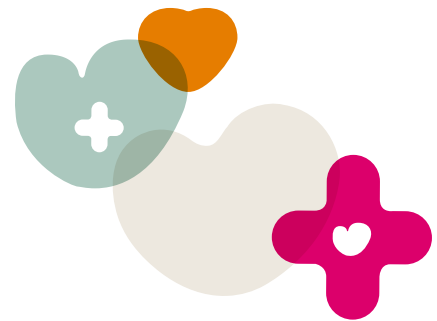
The concept of well-being encompasses the physical, mental and emotional, social and spiritual dimensions of health. This concept is recognised by the World Health Organisation.

Hauora

Hauora is a Māori philosophy of health unique to New Zealand. It comprises taha tinana, taha hinengaro, taha whānau and taha wairua.

- **Taha tinana** – Physical well-being
The physical body, its growth, development, ability to move and ways of caring for it
- **Taha hinengaro** – Mental and emotional well-being
Coherent thinking processes, acknowledging and expressing thoughts and feelings and responding constructively
- **Taha whānau** – Social well-being
Family relationships, friendships and other interpersonal relationships; feelings of belonging, compassion, and caring; and social support
- **Taha wairua** – Spiritual well-being
The values and beliefs that determine the way people live, the search for meaning and purpose in life, and personal identity and self-awareness (for some individuals and communities, spiritual well-being is linked to a particular religion; for others, it is not).

Each of these four dimensions of Hauora influences and supports the others.



Dr Mason Durie's Te Whare Tapawha model compares Hauora to the four walls of a whare, each wall representing a different dimension: taha wairua (the spiritual side); taha hinengaro (thoughts and feelings); taha tinana (the physical side); and taha whānau (family). All four dimensions are necessary for strength and symmetry.

(Adapted from Mason Durie's Whaiora: Māori Health Development. Auckland: Oxford University Press, 1994, page 70).

Source: http://www.wicked.org.nz/r/health/curriculum/statement/page31_e.php



Healthy eating and Hauora

What we eat and drink, who we are with and our environment can all have a big impact on our Hauora/well-being. Complete the exercise below to help you think about how healthy eating impacts our physical, mental, emotional, social and spiritual well-being.

Scenario

Your school has decided to run a healthy school hāngi to fundraise for a new school canteen. The school invites all parents, students, siblings and grandparents to attend. A traditional Māori game Ki o Rahi is played before everyone sits down to enjoy the food from the hāngi, feasting on lamb, pumpkin, potatoes and salad made by your class.

Question

By attending the hāngi and sharing healthy kai with your family and friends, how would this make you feel? How does this impact on your well-being?

Give one example for each dimension:

Write your examples in the circles!

Taha tinana

(physical well-being)

Taha whānau

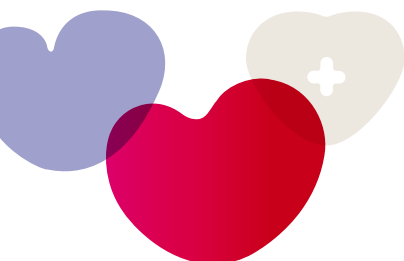
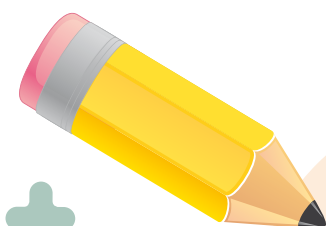
(social well-being)

Taha hinengaro

(mental and emotional well-being)

Taha wairua

(spiritual well-being)



Lessons 2–5

What is a healthy snack?

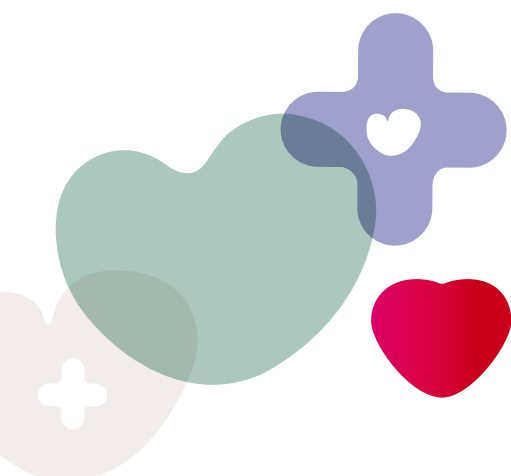
Overview: We are making the connection between Hauora and healthy eating. Identifying which foods and beverages we consider to be **everyday**, **sometimes** and **occasional**. We define what a healthy snack is and how to use the nutrition information panel to help us identify healthier packet snacks. (HP SLO 1, 4; E SLO 3, 4)

Opportunities for assessment	Structure	Curriculum and resource links
<p>Learning outcomes</p> <p>We are successful in our learning when we can:</p> <ul style="list-style-type: none"> Identify why we need snacks Explain which snack foods and beverages are a good source of energy and nutrients Identify the challenges to eating an appropriate snack before a sports game/activity Define everyday, sometimes and occasional foods and give examples of foods that fit into these categories Identify which foods meet the nutrition guidelines per 100g/100ml Read and interpret food labels Use the information on food labels as a basis for decisions about whether a food is an occasional food or not. <p>Te Reo</p> <p>Learning intentions and success criteria rubrics for Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Learning-intentions-and-success-criteria</p> <p>Te wā Kai</p> <p>Using success criteria and assessment rubrics at http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Learning-intentions-and-success-criteria</p>	<p>Prepare</p> <ul style="list-style-type: none"> Resources and snackactivities listed below. <p>Connect</p> <ul style="list-style-type: none"> What is a healthy snack and why do we need it? (resource 2) Select a sport/activity that students in the class play/practice/rehearse after school Ask students what they need to do in order to play/practice/rehearse well in their sport or activity after school (physical), why they play sport/participate in the activity (social/identity); how it makes them feel (emotional); does anyone else in the family play sport/participate in the activity (identity)? Relate to four areas of Hauora. <p>Activate</p> <ul style="list-style-type: none"> Focus on the physical – taking responsibility for our health If you are going to practice/training/rehearsal/playing a sport immediately after school, how do you ensure you have enough energy to train/rehearse/play well? In pairs students record ideas Feedback to class. <p>Demonstrate</p> <ul style="list-style-type: none"> Highlight that eating a healthy snack between meals is a good way to ensure that you have enough energy to fuel brains and bodies for children and young people Focusing on fuelling our body ready for physical activity, how do we know which are the best kinds of food to help us perform well? Complete snackactivities 2 and 3. 	<p>Pedagogical links:</p> <ul style="list-style-type: none"> Creating a supportive learning environment Encouraging reflective thought and action Enhancing the relevance of new learning Facilitating shared learning Making connections to prior learning. <p>Key competencies:</p> <ul style="list-style-type: none"> Thinking Using language, symbols and texts Relating to others Participating and contributing. <p>Literacy:</p> <p>Use strategies to organise ideas (fishbone).</p> <p>Te Reo:</p> <p>Ongoing opportunities to assess Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Assessment-opportunities</p> <p>Te wā Kai:</p> <p>http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Assessment-opportunities</p>

Lessons 2–5

What is a healthy snack? *continued*

Opportunities for assessment	Structure	Curriculum and resource links
See previous page.	<ul style="list-style-type: none">• Read through the information on food labels, nutrition information panels and food additives (resources 3 and 4) with the students. Students can then work to complete snackivity 4• Please note resource 5 and snackivity 5 are part of an extension activity. <p>Consolidation</p> <ul style="list-style-type: none">• Group discussion: What knowledge/ information do we need in order to know whether a snack is healthy or not? For example, four food groups, label reading information and the level of intensity and duration of the sport/activity.	See previous page.



Resource
2

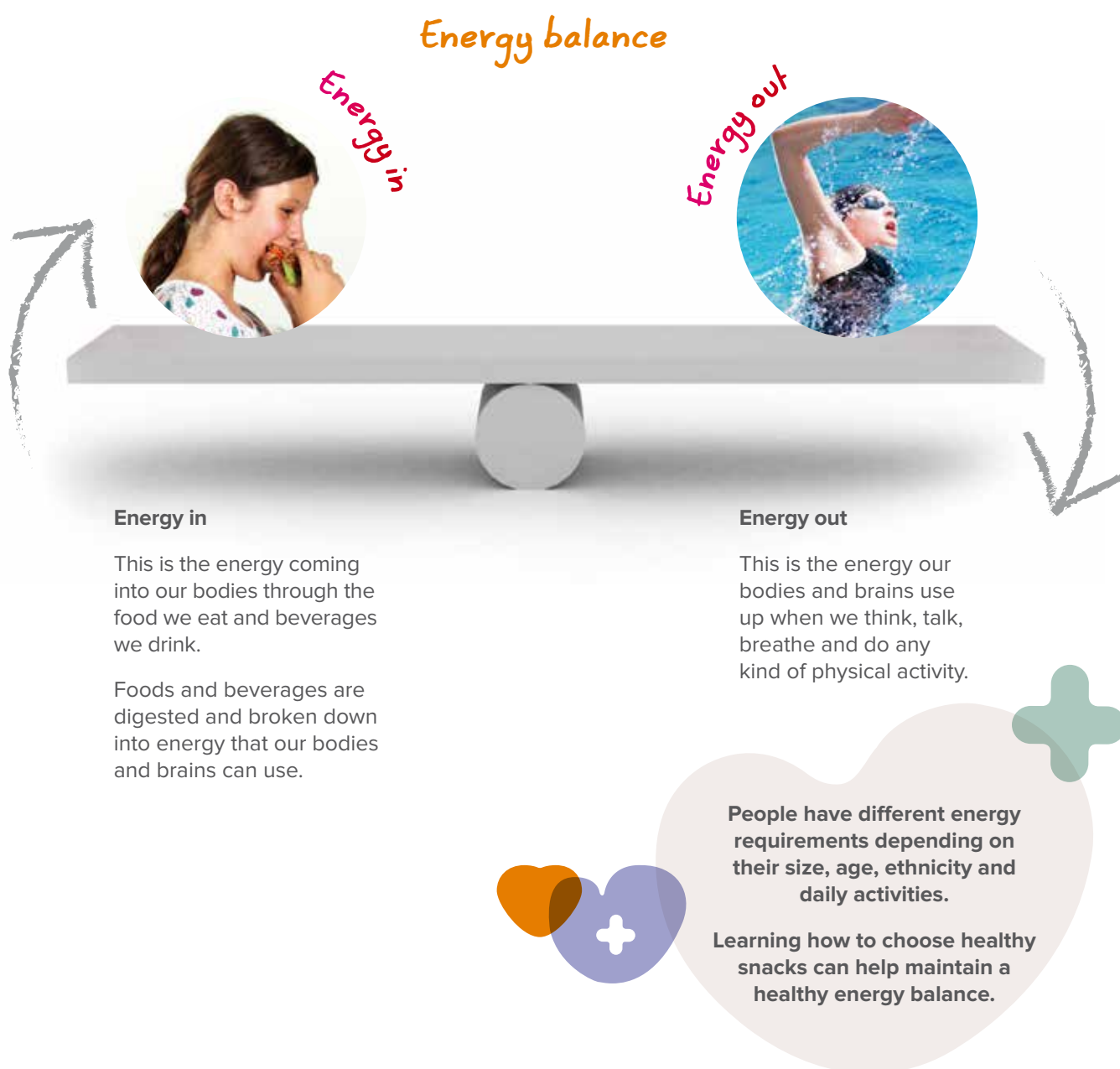
What is a healthy snack?

Snacks can be either food or beverages. They should be considered 'mini-meals' that give us energy and nutrients between main meals.

Children and young people need snacks mid-morning and mid-afternoon to boost concentration and energy levels for school work and play.

We need to think about the portion size and timing of snacks to ensure we aren't too full to eat lunch or dinner. As many common snack foods are oversized portions, food that was once considered a snack food, such as muesli bars, muffins and cookies, may now contain the energy of a meal.

We maintain a healthy weight when we balance our energy in with energy out.



Source: <http://www.health.govt.nz/publication/food-and-nutrition-guidelines-healthy-children-and-young-people-aged-2-18-years-background-paper>

The ideal snack

The ideal snacks provide energy, protein, carbohydrate, vitamins, minerals, dietary fibre and a good balance of dietary fats.

Ideally snacks should be **everyday** foods and come from the four food groups; vegetables and fruit, breads and cereals, milk and milk products and lean meat, poultry, seafood, eggs, legumes, nuts and seeds.

Below is an explanation of the difference between **everyday**, **sometimes** and **occasional** foods.

Everyday foods



Everyday foods and drinks are lower in energy, saturated fat and salt and are appropriate for **everyday** consumption. This includes foods and drinks that fit into the four food groups.

Everyday foods and drinks are the healthiest choices because in general they:

- Are rich sources of nutrients including vitamins and minerals
- Contain less saturated fat and/or salt and/or added sugar
- Help to prevent children and young people from consuming too many kilojoules (energy).

Sometimes foods



Sometimes foods and drinks are still good choices but are a bit higher in energy, saturated fat and salt and so should be eaten in moderation. **Sometimes** foods and drinks should not dominate the choices available.

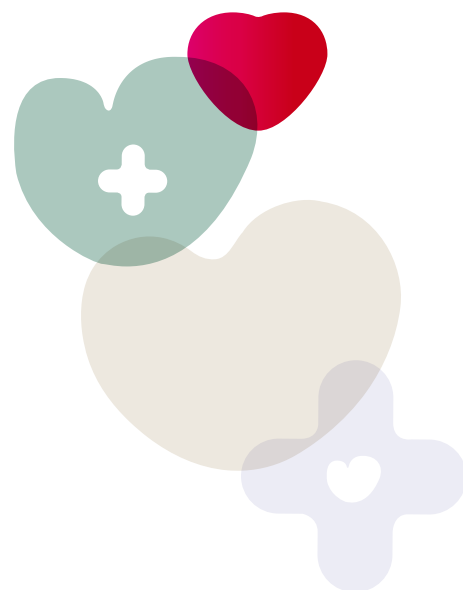
Examples include fruit drinks, flavoured milks, toasted muesli, fish fingers, ham, sausages, some muesli bars, crackers, biscuits, ice cream, muffins, cakes, slices, scones and pastries.

Occasional foods

Occasional foods and drinks are high in saturated fat and/or salt and/or added sugar. In general, they:

- are low in vitamins and minerals and provide minimal nutritional value
- contain significant levels of saturated fat and/or salt and/or sugar
- usually contribute excess kilojoules (energy).

Examples include confectionery, deep fried foods (e.g. chips, deep fried fish), full-sugar carbonated drinks, sports drinks and artificially-sweetened energy drinks.





Categorising healthy snacks



1. Cut out the pictures above and place each picture in the right food groups on the next page.
2. Looking at the pictures, what are your favourite healthy snack foods?
3. Put all the foods and beverages that don't fit into the four food groups in either the **sometimes** or **occasional** categories.
4. How did you decide that these foods and beverages fit into the **sometimes/occasional** category? If you are unsure, how could you find out?



Which box does each food picture belong in?

Vegetables and fruit

Breads and cereals

Lean meat, poultry, seafood,
eggs, legumes, nuts and seeds

Milk and milk products

Sometimes foods

Occasional foods



Planning for healthy snacks

Life can be busy, packed with family, friends, school work and play. Many people eat packet snacks from the **sometimes** or **occasional** categories because packet snacks can be convenient and quick to eat or drink on the go. Eating or drinking a healthy snack from the **everyday** category, such as yoghurt, can be just as easy. Planning for healthy snacks can help avoid the need to eat/drink **occasional** snacks on the run.

Activity

In groups (define roles) brainstorm your ideas for healthy snacks suitable for morning tea.

Record your ideas in Table 1 with a reason why each snack is a healthy choice.

Record examples of **occasional** snacks in Table 2 with a reason why each snack is NOT a healthy choice.



Table 1: Snack foods that are suitable as a healthy snack for morning tea

Snack food	Why it is a healthy snack

Table 2: Snack foods that are NOT suitable as a healthy snack for morning tea

Snack food	Why it is NOT suitable as a healthy snack



Deciphering food labels

Today there is a huge variety of packet snacks available. Supermarkets, dairies, petrol stations and food services are packed with these items. So how can you tell which ones are healthy? Learning to read labels can help you identify healthier products.

What must be on a food label?

Nearly all packaged food products require a label. In general, these items must be shown on a food label:

Nutrition information panel to allow you to compare the quantities of seven key nutrients per serving and per 100g or 100ml of liquid.

Ingredients are listed in decreasing order of weight. This includes any food additives, such as preservatives, flavours and colours, which are identified by their function and name or code number (e.g. Thickener (pectin)). Sometimes the percentage of the ingredient is also listed.

Directions for use and storage (where needed) to ensure the food will keep for the period indicated by the date mark, and/or how you should store the food to stop it spoiling.

The name and address of the supplier or business in New Zealand or Australia who can be contacted if more information about the product is needed.

Date marking is needed for most packaged food with a shelf life of less than two years, most commonly these are 'Use By' and 'Best Before' dates.

The name of the product.

Warning statements and advisory statements to identify certain ingredients/substances that may trigger allergies or be of concern.

Net weight or volume.



Foods that don't require a label

- Unpackaged food
- Food made and packaged where it is sold or packaged in front of you
- Ready-to-eat food delivered to order
- Whole or cut fresh fruit and vegetables
- Food sold at a fundraising event.

Source: www.foodsmart.govt.nz/whats-in-our-food/food-labelling/understanding-food-labels/

Resource 4

What is a nutrition information panel?

The nutrition information panel (NIP) provides you with easy access to nutrition information about the food. The NIP must contain nutrient information about seven key nutrient components – energy, protein, fat, saturated fat, carbohydrates, sugars and sodium (salt).

This information helps you compare products across these seven nutrient components and make healthy food choices. These quantities are shown per serving and per 100 grams (g) or 100ml of liquid. When comparing products, always use the per 100g/100ml column not the 'per serve' column, as serving sizes can vary with different products. Looking at the 100g/100ml column allows for consistency.

Nutrient information

Energy

Energy is the fuel our body uses to live, speak, think, breathe, move and function. We get this energy from food and beverages. Carbohydrates, proteins and fats are the three main nutrients that provide energy.

Kilojoule (kJ)

The kilojoule is a measurement of energy. It can be used to quantify how much energy we can get from the food we consume or how much energy we use up. One gram of protein or carbohydrate provides 17kJ. Fat is a more energy-rich nutrient, providing 37kJ per gram. Most foods are a combination of carbohydrate, protein, fat and fibre. The number of kilojoules in a food is the sum of the kilojoules provided by each nutrient. Reading the nutritional label tells us the total amount of energy present in a serving or per 100g/100ml mass of that food/liquid.

Fat

Fat provides protection for our organs and insulates our bodies. It also helps fuel our bodies if our energy demands increase. Food contains a mixture of four types of fats – monounsaturated, polyunsaturated, saturated and trans fat. One type of fat usually dominates in food for example, butter is mainly saturated fat. Use all fats in small amounts as they all contain high levels of energy.

SERVINGS PER PACK: 5 SERVING SIZE: 200mL		
AVERAGE QUANTITY	PER SERVE	PER 100mL
ENERGY	308kJ	154kJ
PROTEIN	7.5g	3.7g
FAT – total	0.2g	0.1g
– saturated	0.2g	0.1g
CARBOHYDRATE	10.2g	5.1g
– sugar	10.2g	5.1g
SODIUM	91mg	46mg

Use 100mL column

Monounsaturated fats

Use in small amounts. These fats can help reduce the risk of heart disease.

Major food sources:

- Avocados, canola oil, olives and olive oil
- Peanuts, peanut butter, almonds, macadamias and hazelnuts.



Polyunsaturated fats

Use in small amounts. These fats can help reduce the risk of heart disease.

Major food sources:

- Sunflower oil, corn oil and soybean oil
- Wheatgerm, seeds and nuts (e.g. brazil nuts, walnuts) and fish oils.

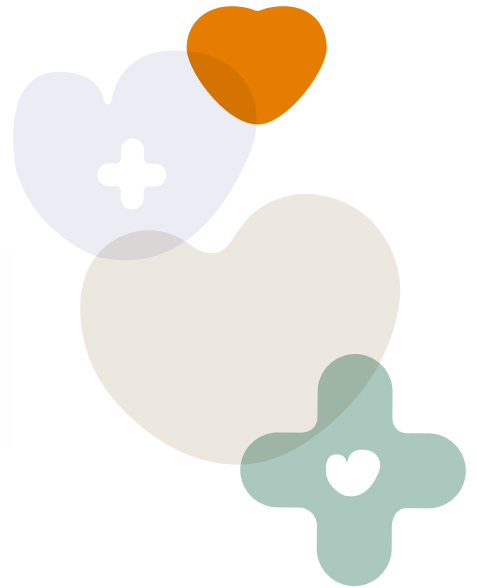


Saturated fats

Aim to eat only **occasionally**; these fats raise blood cholesterol and promote heart disease.

Major food sources:

- Processed meats such as sausages, ham and salami
- Coconut, coconut cream, palm oil
- Butter, dark blue top milk, cream, hard cheeses, cream cheese, sour cream and ice cream.



Trans fats

Aim to eat only occasionally; these fats raise blood cholesterol and promote heart disease.

Major food sources:

- Processed foods such as pies, packet biscuits, crackers and cakes
- Meat, milk and milk products
- Deep fried foods.



Sugar

Sugar is a simple type of carbohydrate providing energy and sweetness to food. It does not contain the same amount of vitamins, minerals and fibre that wholegrain sources of carbohydrate provide. If we eat foods high in sugar with fewer other nutrients we can often feel our energy levels go up and down. Too much sugar also contributes to tooth decay.



Fibre

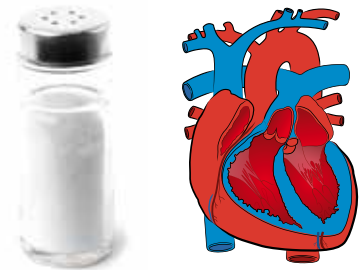
Fibre is found in breads and cereals, legumes, vegetables and fruit and nuts. Fibre helps to fill us up and digest our food.



Sodium

Sodium is a nutrient which helps regulate the amount of fluid in our bodies.

Most of our sodium intake comes from processed meat, bread, cheeses, breakfast cereals and canned goods. Too much sodium can increase blood pressure and make it harder for our hearts to pump.





Comparing packet snacks

Part one

Look at the muesli bar nutrition information panel below. Using the nutrition guidelines, answer the questions below by circling yes or no (Y/N).

Nutrition information panel – muesli bar

	Qty Per Serving (45g)	Qty Per 100g
Energy	723kJ	1610kJ
Protein	3.6g	8.1g
Fat – total	7.9g	17.6g
Fat – saturated	2.3g	5.0g
Carbohydrate – total	21.6g	48.0g
Sugar	6.7g	18.9g
Sodium (salt)	14mg	31mg
Fibre	2.1g	4.7g

INGREDIENTS: Cereals, wholegrain oats, barley, rice bran oil, brown sugar, glucose syrup, coconut, cinnamon, vegetable fat, colour (caramel), seeds 10% (sunflower, sesame, pumpkin), raising agent (503).



Does the muesli bar:

...meet the total fat guideline? **Y / N**

...meet the sugar guideline? **Y / N**

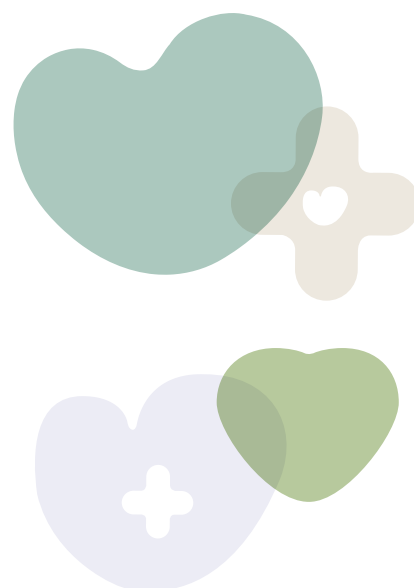
...meet the sodium guideline? **Y / N**

...meet the fibre guideline? **Y / N**

When looking at nutrition information on snack or products per 100g, use the guidelines below to help you make a healthier choice:

Nutrient	Qty Per 100g
Fat – total	Less than 10g
Fat – saturated	Less than 2g
Sugar	Less than 15g
Sodium (salt)	Less than 400mg
Fibre	Greater than 5g

Please note that these are general label reading guidelines for all foods. The fuelled4life criteria uses different guidelines for different categories.



Part two

Look at the table below comparing the nutrient composition of a large biscuit and two wholegrain crackers.

Using the nutrition guidelines, answer the questions below by circling yes or no (Y/N).

Nutrition information panel – comparison of a large biscuit and wholegrain crackers

Nutrient	Large biscuit (per 100g)	Wholegrain crackers (per 100g)
Fat – total	22.4g	9.4g
Fat – saturated	14.4g	1.1g
Sugar	38.4g	1.8g
Sodium (salt)	358mg	452mg
Fibre	0g	12.0g



VS

*Does the large biscuit:*

...meet the total fat guideline? **Y / N**

...meet the sugar guideline? **Y / N**

...meet the sodium guideline? **Y / N**

...meet the fibre guideline? **Y / N**

Do the wholegrain crackers:

...meet the total fat guideline? **Y / N**

...meet the sugar guideline? **Y / N**

...meet the sodium guideline? **Y / N**

...meet the fibre guideline? **Y / N**

Part three

Choose two packet snacks that you like. Look at the nutrient information on the nutrition information panel to fill in the table below, then answer the following questions by circling yes or no (Y/N).

Nutrient	Snack one (per 100g/100ml)	Snack two (per 100g/100ml)
Fat – total	g	g
Sugar	g	g
Sodium (salt)	mg	mg
Fibre	g	g



Does snack one...

- ...meet the total fat guideline? Y / N
- ...meet the sugar guideline? Y / N
- ...meet the sodium guideline? Y / N
- ...meet the fibre guideline? Y / N

Does snack two...

- ...meet the total fat guideline? Y / N
- ...meet the sugar guideline? Y / N
- ...meet the sodium guideline? Y / N
- ...meet the fibre guideline? Y / N

Resource
5

Food additives – extension topic

Food additives are used to:

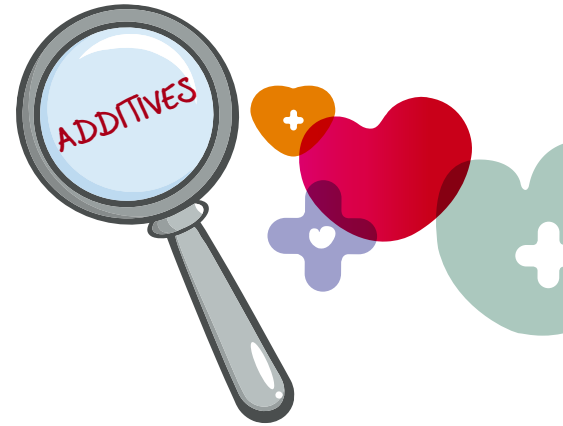
- Improve the keeping quality of a food by making it last longer on the shelf or in the fridge. For example, salt (sodium) is used as a preservative to prevent the growth of bacteria and humectant is used to stop food from drying out.
- Improve the taste or appearance of a food. For example, the use of flavours, thickeners and colours.

A benefit of food additives is that consumers can be offered a wider choice of foods. Many processed foods contain additives. Some common examples are bacon, margarine, ice cream and bread.

Many food additives occur naturally, such as red colour from beetroot and the purple colour from grape skins. These colours can be extracted and added to other foods.

Some food additives found in nature can be manufactured, for example, ascorbic acid or Vitamin C. Other additives are manufactured but not found in nature, such as aspartame, which is used to replace sugar.

Some people believe that because food additives are chemicals they should be banned. A small number of people may have adverse reactions to some food additives, just as some people may be allergic to or have adverse reactions to peanuts, milk or shellfish. Food labelling helps people who are sensitive to certain food additives to avoid them.



List of ingredients found in products 1–4 of the label reading snackivity that follows:

Vitamins:

Niacin, thiamine, riboflavin, folic acid

Minerals:

Iron

Fats:

Yoghurt compound (vegetable fat), vegetable oil (contains either corn, soybean or sunflower oil, coconut, milk chocolate, cocoa butter, cocoa mass, palm kernel oil and soybean oil)

Sugar:

Sugar, honey, lactose (milk sugar), corn syrup, dextrose

Carbohydrates:

Wholegrain cereals, rolled oats, whole wheat, glucose (wheat), maize starch, oat flour, rice flour, enriched flour, corn meal, barley flakes, roasted buckwheat and wheatgerm

Milk/milk products:

Skim yoghurt powder, whey powder, skim milk powder, milk ingredients, whey, cheddar cheese and sour cream

Additives:

Emulsifiers, food acid (citric), antioxidants (304,306), humectant (sorbitol), preservative (220), artificial flavour, salt, sodium bicarbonate, disodium phosphate, monosodium glutamate, lactic acid and artificial colours

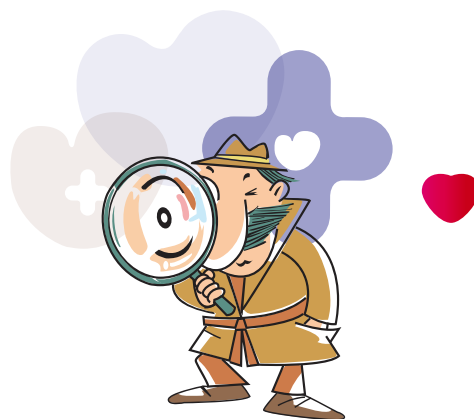
Dried fruits, nuts and seeds:

Sesame seeds, pepitas (pumpkin seeds), sunflower seeds, almonds, dried apricot, dried apple and dried fruit medley

Source: <http://www.foodsmart.govt.nz/whats-in-our-food/chemicals-nutrients-additives-toxins/food-additives/>



Label detective



Please work in groups using resource 5 for help with this activity.

Product 1

Wholegrain cereals (30%) [rolled oats (22%), whole wheat (8%)], yoghurt compound [sugar, vegetable fat, skim yoghurt powder (4%), whey powder, emulsifiers (soy lecithin, 492), food acid (citric)], glucose (wheat), sugar, dried apricot (5%), vegetable oil [emulsifier (soy lecithin), antioxidants (304, 306)], dried apple, maize starch, coconut, humectant (sorbitol), almonds, honey, oat flour, rice flour, skim milk powder, emulsifier, food acid (citric), preservative (220).

Product 2

Milk chocolate (sugar, cocoa butter, milk ingredients, cocoa mass, lactose, artificial flavour), enriched flour (flour, niacin, iron, thiamine, riboflavin, folic acid), sugar, palm kernel oil, corn syrup, milk ingredients, dextrose, salt, cocoa mass, sodium bicarbonate, soybean oil, artificial flavour.

Product 3

Enriched corn meal (iron, niacin, thiamin, riboflavin, and folic acid), vegetable oil (contains one or more of the following: corn, soybean, or sunflower oil), whey, salt, cheddar cheese, soybean oil, maltodextrin, disodium phosphate, sour cream, artificial flavor, monosodium glutamate, lactic acid, artificial colors (including yellow 6), and citric acid.

Product 4

Rollled oats, barley flakes, roasted buckwheat, wheatgerm, coconut flakes, sesame seeds, almonds, dried fruit medley, pepitas (pumpkin seeds), sunflower seeds.

1. On page 26 are four snack food products you would find in the supermarket. Using resource 5, highlight with different colours the ingredients that are vitamins, minerals, fats, sugars, carbohydrates, dried fruit and nuts, milk products and additives contained in these four products.

2. If you were to provide snacks with minimal additives for your class, which of these four products would you choose?

3. Why do people choose products that contain a lot of additives?

4. What do you think the four products listed on page 26 are?

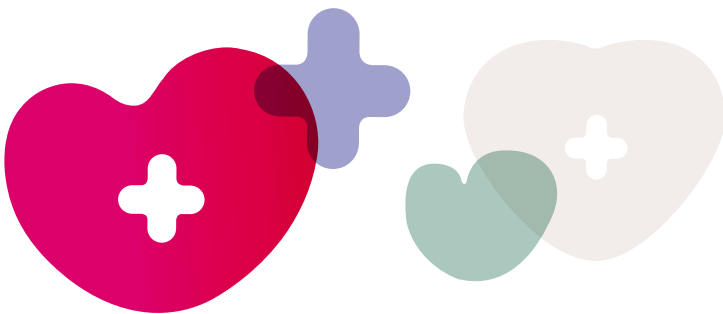
Product 1 is:

Product 2 is:

Product 3 is:

Product 4 is:

5. What have you noticed about these packet snacks? Do you think they are a healthy choice? Why/why not?



Lessons 6–8

Using fuelled4life



Overview: We are learning to label read and use fuelled4life to help us choose healthier packet snacks (HP SLO 1, 2; E SLO 1, 2, 3).

Opportunities for assessment	Structure	Curriculum and resource links
<p>Learning outcomes</p> <p>We are successful in our learning when we can:</p> <ul style="list-style-type: none"> Use the information on the fuelled4life website to identify which snack foods and beverages are more healthy and nutritious than others Use fuelled4life to improve food provision at your school Work out the cost of occasional versus healthy snacks Explain what a healthy and delicious snack looks, tastes, feels and smells like. <p>Te Reo</p> <p>Learning intentions and success criteria rubrics for Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Learning-intentions-and-success-criteria</p> <p>Te wā Kai</p> <p>Using success criteria and assessment rubrics at http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Learning-intentions-and-success-criteria</p> <p>Evidence: to assess Taumata level 3</p> <p>Evidence: Teach and assess social and interpersonal skills. Student, peer and teacher assessment ongoing.</p>	<p>Prepare</p> <ul style="list-style-type: none"> Resources and snackactivities listed below. <p>Connect</p> <ul style="list-style-type: none"> What things do we look for in a food to know if it is good for us or not? E.g. energy, carbohydrate, protein, sugar, fat. These are called 'nutrients' and each has a purpose. <p>Activate</p> <ul style="list-style-type: none"> Introduce fuelled4life to the class using the information in resource 6 and the fuelled4life website. <p>Demonstrate</p> <ul style="list-style-type: none"> Students complete snackactivities 6, 7 and 8. <p>Consolidation</p> <ul style="list-style-type: none"> Students discuss findings from snackactivities. 	<p>Pedagogical links:</p> <ul style="list-style-type: none"> Facilitating shared learning Making connections to prior learning Providing sufficient opportunities to learn. <p>Key competencies:</p> <ul style="list-style-type: none"> Thinking Using language, symbols and texts Managing self Relating to others Participating and contributing. <p>Literacy:</p> <ul style="list-style-type: none"> Integrate different sources of information, processes, and strategies to inform thinking about appropriate foods Interpret information on labels to make judgments. <p>Te Reo:</p> <p>Ongoing opportunities to assess Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Assessment-opportunities</p> <p>Te wā Kai:</p> <p>http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Assessment-opportunities</p>

Resource
6Identifying healthy snacks
using fuelled4life

Fuelled4life is the Heart Foundation's system to help schools improve the food and beverages they provide for children and young people. The system uses a nutrient criteria (a benchmark for the level of fat, salt and energy in the product) to work out which products are healthier.

Food and beverage companies register products with fuelled4life. If their product meets the nutrient criteria they are listed as either **everyday** or **sometimes** in the Buyers' Guide. The Buyers' Guide is sent to schools to help them choose healthier products. They are also online at www.fuelled4life.co.nz. You can use the fuelled4life Buyers' Guide and website to help you choose healthier snacks.



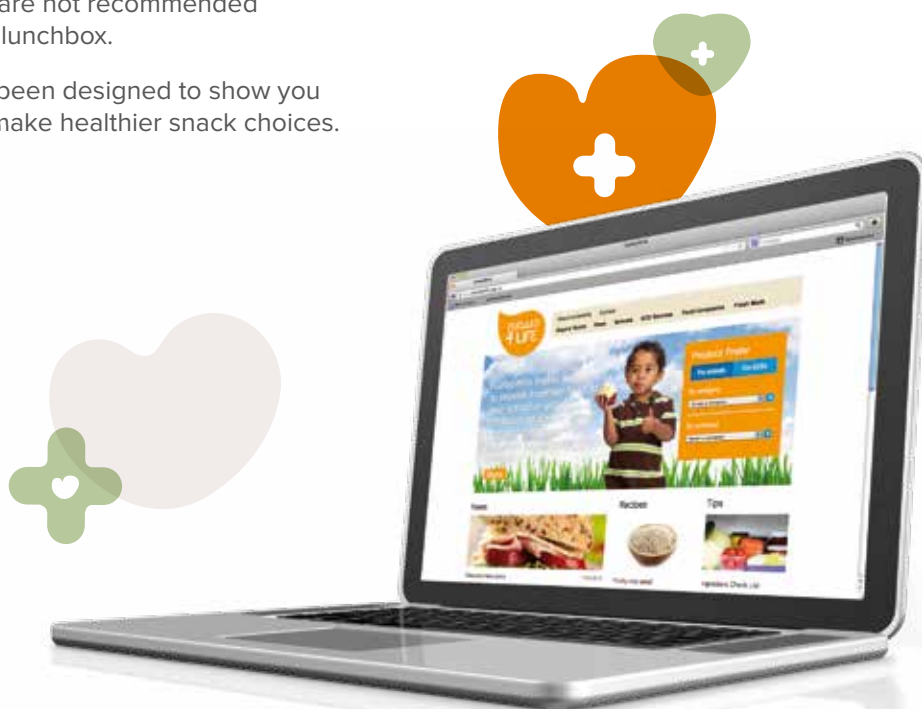
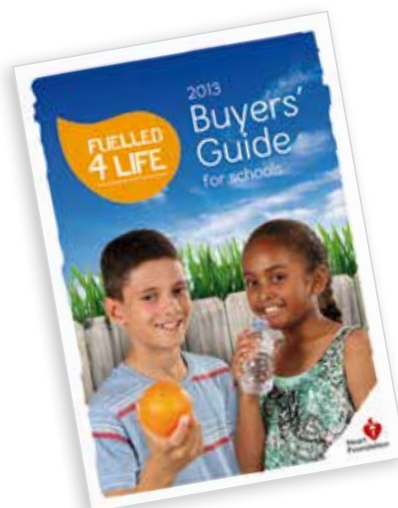
Healthy snacks should ideally come from the **everyday** category. **Everyday** products come from the four food groups; vegetables and fruit, breads and cereals, milk and milk products or lean meat, poultry, seafood, eggs, legumes, nuts and seeds. They are lower in fat, salt and energy.



Sometimes foods and drinks are still good choices but are a bit higher in energy, saturated fat and salt and so should be eaten in moderation. **Sometimes** foods and drinks should not dominate the choices available.

Occasional foods are those foods that do not fit into either category as they contain high levels of fat, salt or energy. These include foods such as deep fried foods, full-sugar drinks and confectionery. These are not recommended for the school canteen or school lunchbox.

The following snackactivities have been designed to show you how you can use fuelled4life to make healthier snack choices.





Classifying snacks

1. Classify the snacks in the table below into five **everyday** snacks and five **sometimes** snacks.

Complete the table below by going to **www.fuelled4life.org.nz** and click on the 'Product finder/For Schools' tab. Click on the 'By category' drop down box and click on each category listed in the table below. Here you will see a list of snack items registered with fuelled4life.

Items in green are **everyday** products and items in blue are **sometimes** products.

Once you have found each snack item, classify each item as either an **everyday** product or **sometimes** product. Place a tick in the **everyday** or **sometimes** column in the table below.



No.	Product	Category	Everyday	Sometimes
1	Multigrain cereal bar	Snack items		
2	Small flavoured milk drink	Milk and milk products		
3	Fruit cup	Vegetables and fruit		
4	Rice crackers	Snack items		
5	Fruit salad	Vegetables and fruit		
6	Dried apricots	Snack items		
7	Yoghurt pottle	Milk and milk products		
8	Fruit toast	Breads and cereals		
9	Almonds	Snack items		
10	Celery	Vegetables and fruit		

2. What do you notice about the **everyday** snacks compared to the **sometimes** snacks?

3. What are your favourite snacks?



Fuelled4life and schools

Everyone needs to be active and eat well to be healthy and happy. Fuelled4life can help you and your parents identify healthy food and beverages. There are also a set of guidelines developed by the Ministry of Health to guide our food and beverage choices. These are called 'Eating for Healthy Children aged 2–12, Nga Kai Totika mote Hunga Kohungahunga'.

Go to the fuelled4life website to review these guidelines:

<http://www.fuelled4life.org.nz/tips/eating-for-healthy-children-aged-2-to-12-ngaa-kai-ttika-m-te-hunga-khungahu>

Answer the following questions:

1. Why is it important to consume healthy food and beverages as young people?

2. Fuelled4life can help your school improve its food provision to assist students to remain focused and energised for their school day. This could include food provided through your:



School canteen/
lunch order



School events
including sports days



Cultural activities



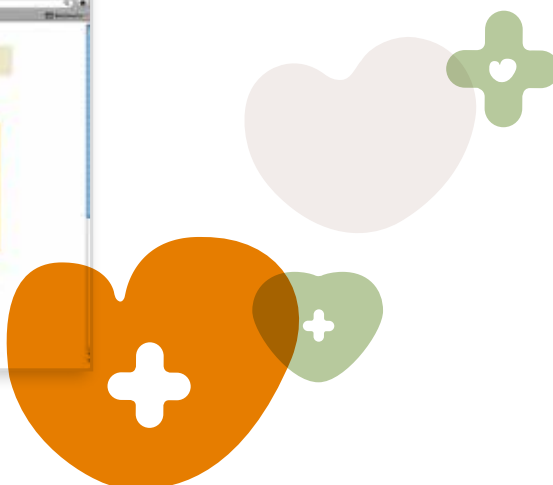
School camps



School fundraisers

Pick one of these scenarios and give two examples of changes that could be made using fuelled4life to improve food provision. For example, at the school canteen, you could swap the current white bread sandwich for wholegrain bread.

3. Thinking about the suggestions you have made in question 2, can you form a student health team and use these suggestions to improve your school food provision?
4. Go to the fuelled4life website page titled 'Understanding Labels'. What three important nutrients do the fuelled4life team concentrate on to make sure only healthy food and beverages are included in the Buyers' Guide?
Visit the 'Understanding Labels' page at <http://fuelled4life.org.nz/tips/understanding-labels>





Go to the fuelled4life website page titled 'Buyers' Guide' and research under the Schools section. Under each category in the table below pick your favourite food product. Identify what the main benefits are for you.



Category	Name of chosen product	Why this is good for me
Beverages		
Snack items		
Milk and milk products		
Breads and cereals		
Lean meat, poultry, seafood, eggs, legumes, nuts and seeds		
Vegetables and fruit		
Mixed meal dishes		

Your teacher will select one of the scenarios below for your class

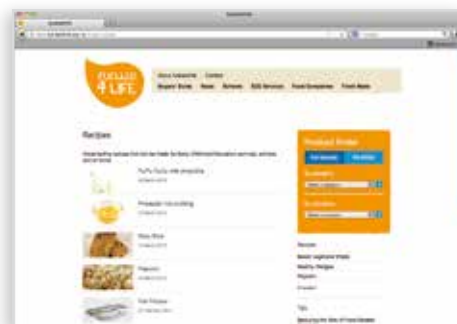
Scenario 1

Your class is going on a school camp in the Coromandel for two days in February. Help keep your class fuelled for a fun, active two days by creating a tasty and nutritious lunch menu. Go to the fuelled4life website page titled 'Buyers' Guide' and under the Schools section use the products listed to develop a main lunch dish that includes vegetables, a snack that includes fruit and a healthy beverage.



Scenario 3

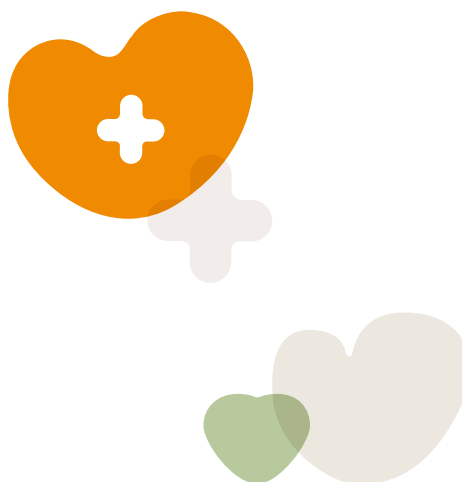
Go to the recipe page on the fuelled4life website. Pick your favourite recipe to try at home with an adult.



Scenario 2

Using the healthy snack plan on the following page, suggest a healthy range of snacks to include in your lunchbox for one week. The list below will give you some healthy snack ideas. Think about the after-school activities you have on during the week, will you need more energy on some days compared to other days? How does this affect your snack plan?

- Fresh fruit
- A fruit smoothie
- Fruit platter with yoghurt
- Canned fruit with custard/jelly
- Cut up carrots, celery, capsicum and cherry tomatoes with hummus/peanut butter and salsa
- Yoghurt pottles
- Dairy food pottles
- Flavoured milk drinks or plain milk
- Wholegrain toast and topping
- Trail Mix – raw nuts such as walnuts, almonds, cashews, dried apricots, dates, sunflower seeds
- Popcorn – air popped
- Fruit bread with spread
- Home-made pita bread pizzas with spaghetti and edam cheese.



Healthy snack plan

Draw and name healthy snacks to include in your school lunchbox. Think about including food from the four food groups; breads and cereals, milk and milk products, vegetables and fruit, lean meat, poultry, seafood, eggs, legumes, nuts and seeds.

Healthy snack for morning tea

MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY

Healthy snack for an after school activity

MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY



Cost comparison

We want to compare the cost of various healthy snacks with **occasional** snacks. How do you think we could do that? What we need to know is the cost of a serving. In order to do this we need to take the total cost of the product and divide it by the number of servings we receive in the packet/ container of the product. Remember to check the serving size on the nutrition information panel as serving sizes vary. Is the serving size what you would actually eat as a snack?

For example: A tray of yoghurt (\$4.49) has six pottles (servings). In order to work out the cost per serving we need to take the total cost of the product and divide it by the number of servings.

For example: \$4.49 divided by six equals \$0.74c. The cost of a serving of yoghurt is therefore \$0.74c.

1. Complete the table below for four of the **occasional** snacks (Table 4) and four of your favourite healthy snacks (Table 5).



Table 4: Occasional snacks

<i>Occasional snack</i>	<i>Total cost</i>	<i>Number of servings</i>	<i>Cost per serving</i>
1. One packet of chips in a multipack of 12 packets of chips	\$5.99	12	$\$5.99 \div 12 = \0.49
2. One chocolate-covered muesli bar in a pack of six bars	\$3.00	6	
3. Three chocolate biscuits in a packet of 12 biscuits	\$4.12	4	
4. One big biscuit in a multipack of nine big biscuits	\$8.55	9	

Table 5: Healthy snacks

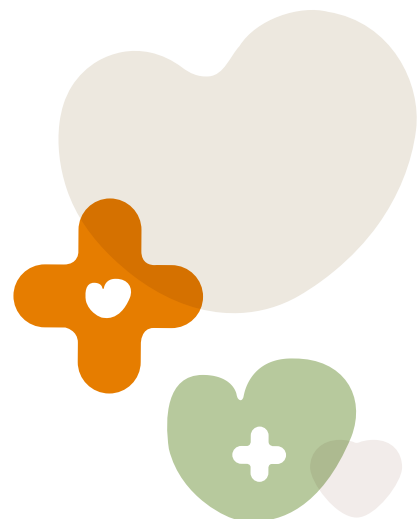
Healthy snack	Total cost	Number of servings	Cost per serving
1. One banana in a bunch of five bananas	\$1.99 a bunch	5	$\$1.99 \div 5 = \0.40
2. One pottle of yoghurt in a multipack of 12 yoghurts	\$5.49 pack	12	
3. One carrot in a bag of 15 carrots	\$2.19 a bag	15	
4. One slice of wholegrain bread in a bag of 19 slices	\$3.29 a bag	19	

2. Compare the cost of the **occasional** snacks previous (Table 4) with the cost of four healthy snacks (Table 5).

E.g. comparing the cost of pottle of yogurt \$0.74c with a chocolate bar \$1.50 for 40g bar.

- What do you notice about the cost of the healthy snacks in comparison to the **occasional** snacks?

- Which are the most cost effective snacks?



Lessons 9–11

Energy balance

Overview: We are posing the following questions: What snack foods did people in New Zealand eat in the past? What snack foods do people eat in other countries? How do we know which snack foods are good for us? How can we find out? What are the challenges we face in eating the right snack foods to meet our energy needs? How can we make sure we are getting the right balance of energy in versus energy out? What could we do with this information? (HP SLO 1, 2, 3, 4; E SLO 1, 2, 3, 4; T SLO 1, 2).






Opportunities for assessment	Structure	Curriculum and resource links
<p>Learning outcomes</p> <p>We are successful in our learning when we can:</p> <ul style="list-style-type: none"> Use prior knowledge and a range of information to predict what foods and beverages are everyday and sometimes Demonstrate the ability to analyse foods and beverages from the past and other cultures in terms of their nutrients and energy content Explain that good health is achieved when we balance the amount of energy consumed (through foods and beverages) with energy out (expended through activity and growth) Explain what the most suitable snack foods are for athletes. <p>Te Reo</p> <p>Learning intentions and success criteria rubrics for Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Learning-intentions-and-success-criteria</p> <p>Te wā Kai</p> <p>Using success criteria and assessment rubrics at http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Learning-intentions-and-success-criteria</p>	<p>Prepare</p> <ul style="list-style-type: none"> Snackactivities listed below. <p>Connect</p> <ul style="list-style-type: none"> As a class reflect on what we have learnt so far about snack foods and beverages using a bus stop activity. Place headings (everyday, sometimes, occasional, nutrition information panel, cost effective, snack packaging) on A3 paper around the room Ask students to work in groups and rotate around each of the A3 headings, putting in writing the new things they have learnt in these areas as well as a question they have in relation to snack foods and beverages (these groups will become their study groups) Complete bus stop activity in given timeframe. The last group at each bus stop reports back on the findings Explain that we are now going to look at snack foods New Zealanders ate in the past and snack foods eaten in other countries. The particular focus will be identifying the amount of energy these foods provide and balancing this with our energy requirements. <p>Activate</p> <ul style="list-style-type: none"> Snackactivities 9 and 10 <p>Demonstrate</p> <ul style="list-style-type: none"> Snackactivity 11 <p>Consolidation</p> <ul style="list-style-type: none"> Snackactivity 12 and snackactivity 13 Please note snackactivity 13 is an extension activity. 	<p>Pedagogical links:</p> <ul style="list-style-type: none"> Encouraging reflective thought and action Enhancing the relevance of new learning Facilitating shared learning Making connections to prior learning Providing sufficient opportunities to learn E-learning. <p>Key competencies:</p> <ul style="list-style-type: none"> Thinking Using language, symbols and texts Managing self Relating to others Participating and contributing. <p>Literacy:</p> <ul style="list-style-type: none"> Demonstrate an ability to gather, read, understand and effectively present nutrition information for a specific purpose Select relevant information. Language development and developing an understanding about interpersonal communication skill development through focused small group discussion. <p>Te Reo:</p> <p>Ongoing opportunities to assess Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Assessment-opportunities</p> <p>Te wā Kai:</p> <p>http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Assessment-opportunities</p>



Snacks from the past



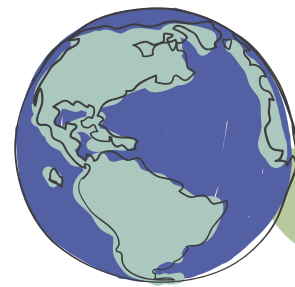
1. Match up the items you see below. Use lines to connect the snack eaten by Māori many years ago with 'what it is' and the image of the snack. Use the internet (Google) and the library as resources to find the correct answer.
2. Would these snacks be classified as **everyday**, **sometimes** or **occasional** snacks?

Snack	What it is	Image
Tuna	Māori chewing gum	
Kutai or Toretore	Sea urchin	
Kumara	Mussels	
Kapia	Eel	
Kina	Māori sweet potatoes	



Snacks around the world

Various cultures have their own snack foods and beverages. Below is a list of international snacks that are eaten in other countries. Find out what these snacks are, which country they come from and decide if they're an **everyday**, **sometimes** or **occasional** snack. Place a tick in the correct column to show whether they are an **everyday**, **sometimes** or **occasional** food. You can find this information by using the library or internet.



	<i>What is it?</i>	<i>Country</i>	<i>Everyday</i>	<i>Sometimes</i>	<i>Occasional</i>
	Pakora				
	Fudge				
	Lokum				
	Churros				
	Frites				
	Cokodok				
	Malasada				
	Salmiak				
	Papaya				
	Edamame				
	Arancini				
	Pistachio				



Snacks comparison

Compare the snacks from snacktivity 9 with the snacks from snacktivity 10.

1. Draw a line from each snack in the table to the bubble it belongs with on the right hand side.
2. What differences are there between the two groups?

3. We know that **occasional** foods are higher in total energy than **everyday** foods. What does this mean for people eating **occasional** snacks regularly?

Snacks eaten by Māori in the past

Mussels

Sea urchin

Eel

Māori sweet potatoes

Tuna

Snacks eaten in other countries

Pakora

Lokum

Edamame

Frites

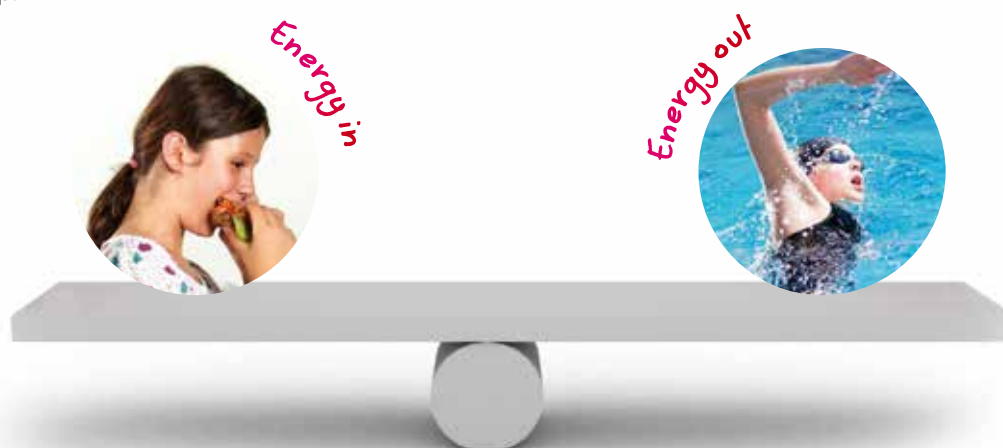
Churros





Energy balance

Balancing our energy requirements means thinking about the energy that we use when we are doing school work, physical activity or even playing with friends. Children and young people also need energy to help them grow and develop. To balance the energy going out of our bodies we need to think about putting energy in through eating and drinking. The more energy you take in, the more energy you have to use up.



In the past, young people were very active and did a lot of manual work such as helping with the planting and harvesting of food and chores around the house. They also entertained themselves with traditional games and activities rather than watching television or playing on a computer. With less manual labour required in our daily life, we could be using less energy.

Thinking about snacktivity 9 we found that snacks eaten in the past came from the **everyday** category. Today there are many snacks available to us from the **sometimes** and **occasional** categories. These snacks can be high in energy, providing more energy than we need.

1. With our energy requirements decreasing and our energy intake increasing through high-energy snacks, how could this affect our health?
2. What would happen if a farmer and his family moved from their large farm in Timaru to a small apartment in Auckland city? How would their lives and energy requirements change?
3. Why is it important for our health to balance the amount of energy we consume (food and drink) with the energy we use through growth and activity?





Energy requirements of junior athletes – extension topic

We have learnt about the importance of balancing energy in versus energy out. Not everyone needs the same types of snacks or the same amount of snacks. Junior athletes have higher energy requirements as they can be training or competing for up to four hours a day.

Scenario

Jenny is an elite junior swimmer training for the Commonwealth Youth Games, held in Samoa in 2015. Jenny is training for up to three hours before and after school. She is often tired in class and finds it hard to concentrate on her school work, especially in the afternoon. She has been told off twice for falling asleep in class and Jenny's parents are concerned that her school work is suffering because she is always so tired. Healthy snacks can help Jenny stay fuelled for swimming training and help keep her energised and focused at school.



1. How does Jenny's energy requirements differ from your energy requirements?

2. Using the table below, can you find five healthy snacks that Jenny can eat for morning or afternoon tea?

Description of snack	Food group(s)	Good source of:
Bowl of wholegrain cereal with low-fat milk 	<ul style="list-style-type: none"> • Breads and cereals • Milk and milk products 	Carbohydrate, fibre, vitamins and minerals, calcium

Lessons 12–13

Inquiry - snack preferences

Overview: We want to conduct a survey to identify snack preferences. We are engaging in and reflecting on an interview process. Preparing questions for an upcoming survey and practising interviewing each other. Conducting a survey and recording answers within our assigned groups (E SLO 1, 2, 3, 4; M SLO 1; T SLO 1, 2, 3, 4).

Opportunities for assessment	Structure	Curriculum and resource links
<p>Learning outcomes</p> <p>We are successful in our learning when we can:</p> <ul style="list-style-type: none"> Identify and demonstrate effective interviewing techniques Give and receive constructive feedback Make improvements based on the feedback received Demonstrate the oral, reading and written communication skills required to conduct a survey (asking people to take part, reading questions clearly, recording answers accurately/legibly, and thanking participants for their time) Collate findings from our survey Select the best way to present/display our findings Identify patterns, trends and relationships within the data Make comparisons between the data. <p>Te Reo</p> <p>Learning intentions and success criteria rubrics for Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Learning-intentions-and-success-criteria</p> <p>Te wā Kai</p> <p>Using success criteria and assessment rubrics at http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Learning-intentions-and-success-criteria</p>	<p>Prepare</p> <ul style="list-style-type: none"> Resource 2 and snackivities listed below. <p>Connect</p> <ul style="list-style-type: none"> Read snackivity 14 together and discuss When we are interviewing people for our survey, how might we introduce ourselves and our study? <p>Activate</p> <ul style="list-style-type: none"> Model good and not so good interviewing techniques through role play and ask students to identify these features e.g. not looking at person, muffled voice, speaking too quickly. Create a checklist of interview technique reminders In groups of three, students interview each other recording on the interview sheet in snackivity 14. One to conduct interview, one to record and the other to observe. Rotate roles Ask 'what did we do well, what did we not do well, what could we improve on next time and how?' How could we record the responses? (See snackivity 15). <p>Demonstrate</p> <ul style="list-style-type: none"> Students work in their group of three. One member of the group surveys five boys, another member surveys five girls and the remaining group member surveys five adults who do the grocery shopping for a family with children (using your own whānau). They record the results on snackivity 15 Review interview sheets. Ask each group to tally up their results under the headings 'Boys', 'Girls' and 'Adults'. 	<p>Pedagogical links:</p> <ul style="list-style-type: none"> Encouraging reflective thought and action Enhancing the relevance of new learning Facilitating shared learning Making connections to prior learning Providing sufficient opportunities to learn E-learning. <p>Key competencies:</p> <ul style="list-style-type: none"> Thinking Using language, symbols and texts Managing self Relating to others Participating and contributing. <p>Literacy:</p> <ul style="list-style-type: none"> Demonstrate an ability to gather, read, understand and effectively present nutrition information for a specific purpose Select relevant information. Language development and developing an understanding about interpersonal communication skill development through focused small group discussion. <p>Te Reo:</p> <p>Ongoing opportunities to assess Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Assessment-opportunities</p> <p>Te wā Kai:</p> <p>http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Assessment-opportunities</p>

Lessons 12–13

Inquiry – snack preferences *continued*

Opportunities for assessment	Structure	Curriculum and resource links
See previous page.	<ul style="list-style-type: none"> • What are the conclusions we might draw from this information? Model how this might be recorded in summary statements. Ask students to write their own conclusions • Present findings in snackivity 15 • What comparisons might we make with this information? Model examples. Students complete at least one • Using resource 7 discuss and model how to graph this information e.g. type of graph, axis headings etc. If possible students to look at examples on http://www.nzmaths.co.nz/statistical-investigations-units-work • Students to graph information (individually or as a group) • Record each of these steps on A3 paper for referral throughout the analysis stage. <p>Consolidation</p> <ul style="list-style-type: none"> • Review each of the steps required for data collation and analysis • Record at least two conclusions and one comparison by gender and by age • Are there any patterns or trends? • Share findings with teacher and with one other group. 	See previous page.



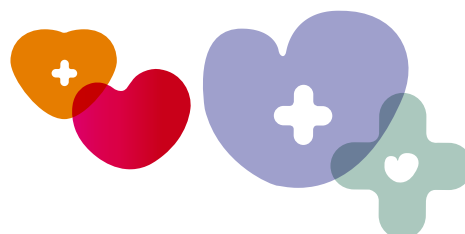
Snack survey

When you buy snacks for yourself or your family, what are you looking for in a snack? What influences your choice of snack foods?

Survey either: five girls in your class OR five boys in your class OR five adults who do the grocery shopping for a family with children (you can use your own whānau). Below is a suggested survey you can use.

(make copies of your survey and cut at the dotted line)

Your name: _____



1. Please select your gender

- ☐ Male
☐ Female

2. Which age group do you fit into? (please circle)

0–10 11–15 16–20 21–25 26–30 31–35 36–40 41–45 46–50 51–55 56+

3. Do you eat snack foods?

- ☐ Yes
☐ No

4. If yes to the above, what are your three preferred snack foods?

(starting with your favourite snack)

1. _____
2. _____
3. _____

5. Tick the two things that you like most about these snack foods

- | | |
|---|---|
| <input type="checkbox"/> How it looks | <input type="checkbox"/> Has the Heart Foundation Tick |
| <input type="checkbox"/> It is a healthy choice | <input type="checkbox"/> Is a fuelled4life product |
| <input type="checkbox"/> Seen it advertised on TV | <input type="checkbox"/> How it feels |
| <input type="checkbox"/> How it tastes | <input type="checkbox"/> It comes in a cool package |
| <input type="checkbox"/> It is not expensive | <input type="checkbox"/> Satisfactory nutrient criteria listed on the nutrition information panel |
| <input type="checkbox"/> It won't get damaged in the lunchbox | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> How it smells | |
| <input type="checkbox"/> It is always available | |

6. When do you eat snacks?

- | | |
|---|--|
| <input type="checkbox"/> Mornings | <input type="checkbox"/> On the weekends |
| <input type="checkbox"/> Afternoons | <input type="checkbox"/> Between meals |
| <input type="checkbox"/> Before sport or activity | |



Survey tally

Gender

Male

Female

--	--

Age group

0–10

11–15

16–20

21–25

26–30

31–35

36–40

41–45

46–50

51–55

56+

--	--	--	--	--	--	--	--	--	--	--

Eats snacks?

Yes

No

--	--

Three favourite snacks:

--

Two things you like the most about snack foods:

Likes about snack

Number

Likes about snack

Number

How it looks		Has the Heart Foundation Tick	
It is a healthy choice		Is a fuelled4life product	
Seen it advertised on TV		How it feels	
How it tastes		It comes in a cool package	
It is not expensive		Satisfactory nutrient criteria listed on the nutrition information panel	
It won't get damaged in the lunchbox			
How it smells		Other	
It is always available			

Timing of snacks

Time

Number

Mornings	
Afternoons	
Before sport or activity	
On the weekends	
Between meals	

Resource
7

Analysing snack survey results

- Students can go to the TKI Digistore for additional support
- Students draw a flow chart diagram that explains the steps for analysis used
- Students collate their data on a tally chart headed ‘Snack Preferences’
- Students graph data and record at least two conclusions and one comparison by age and gender
- Are there any patterns or trends?
- Decide the best way to present the findings.

The whole class can collate total data

What are the patterns or trends in the class data?

Discuss some conclusions for class data.

For example, what time of day do children aged 0–10 eat the most snacks? What are the top three favourite snacks eaten by children aged 0–10?



Lessons 14–16

Designing a healthy snack

Overview: We are utilising what we have learnt to create our own healthy snack to appeal to young people like us (HP SLO 1, 2, 3, 4; E SLO 1, 2, 3, 4; M SLO 1, 2; T SLO 1, 2, 3, 4).

Opportunities for assessment	Structure	Curriculum and resource links
<p>Learning outcomes</p> <p>We are successful in our learning when we can:</p> <ul style="list-style-type: none"> Identify what packaging is appealing and why Identify the advertising techniques that appeal to young people that have been used in the packaging of two snacks Modify a recipe for a snack to create a healthier version Design our own healthy snack with appealing packaging. <p>Te Reo</p> <p>Learning intentions and success criteria rubrics for Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Learning-intentions-and-success-criteria</p> <p>Te wā Kai</p> <p>Using success criteria and assessment rubrics at http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Learning-intentions-and-success-criteria</p> <p>Evidence: to assess Taumata level 3</p> <ul style="list-style-type: none"> Evidence – keep student action plans, surveys, results and presentations as evidence of numeracy statistics and writing for national standard. 	<p>Prepare</p> <ul style="list-style-type: none"> Ask the class to keep the packaging of the snack foods and beverages included in their lunchboxes or eaten at home over a two week period Packet snacks collected will be used in snackivity 16 Teacher to provide recipe books to aid students to select snack recipes for modification and development in snackivity 17. <p>Connect</p> <ul style="list-style-type: none"> Review previous learning in relation to the definition of a healthy snack, fuelled4life and energy balance. This will be referred to in snackivity 18. <p>Activate</p> <ul style="list-style-type: none"> Discuss advertising techniques with the class. Students then pick two packets that have been collected and complete snackivity 16 Discuss recipe modification with the students using snackivity 17. How could the students use this knowledge to create their own snack? <p>Demonstrate</p> <ul style="list-style-type: none"> Students begin to work on snackivity 18 (may take several lessons). Use various recipe books to help to generate ideas. <p>Consolidation</p> <ul style="list-style-type: none"> Students complete snackivity 18. 	<p>Pedagogical links:</p> <ul style="list-style-type: none"> Creating a supportive learning environment Encouraging reflective thought and action Enhancing the relevance of new learning Facilitating shared learning Making connections to prior learning Providing sufficient opportunities to learn E-learning Engaging Māori/Pasifika students and their communities. <p>Key competencies:</p> <ul style="list-style-type: none"> Thinking Using language, symbols and texts Managing self Relating to others Participating and contributing. <p>Literacy:</p> <ul style="list-style-type: none"> Writing and reading as evidence for national standard. <p>Te Reo:</p> <p>Ongoing opportunities to assess Te Reo – Ko au (I, me, myself) http://hereoora.tki.org.nz/Unit-plans/Unit-1-Ko-au/Assessment-opportunities</p> <p>Te wā Kai:</p> <p>http://hereoora.tki.org.nz/Unit-plans/Unit-3-Kai/Assessment-opportunities</p>



Advertising techniques

We are looking at snack food and beverage packaging and how this influences our preferences. Pick two products from the packet snacks the class has collected and complete the questions below for both products.

1. What is the **product** being promoted?

Product 1

Product 2

2. What is the **dominant image**?

Product 1

Product 2

3. What is the **brand** of the product?

Product 1

Product 2

4. What is in the **top third** of the packaging (the place the eye is first drawn to)?

Product 1

Product 2

5. Is there a **slogan** on the packaging (a catchy phrase used to sell the product)?

Product 1

Product 2

6. What is the **logo** (symbol used to identify the product) or **brand name**?
For example, a big tick or a big M.

Product 1

Product 2

7. What is the **catch or hook** (the thing that grabs the viewer's attention and makes them believe in the product and want to buy it)?

Product 1

Product 2



8. What **colours** are used on the packaging and do these have an affect on you?

Product 1

Product 2

9. Who is the **target audience** (age, gender) for the product packaging? How do you know?

Product 1

Product 2

10. When do you think most of the advertisements for these products are screened on TV (time of day/night, days of the week, months of the year)? Why is that?

Product 1

Product 2

11. Which snacks are the most appealing to you and why? Think about the colours, words, pictures, shapes, logos and cartoons used on the packaging.

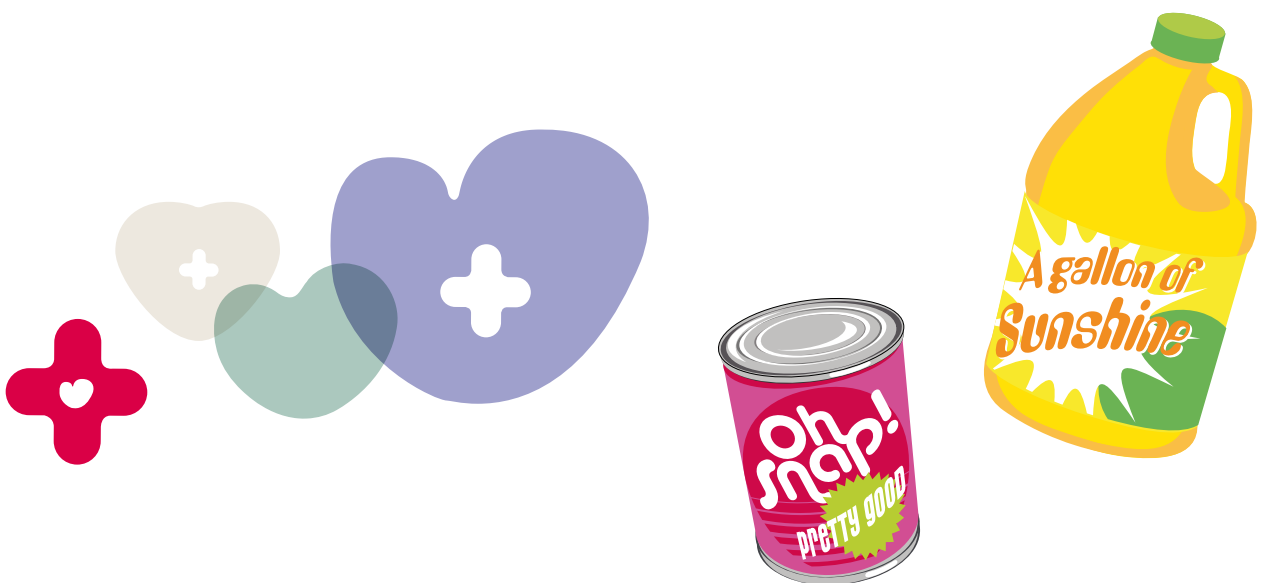
Product 1

Product 2

12. Which snack do you think would taste the best?

Product 1

Product 2





Recipe modification

Many popular recipes are often high in saturated fat, sugar or salt and are therefore not the healthiest options for us. However with some simple tips, it can be easy to change a recipe to make it healthier while still being just as tasty.

Below are two recipes for standard muffins that are a popular snack and addition to many lunchboxes. Using the table on page 54 as a guideline, come up with three things you could do to make each recipe healthier.

Trial one of these new recipes at home with an adult. What other recipes could you modify to make healthier versions for you and your family/whānau?

Chocolate chip muffins

Ingredients

2 eggs
1 cup (220g) white sugar
1 cup (110g) standard flour
6 Tbsp unsweetened cocoa powder
2 tsp baking powder
1 tsp vanilla essence
 $\frac{2}{3}$ cup (160ml) whole milk
120g butter
Chocolate chips (optional)
1 pinch of salt

Method

Preheat oven to 180°C.
Grease muffin trays with butter (makes 12 standard or 6 large muffins). Beat the eggs with sugar, mix with flour, cocoa powder, baking powder, salt, vanilla and milk. Fold in the melted butter. Add chocolate chips and stir briefly to combine. Place spoonfuls of the mixture into the greased muffin trays. Bake for approximately 20–25 minutes or until cooked.



Three things to make this recipe healthier:

1. _____

2. _____

3. _____

Savoury muffins

Ingredients

2½ cup self-raising flour
2 cup grated tasty cheese
2 eggs
1 cup oil
1 cup whole milk
2 cup diced vegetables
(courgettes, roasted capsicum,
spinach, spring onions,
sun-dried tomatoes)
75g ham, finely sliced
Freshly ground black pepper
1 pinch of salt

Method

Preheat the oven to 200°C. Spray a 12-hole muffin pan generously with spray oil. Place the flour and cheese in a large bowl. Stir to combine and make a well. Beat together the eggs, oil and milk. Pour into the dry ingredients and lightly fold together until just combined. Fold in the vegetables and ham. Season with black pepper.

Spoon the muffin mixture into the prepared pan. Bake for 20–25 minutes until golden. Leave to cool in the pan for 5–10 minutes before transferring to a cooling rack.



Three things to make this recipe healthier:

1.

2.

3.

Muffin recipe alterations

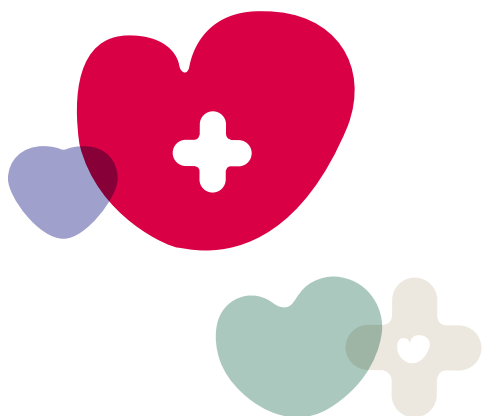
Instead of this...		...use this		Outcome
White flour		Half white flour and half wholemeal flour	=	More fibre
Self-raising flour		Flour + baking powder (1 cup flour: 1.5 teaspoons baking powder)	=	Less sodium
Butter		Vegetable oil	=	Less saturated fat
Cheddar cheese or tasty cheese		Edam cheese or reduced-fat tasty cheese	=	Less total fat and saturated fat
Whole milk (dark blue)		Low fat milk (light blue) or trim milk (green)	=	Less total fat and saturated fat
Bacon or ham		Diced cooked chicken	=	Less total fat and saturated fat Less sodium
Topping • Chocolate icing • Cream cheese icing		Topping • Dust with icing sugar • Serve with yoghurt • Piece of fruit (banana, pineapple)	=	Less sugar, less total fat
Big portion (1 cup of flour makes 3 muffins)		Smaller portion (1 cup of flour makes 5–6 muffins)	=	Less energy (kJ)
Inclusion of fruit (blueberries, mashed banana, diced apple, crushed pineapple, chopped dried apricot) or vegetables (chopped onion, corns, peas, grated carrot, courgette and leek)			=	More fibre, vitamins and minerals... and more flavour!



Create your snack

What you already know:

- How healthy eating affects our Hauora/well-being
- Why we need healthy snacks
- How to identify a healthy snack
- How to use fuelled4life to identify healthier packet snacks
- The four food groups
- How foods and beverages fit into **everyday**, **sometimes** and **occasional** categories
- How to interpret a nutrition information panel
- The importance of balancing energy in with energy out
- Different people have different energy requirements and different snack needs
- Snacks eaten in the past and cultural snacks
- The costs of healthy versus **occasional** snacks
- Persuasive marketing techniques used on snack packaging
- What makes a snack appealing to young people
- How to modify a recipe to make it healthier.



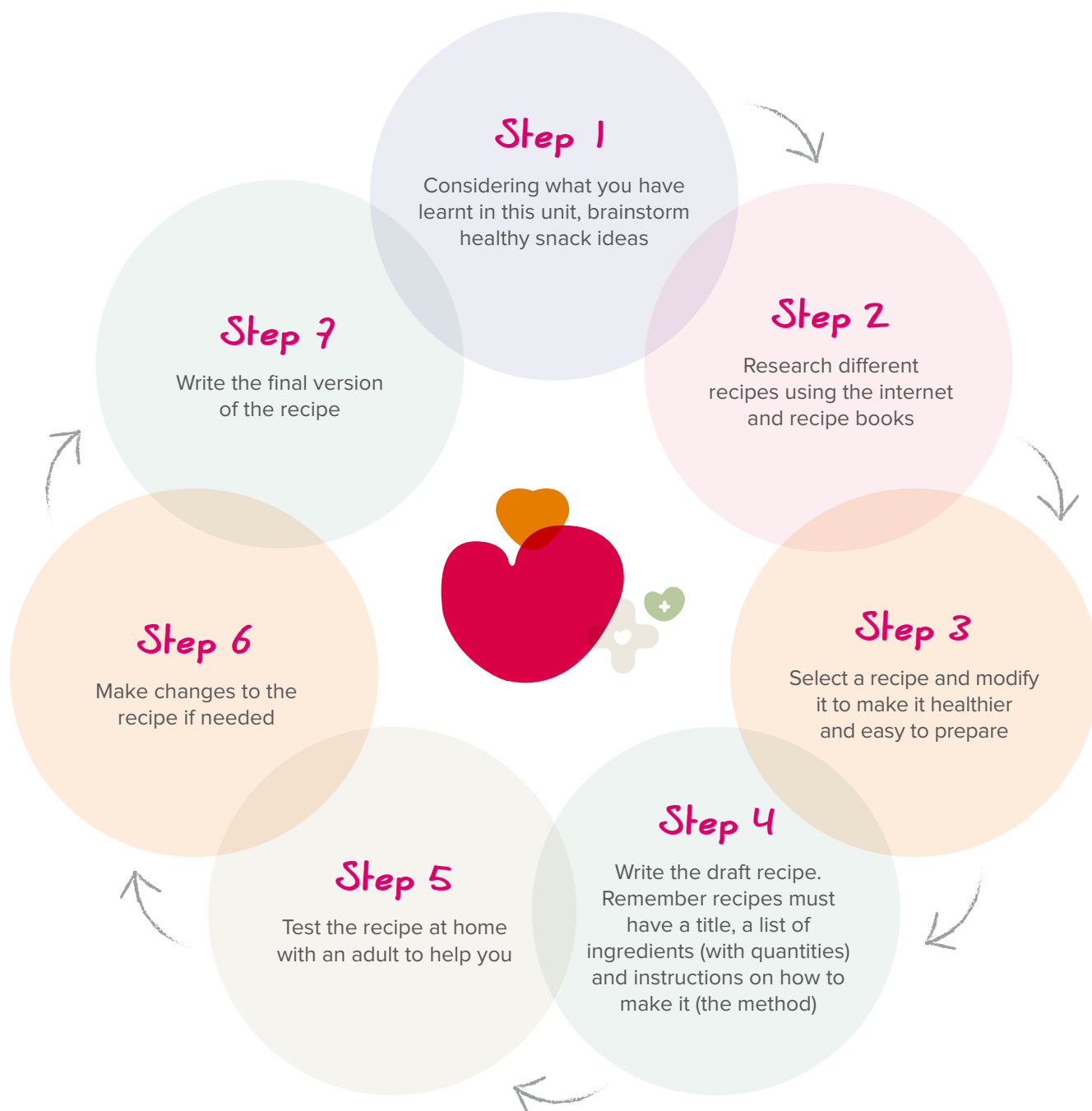
Lesson 14–16 *Designing a healthy snack*

Task: Create your snack

Imagine you are working for a food company that wants to create a healthy snack for young people. The snack must include one fruit or vegetable and be suitable for the lunchbox or for sale through the canteen.

Using your knowledge of recipe modification, work in pairs to design a healthy snack recipe. You may need to trial your recipe at home (with an adult to help you).

You may wish to use the flowchart below to help you complete this task.



Task: Create a poster

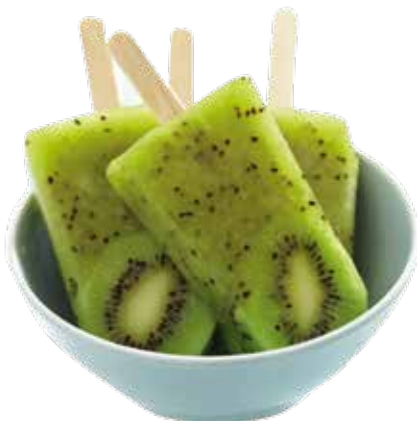
Think about how you will market your healthy snack so that it is appealing to young people.

Create a poster to describe and advertise your healthy snack. In your poster, use various images, backgrounds, colours and logos.

The poster must:

- Describe the following:
 - What your snack is
 - Why it is a healthy choice
 - Why it will be a popular snack for children your age
- Include appealing packaging for your snack
- Be A4 size
- Contain a photo of your snack and the recipe used.

Teachers: Send a copy of the posters to education@heartfoundation.org.nz to be uploaded to the fuelled4life website for all New Zealand schools to see.



Answers

Snacktivity 2 – Categorising healthy snacks

Vegetables and fruit



Breads and cereals



Lean meat, poultry, seafood, eggs, legumes, nuts and seeds



Milk and milk products



Sometimes foods



Occasional foods



Snackivity 3 – Planning for healthy snacks (insert tables onto one page)**Table 1: Snack foods that are suitable as a healthy snack before or during morning tea**

Snack food	Why it is suitable as a healthy snack
Vegetables and fruit Fresh fruit, dried fruit and yoghurt, fruit smoothies, fruit kebabs, canned fruit, cherry tomatoes, carrots, celery, green salad, fruit salad, small baked kumara and corn cob.	Vegetables and fruit: <ul style="list-style-type: none"> • provide energy to fuel us for our day of school work and physical activity • provide fibre to fill us up and keep our tummies healthy • provide vitamins and minerals to keep us healthy and prevent us from getting sick • help us grow and maintain healthy hair, skin and nails.
Milk and milk products Yoghurt, flavoured milk, plain low fat milk, dairy food, milk shakes, smoothies, cheese and crackers, custard, cottage cheese and crackers and slices of cheese.	Milk and milk products: <ul style="list-style-type: none"> • provide us with energy • protein and calcium for strong, healthy teeth and bones.
Breads and cereals Wholegrain breads/rolls, wholemeal bread/rolls, wheat meal bread/ rolls, brown bread/rolls, fruit bread, bagels, crumpets, muffin splits, pita bread, wraps, raisin bread, natural muesli, porridge, weet-bix, bran and porridge.	Breads and cereals: <ul style="list-style-type: none"> • provide carbohydrates for energy • provide fibre to fill us up and keep our tummies healthy.
Lean meat, poultry, seafood, eggs, legumes, nuts and seeds Chicken, lamb, beef, tuna, fish, salmon, turkey, baked beans, lentils, chickpeas, hummus, peanuts, walnuts, pistachio nuts, macadamia nuts, hazelnuts, peanut butter, sesame seeds, sunflower seeds.	Lean meats, poultry, seafood, legumes, nuts and seeds: <ul style="list-style-type: none"> • provide protein to help build and maintain muscles • provide another source of energy • provide iron to help transport oxygen around the body, grow healthy brains and prevent us from getting sick.

Table 2: Snack foods that are not suitable as a healthy snack for morning tea

Snack food	Why it is NOT suitable as a healthy snack
Sometimes/occasional foods Full sugar carbonated drinks, sports drinks and artificially sweetened energy drinks	Occasional products are high in fat and/or sugar and/or salt. Foods and beverages high in fat and/or sugar contain high amounts of energy contributing to weight gain. Saturated fat is bad for our heart. Foods and or drinks high in sugar are bad for our teeth. Occasional products are low in the vitamins and minerals we need to keep us healthy.
Confectionery – lollies, fudges and chocolate	
Deep fried foods – hot potato chips, potato chips, corn chips, battered fish and hot dogs	
Pastry and baked products – croissants, pies, sausage rolls, samosas, biscuits, muesli bars, crackers, cakes, slices, muffins, Danish pastries and scones.	

Snackivity 4 –Comparing packet snacks

Part one

	Qty per serving (45g)	Qty per 100g
Energy	723kJ	1610kJ
Protein	3.6g	8.1g
Fat – total	7.9g	17.6g
Fat – saturated	2.3g	5.0g
Carbohydrate – total	21.6g	48.0g
Sugar	6.7g	18.9g
Sodium (salt)	14mg	31mg
Fibre	2.1g	4.7g

INGREDIENTS: Cereals, wholegrain oats, barley, rice bran oil, brown sugar, glucose syrup, coconut, cinnamon, vegetable fat, colour (caramel), seeds 10% (sunflower, sesame, pumpkin), raising agent (503).

Does the muesli bar:

...meet the total fat guideline? Y / ☒ N

...meet the sugar guideline? Y / ☒ N

...meet the sodium guideline? ☒ Y / N

...meet the fibre guideline? Y / ☒ N

Part two

Nutrient	Large biscuit (per 100g)	Wholegrain crackers (per 100g)
Fat – total	22.4g	9.4g
Fat – saturated	14.4g	1.1g
Sugar	38.4g	1.8g
Sodium (salt)	358mg	452mg
Dietary fibre	0	12.0g

Does the large biscuit:

...meet the total fat guideline? Y / ☒ N

...meet the sugar guideline? Y / ☒ N

...meet the sodium guideline? Y / ☒ N

...meet the fibre guideline? Y / ☒ N

Do the wholegrain crackers:

...meet the total fat guideline? ☒ Y / N

...meet the sugar guideline? ☒ Y / N

...meet the sodium guideline? Y / ☒ N

...meet the fibre guideline? ☒ Y / N

Snackactivity 5 – Label detective

1. What do you think the four products listed above are?

Product 1: Yoghurt-covered muesli bar

Product 2: Chocolate bar

Product 3: Cheese chips

Product 4: Natural muesli

Snackactivity 6 – Classifying snacks

No.	Product	Category	Everyday	Sometimes
1	Multigrain cereal bar	Snack items		✓
2	Small flavoured milk drink	Milk and milk products		✓
3	Fruit cup	Vegetables and fruit		✓
4	Rice crackers	Snack items		✓
5	Fruit salad	Vegetables and fruit	✓	
6	Dried apricots	Snack items		✓
7	Yoghurt pottle	Milk and milk products	✓	
8	Fruit toast	Breads and cereals	✓	
9	Almonds	Snack items		✓
10	Celery	Vegetables and fruit	✓	

Snackactivity 7 – fuelled4life and schools

Why is it important for young people to consume healthy food and beverages?

Answer: Childhood and adolescence are periods of rapid physical, social, cognitive and behavioural change. Optimal nutrition during childhood and adolescence is essential for the maintenance of growth and good health. The dietary requirements of children and young people are different to those of adults and are constantly changing as individuals grow and develop.

Establishing good nutrition and physical activity patterns in childhood contributes to good health throughout life. The values, habits and behaviours developed during this period often influence behaviours in adulthood. In addition, there is evidence that health during childhood and adolescence impacts on health during adulthood.

Source: <http://www.health.govt.nz/publication/food-and-nutrition-guidelines-healthy-children-and-young-people-aged-2-18-years-background-paper>

3. Fuelled4life can help your school to improve its food provision to help students remain focused and energised for their school day.

Complete the graphic organiser to show how to improve your school's food provision, this could include food provided through the:

School canteen/lunch order: The fuelled4life website and Buyers' Guide for schools can be used by the school health team in conjunction with their canteen manager to help develop a new canteen menu.

The fuelled4life website has a range of healthy canteen menus, developed by nutritionists to guide schools in their own canteen menu development.

The Buyers' Guide can provide healthy products suitable for children and young people. The fuelled4life website also contains a range of healthy recipes for canteen managers that make food on site.

School camps: The fuelled4life website and Buyers' Guide for schools can be used to develop a healthy camp menu to ensure students are fuelled for camp activities.

School fundraisers, cultural activities and school events including sports days: The fuelled4life website and Buyers' Guide can be used to pick healthy products suitable for sale and provision at school fundraisers, cultural activities and school events including sports days.

Snackivity 8 – Cost comparison






Table 4: Occasional snacks

<i>Occasional snack</i>	<i>Total cost</i>	<i>Number of servings</i>	<i>Cost per serving</i>
1. One packet of chips in a multipack of 12 packets of chips	\$5.99	12	\$0.49
2. One chocolate-covered muesli bar in a pack of six bars	\$3.00	6	\$0.50
3. Three chocolate biscuits in a packet of 12 biscuits	\$4.12	4	\$1.03
4. One big biscuit in a multipack of nine big biscuits	\$8.55	9	\$0.95

Table 5: Healthy snacks

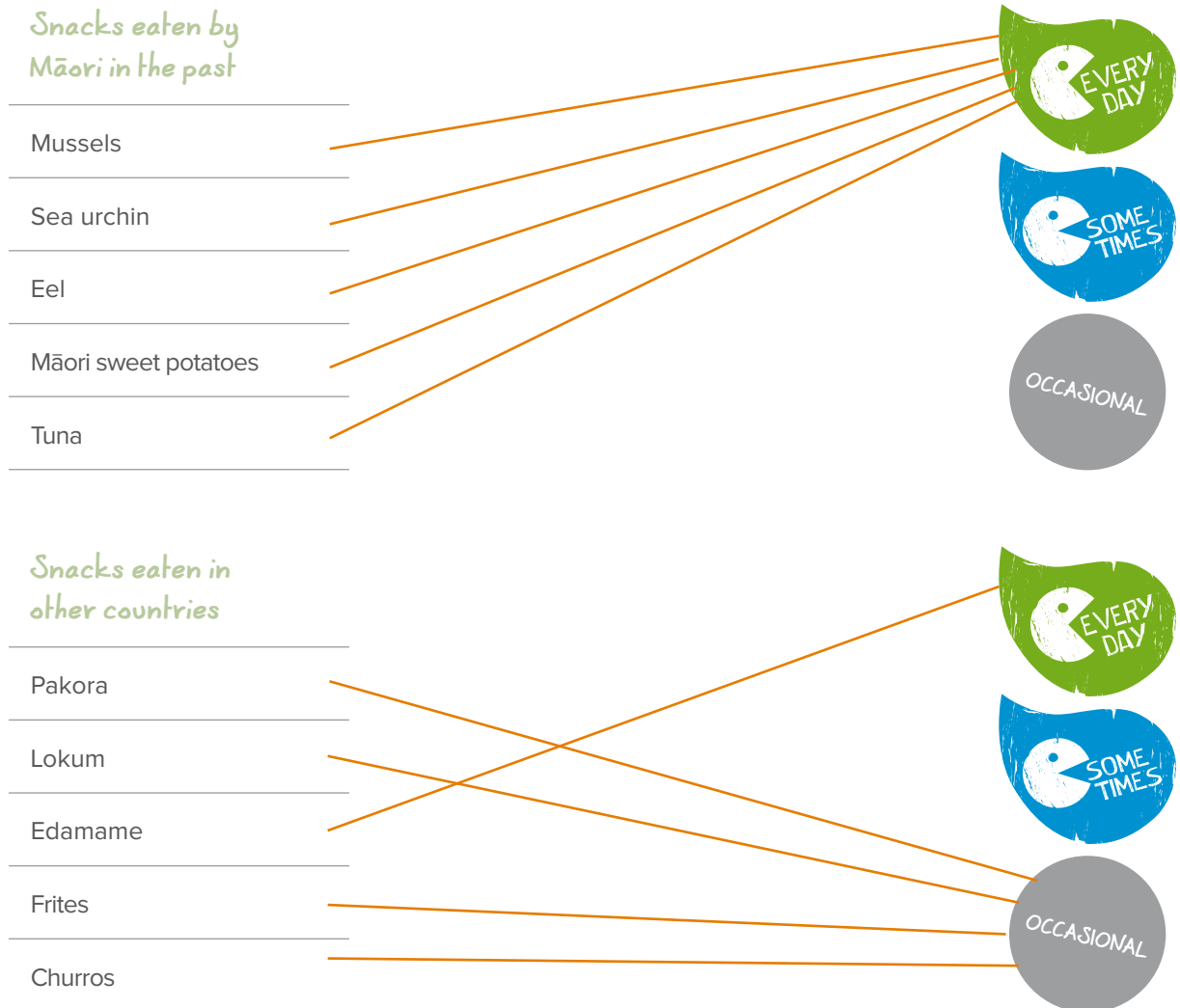
Healthy snack	Total cost	Number of servings	Cost per serving
1. One banana in a bunch of five bananas	\$1.99 a bunch	5	\$0.40
2. One pottle of yoghurt in a multipack of 12 yoghurts	\$5.49 pack	12	\$0.46
3. One carrot in a bag of 15 carrots	\$2.19 a bag	15	\$0.15
4. One slice of wholegrain bread in a bag of 19 slices	\$3.29 a bag	19	\$0.17

Snacktivity 9 – Snack from the past

Snack	What it is	Image
Tuna	Eel	
Kutai or Toretore	Mussels	
Kumara	Māori sweet potatoes	
Kapia	Māori chewing gum	
Kina	Sea urchin	

	<i>What is it?</i>	<i>Country</i>	<i>Everyday</i>	<i>Sometimes</i>	<i>Occasional</i>
Pakora	Deep fried vegetable/chicken fritter	South Asia			✓
Fudge	A mixture of sugar, butter and milk heated and beaten into a creamy texture.	America			✓
Lokum	Another name for Turkish delight, based on a gel of starch and sugar	Turkey			✓
Churros	Deep fried doughnut	Spain			✓
Frites	Deep fried thinly cut slices of potato referred to as French fries in New Zealand. Frites are the French name for French Fries but fries originated in Belgium.	Belgium/ France			✓
Cokodok	Deep fried banana fritter	Malaysia			✓
Malasada	Egg-sized balls of dough that are deep-fried in oil and coated with granulated sugar. Often filled with custard or chocolate.	Portugal			✓
Salmiak	A salty liquorice made with liquorice extract, sugar and a binder.	Netherlands			✓
Papaya	Orange tropical fruit	Mexico	✓		
Edamame	Green soy beans	Japan	✓		
Arancini	Deep fried rice ball	Italy			✓
Pistachio	Small green nut in a hard shell	Iran & Iraq	✓		

Snacktivity 11 – Snacks eaten by Māori in the past



2. What differences are there between the two groups?

All of the snacks eaten in the past fit into the **everyday** category. Four out of five cultural snacks fit into the **occasional** category.

3. We know that **occasional** foods are higher in total energy than **everyday** foods. What does this mean for people eating **occasional** snacks regularly?

People eating or drinking **occasional** snacks regularly are consuming more energy than they may need. If energy isn't used in the body it is stored as fat and contributes to weight gain.



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