The 5+ A Day Charitable Trust Est. 2007

Growing and Learning with 5+ A Day

PRIMARY SCHOOL LEVELS 1 & 2
www.5adayeducation.org.nz

Lessons Linked to The New Zealand Curriculum

- **Lesson 1 – Growing Plants from Seeds**
- **Lesson 2 – Growing Beans and Salad Greens**
- **Lesson 3 – Eating a Rainbow**
- **Lesson 4 – Eating and Exercise**

5+ a DAY fresh fruit & vegetables

Our range of primary school resources are linked to the New Zealand Curriculum, supporting the learning areas of Health and Physical Education, Literacy, Numeracy, and Science through practical lessons and learning experiences aimed at years 1 to 8.

CONTENTS

Everything in this booklet can be downloaded and printed from **www.5adayeducation.org.nz**. The online interactives such as eBooks can also be accessed via our website, and learning materials can be ordered free-of-charge and delivered to your school.

Our curriculum-aligned lesson plans offer engaging inquiries into topics such as making healthy eating choices, growing and using your own fresh vegetables, companion planting for environmentally-friendly pest control, and making and using great compost – all supported by colourful student materials such as fact files and graphic organisers.

Our Key Messages

- All Kiwis should eat five or more servings of fresh fruit and vegetables every day for good health
- A serving is about a handful and we all use our own hands, therefore a child's serving is smaller than an adult's
- Eat in season for best value and taste

LESSON 1:
Growing Plants from Seeds

This is the first of two lessons in which students can discuss the process of germination and plant growth, leading to a practical long-term activity that will show them how plants grow from seeds to provide us with fresh vegetables/ huawhenua hou.

Learning Intentions

Students will:

- *discuss* how plants grow from seeds
- *understand* that growing plants have specific needs
- explore the germination process
- *encounter* and *use* Māori terms for scientific objects and processes

Possible Achievement Objectives

SCIENCE: LEVELS 1 & 2

Life Processes

Students will:

- recognise that all living things have certain requirements so they can stay alive

Ecology

Students will:

- recognise that living things are suited to their particular habitat

Investigating in Science

Students will:

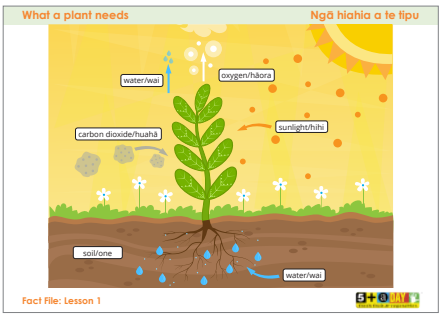
- extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models

Photo cards, fact files, eBooks, resource sheets & additional resources are available for download at **www.5adayeducation.org.nz**

Preparation

What You Need

- **Photo Card:** *From seed to plant/Mai i te kākano ki te tipu*
- **Fact File:** *What a plant needs/Ngā hiahia a te tipu*
- **eBook:** *Fredge Plants Some Seeds*
- **Resource Sheet:** *Roots, stem, and leaves/Ko ngā paiaka, ko ngā tā me ngā rau*
- Sprouted mung bean seeds
- Sticky notes/pens



Key Vocabulary

These words are important to this lesson, and can be defined and explored in context as you discuss the topic with your students. A number of content words are provided in English and Māori. Introduce terms in both languages as appropriate.

germination/tinakutanga: to start growing from a seed or to sprout

photosynthesis/ahotakakame: the process by which plants use sunlight to create food from water and carbon dioxide in the air to help them grow

nutrients/taiora: minerals that plants absorb from the soil to help them grow and stay healthy

Learning Opportunity

The learning opportunity that follows is a suggestion. You can adapt and adjust the content as needed to support your students as they carry out their inquiries.

Your role is to help your students generate rich questions about the topic of how plants grow from seeds, and to understand all the factors involved in doing this successfully.

As a part of this process, you can help to reinforce the message that **eating fresh vegetables is an important part of making healthy lifestyle choices**.

The Lesson

Photo Card: From seed to plant/ Mai i te kākano ki te tipu

Begin the lesson by showing the students the Photo Card: *From seed to plant/Mai i te kākano ki te tipu.*

- *What does this photograph show you?* (Explain that it is a "time-lapse" image)
- *Where is this happening?* (In the ground/kei roto i te whenua)

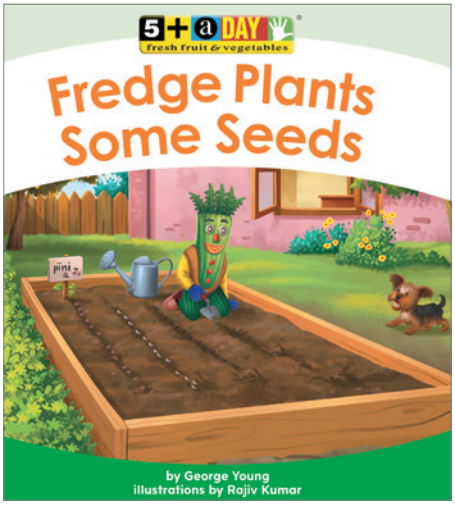
Point to the blue spot on the left of the picture.

- *What would the first photograph in the series show?* (A seed)
- *Where is the seed?/Kei whea te kākano?* (Under the soil/kei raro i te one)
- *Why is the seed/plant changing? What changes can you see?*

Point to the blue spot on the right of the picture.

- *What would the next photograph in the series be?*

eBook: Fredge Plants Some Seeds



At this point, you can stop and share the eBook, *Fredge Plants Some Seeds*. There is audio for this story, which you can use if you wish, or students can take turns to read the text.

The messages in this eBook reinforce the factual information about planting and growing seeds that has been discussed so far and which will be expanded on. For information on using 5+ A Day eBooks, click the 'eBooks' tab on **www.5adayeducation.org.nz**.

There are two interactive activities that follow the eBook. They work on a computer, a tablet, or an IWB. They can be used during or at the end of the lesson or in choosing time to reinforce key information from the story. Students will get the most from these activities if you model them first and explain the actions required and the aims of the activity. Then students can do them independently or in pairs.

For Activity 1, drag each item onto the garden in the correct order: soil, compost, seeds, water, and sun. For Activity 2, help keep Fredge's seeds safe from the blackbirds. Each time a bird swoops down, drag the correct mini-scarecrow onto the bird to scare it off. Use the left-hand scarecrow for the left-hand birds, and the right-hand scarecrow for the right-hand birds.

Compare and Contrast

Now show the students the mung bean sprouts. Give them each a few sprouts to look at closely, then show the Photo Card: *From seed to plant*.

Look at the photograph.

- *Can you see anything that looks like your sprouts?*
- *What might happen if we put your sprouts into some soil and watered them?*
- *How could we watch a seed grow to a plant?* (Plant the seeds and observe daily growth)
- *What would we need to make sure the seed started to grow, and kept on growing?*

Ask the students to discuss the following questions:

- *What things does a seed need to sprout?*
- *What does it need to keep growing into a plant?*

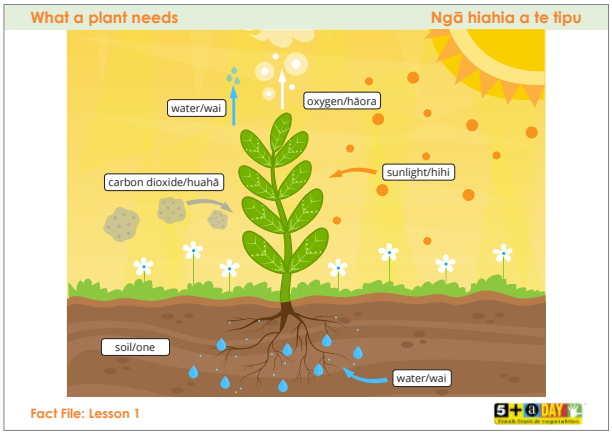
Ask some of the students to share their ideas with the class.

Fact File: What a plant needs/ Ngā hiahia a te tipu

Now show the students the Fact File: *What a plant needs/Ngā hiahia a te tipu.*

Ask them to work in pairs and discuss the diagram.

Then ask for volunteers to talk about each label and what it means. Provide support with any definitions by describing them simply.



Use the Māori words for the elements involved in photosynthesis as appropriate.

- *What are the arrows telling you?*
- *What would happen if there was no water in the soil?*

All About Photosynthesis

FIND OUT MORE

Plants need **carbon dioxide**, **water**, and **sunlight** to grow and stay healthy.

Carbon dioxide is a gas that is in the air all around you. The air passes through tiny holes in the leaves. These holes are called **stomata**. Water enters the plant through the roots and flows up the stem on to the leaves.

Sunlight is absorbed by a **green chemical** in the leaves.

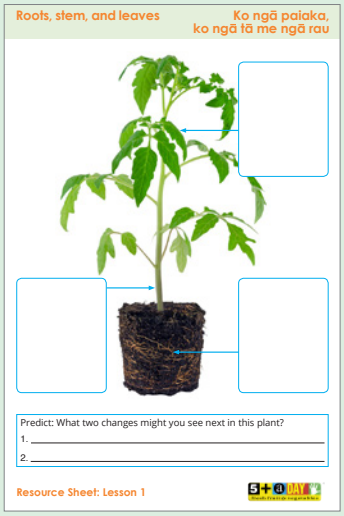
Photosynthesis happens in the leaves of plants. Leaves are made up of very small cells. In each cell there are tiny things called chloroplasts. Each chloroplast has a green chemical called **chlorophyll** in it. This gives leaves their green colour.

Here's how photosynthesis works:

1. The chlorophyll **absorbs** energy from sunlight.
2. The energy is used to split water into two gases called **hydrogen** and **oxygen**.
3. Oxygen comes out of the leaves into the atmosphere.
4. The hydrogen and **carbon dioxide** from the air are used to make glucose or food for plants.
5. Some of the glucose is used to help the plant grow. Some is stored so the plant can use it later.

Reflect on the Learning

This is the time to reflect on the learning outcomes for the lesson, and to signal the next lesson focus, where students will run their own inquiry. It is also a time for students to talk and share ideas that are still unclear.



In reflecting on this lesson, the discussion will focus on the processes of germination and photosynthesis. Review the vocabulary used in the lesson:

- water/wai
- soil/one
- carbon dioxide/huahāā
- oxygen/hāora
- sunlight/hihi
- photosynthesis/ahotakakame.

To follow up, students can work in pairs or independently on the Resource Sheet: *Roots, stem, and leaves/Ko ngā paiaka, ko ngā tā me ngā rau.*

Download the active PDF for students to complete (they can type directly into the spaces provided) or print the sheet for them to work on.

This resource sheet shows a tomato plant that has reached the leafing stage, but has yet to produce flowers or fruit. The students need to label the parts of the plant that are indicated and explain how they contribute to the healthy growth of the plant. Then they can answer the focusing question:

- *What are the next two changes this plant will make?*

LESSON 2:
Growing Beans and Salad Greens

In this lesson, students will continue to explore the process of germination and plant growth. They will discuss how to plant their own seeds and provide all the things a seed needs to become a healthy plant. They will then plant some seeds and monitor the results.

Learning Intentions

Students will:

- *recognise* that growing fresh food needs planning and organisation
- *understand* that growing your own fresh vegetables promotes healthy eating at school and at home

Possible Achievement Objectives

SCIENCE: LEVELS 1 & 2

Life Processes

Students will:

- recognise that all living things have certain requirements so they can stay alive

Ecology

Students will:

- recognise that living things are suited to their particular habitat

Investigating in Science

Students will:

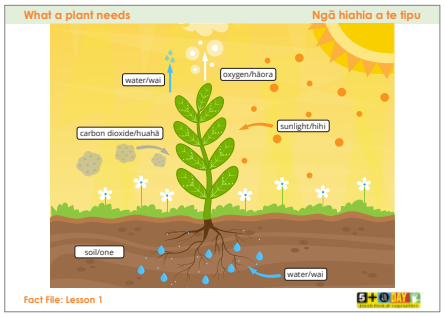
- appreciate that scientists ask questions about our world that lead to investigations and that open-mindedness is important because there may be more than one explanation

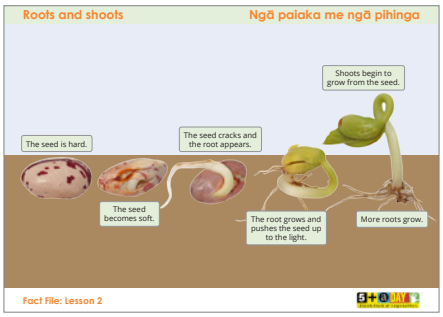
Preparation

Photo cards, fact files, eBooks, resource sheets & additional resources are available for download at **www.5adayeducation.org.nz**

What You Need

- **eBook:** *Fredge Plants Some Seeds*
- **Fact File:** *What a plant needs/Ngā hiahia a te tipu* (from Lesson 1)
- **Photo Card:** *From seed to plant/Mai i te kākano ki te tipu* (from Lesson 1)
- **Fact File:** *Roots and shoots/Ngā paiaka me ngā pihinga*
- **Photo Card:** *The seed cycle/Te hurihanga o te kākano*
- **Resource Sheet:** *Watch and wait/Mātakitaki, tatari hoki*
- Broad bean or runner bean seeds
- Cress seeds or a similar fast-growing micro-green
- Small glass jars and seed-raising mix
- Water





Key Vocabulary

Students will have met some of these words in Lesson 1. Others should be used and defined in context:

germination/tinakutanga: to start growing from a seed or to sprout

hypothesis/whakapae: an idea or a theory which is tested to see if it happens

moisture/haumakū: water stored in the soil and taken up by the roots of a plant

photosynthesis/ahotakakame: the process by which plants use sunlight to create food from water and carbon dioxide in the air to help them grow

nutrients/taiora: minerals that plants absorb from the soil to help them grow and stay healthy

root hairs/weri: the smaller roots that grow from the main root

shoot/pihi: the growth that appears from the seed and grows towards the light

Learning Opportunity

This practical lesson is a follow-on from Lesson 1. Students will begin to take responsibility for their learning through carrying out their own inquiry. You can act as a facilitator to this learning. The students need to form a simple hypothesis, explain how they will check this, then carry out the experiment and eventually record their results and share them in an appropriate way. As well as monitoring bean germination and growth, students will also plant some fast-growing micro-greens that they can eat after several weeks.

The Lesson

eBook: Fredge Plants Some Seeds

Begin the lesson by sharing the eBook Fredge Plants Some Seeds.
Refer to Lesson 1 on page 04 for eBook and activities information.

- *What kind of seeds did Fredge plant?/He aha ngā tūmomo kākano kua whakatōngia e a Fredge?*
- *What did the seeds need to grow into healthy plants?* (good soil, water, light, protection from pests)

Explain that we can all grow fresh and delicious vegetables if we plant them correctly and look after them like Fredge did.

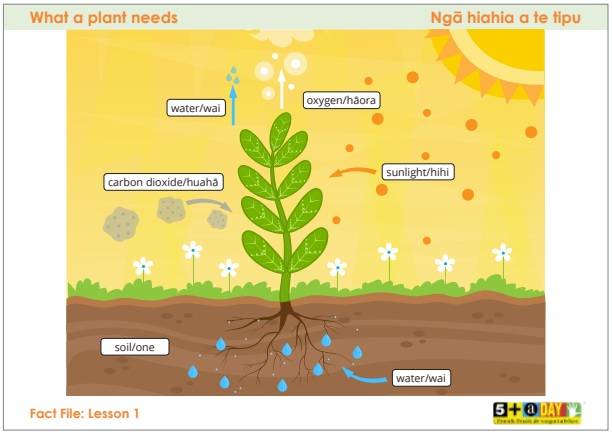
Revisiting what a Plant Needs

Show the students the Fact File: *What a plant needs/ Ngā hiahia a te tipu* from Lesson 1.

- *What things does a plant need to grow and be healthy?*

Review each label with students and check their understanding.

- *What would happen if one of these things were missing?*



Revisiting from Seed to Plant

Show the students the Photo Card: *From seed to plant/Mai i te kākano ki te tipu* from Lesson 1 and discuss the changes they see.

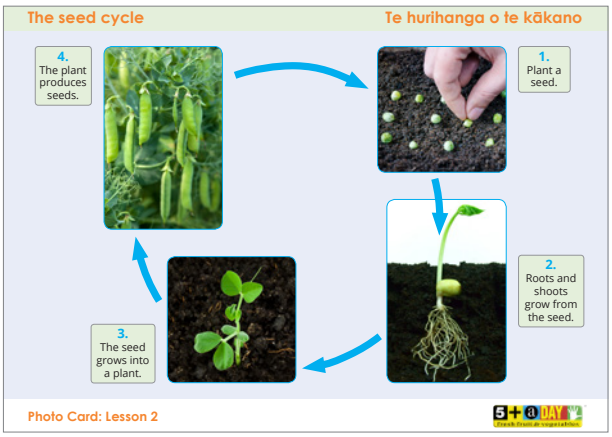
- *What does the seed need to start changing like this?* (warmth, moisture)
- *Has anyone watched a seed growing?/Kua mātakitaki koutou ki te whakatupuranga o te kākano?*
- *How could we watch what's happening to Fredge's beans before they come out of the soil?*

Have the students discuss this and share their ideas. One approach is to plant a bean seed in seed-raising mix against the side of a glass jar. If you use a jar, you will need to remove the seed once it has sprouted and replant it as the jar won't have any drainage.

Another approach is to use moist paper towels instead of seed-raising mix. The students might arrive at different, practical options, and you should allow them to explore these.

Photo Card: The seed cycle/Te hurihanga o te kākano

Before the students plant the seeds, look together at the Photo Card: *The seed cycle/Te hurihanga o te kākano.*



- *Where do you think our bean seeds came from?/Ki o whakaaro, mai i whea o mātou kākano pīni?*
- *How do we keep on getting fresh and healthy vegetables every year?*

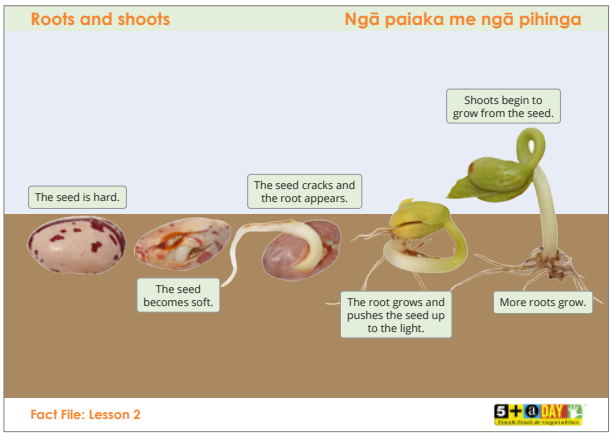
Explore the idea that plants make seeds and that's how new plants grow. Sometimes we eat the seeds (peas/beans); sometimes we eat the plants or their roots (lettuce, carrots).

Have the students work in small groups, each with a jar, some seed-raising mix, and two bean seeds.

If necessary, model how to fill the jar with seed-raising mix and push the bean seeds down into the mix, so they are against the glass of the jar, one on either side.

Fact File: Roots and shoots/ Ngā paiaka me ngā pihinga

Now share the Fact File: *Roots and shoots/ Ngā paiaka me ngā pihinga.*



Based on your discussion of the fact file, make a list together of things for the students to look for as they watch the process over time. For example:

- The bean seed becomes soft and cracks
- A root pops out of the side of the bean
- The root pushes down into the soil
- The seed pushes up as the root grows down
- Tiny root hairs grow off the main root
- A green shoot appears and starts growing up

Growing Conditions

Now discuss the ways in which you could observe the effects that different growing conditions might have on the seeds.

- *What do we need to do to make the seeds grow well?* (Add water and keep them warm.)/ *Me aha tātou kia pai ai te tupu o ngā kākano? (Kīnakihia ki te wai kia mahana)*
- *What would happen if we stopped watering the seeds?/Ka pēwhea ngā kākano, inā ka aukatingia te whakawai?*
- *What if the seeds got really cold?/Ka pēwhea ngā kākano, inā ka makariri?*

Ask students to come up with suggestions for altering the conditions for the seeds to see how this affects their growth compared with the seeds that are well looked after. For example:

- Water some seeds every day and some every three days
- Put some of the jars in a dark place and some in a light place
- Put some jars in a warm place and several in the fridge

Within 2-3 days, under ideal growing conditions, the beans should start to develop a root. In another 2-3 days, root hairs will appear, and the shoot will poke its head out of the seed. In another 4-5 days, the stem will push the seed out of the soil and leaves will begin to develop. Of course, it will be a long time before the plants produce anything edible.

To give the students a faster "from planting to eating" experience, have them spread the cress seeds on some damp cotton wool or on a shallow tray filled with seed-raising mix. Keep the seeds and the sprouts damp by spraying them with water. The cress can be clipped and tasted after about 10 days.

Reflect on the Learning

After the groups have planted their beans, give each student a copy of Resource Sheet: *Watch and wait/Mātakitaki, tatari hoki.*

Tell the students that they can use it to record the changes in their bean seeds. They can draw what is happening at four different times and add the date of each observation.

This is also a time to reflect on the learning and to signal the focus for the next lesson, where students will look at eating a rainbow of colours and serving sizes, ensuring they eat 5+ A Day to prepare for exercise.

LESSON 3:
Eating a Rainbow

This is the first of two lessons in which students can explore the importance of eating a rainbow of different coloured vegetables and fruit to keep their bodies healthy and ready for exercise. This will lead to a second lesson where students will create a one-week plan to prepare for playing a sport at the beginning of the season.

Learning Intentions

Students will:

- *discuss* the importance of eating a rainbow of fruit and vegetables to stay healthy
- *understand* serving sizes
- *explore* how we prepare for playing sport or doing exercise
- *encounter* and *use* Māori terms for scientific objects and processes

Possible Achievement Objectives

HEALTH AND PHYSICAL EDUCATION: LEVELS 1 & 2

Societal Attitudes and Values

Students will:

- explore how people's attitudes, values, and actions contribute to healthy physical and social environments

Safety Management

Students will:

- identify risk and use safe practices in a range of contexts and identify people who can help

Regular Physical Activity

Students will:

- participate in creative and regular physical activities and identify enjoyable experiences

HEALTH AND PHYSICAL EDUCATION: LEVEL 2

Personal Growth and Development

Students will:

- describe their stages of growth and their development needs and demonstrate increasing responsibility for self-care, *for example, in relation to their exercise needs, learning needs, nutritional needs, and social needs, the preparation of snack food, appropriate clothing, digestion, expressing their feelings, hygiene, personal medication, and relaxation*

Preparation

Photo cards, fact files, eBooks, resource sheets & additional resources are available for download at **www.5adayeducation.org.nz**

What You Need

- **eBook:** *Fuelling Up with Fredge*
- **Fact File:** *All about fruit and vegetables/ He kōrero katoa mo ngā huarākau me ngā hua whenua*
- **Photo Card:** *Green fruit and vegetables/ He huarākau, he huawhenua kakariki hoki*
- **Photo Card:** *Other coloured fruit and vegetables/Ētahi atu hua rākau, ētahi atu huawhenua ā-tae*
- **Fact File:** *What is a serving size?/He aha te rahi o te raurau?*
- **Resource Sheet:** *Make a rainbow plate/Whakaritea he perēti āniwaniwa*
- Some fruit and vegetables to illustrate serving sizes (small potato, small orange, handful of cherry tomatoes)
- Old magazines and newspapers and supermarket flyers with coloured pictures of fruit and vegetables
- Scissors
- Glue

Key Vocabulary

These words are important to this lesson, and can be defined and explored in context as you discuss the topic with your students. A number of content words are provided in English and Māori. Introduce terms in both languages as appropriate.

serving/raurau: the amount of food (a handful) that represents one serve of fruit or vegetables

vitamins/huaora: found in food, they are made by plants and animals, and they help your body grow and stay healthy

minerals/kohuke: found in food, they come from the soil and water, and they help your body grow and stay healthy

fibre/weu: helps with digestion and helps prevent disease

glucose/kuhuka: a type of sugar in the blood; it provides energy

Learning Opportunity

This lesson will introduce students to the topic of eating 5 or more servings of fresh fruit and vegetables every day as part of balanced eating in order to be fit and healthy, and the importance of eating a rainbow of coloured fruit and vegetables.

The Lesson

eBook: Fuelling Up with Fredge

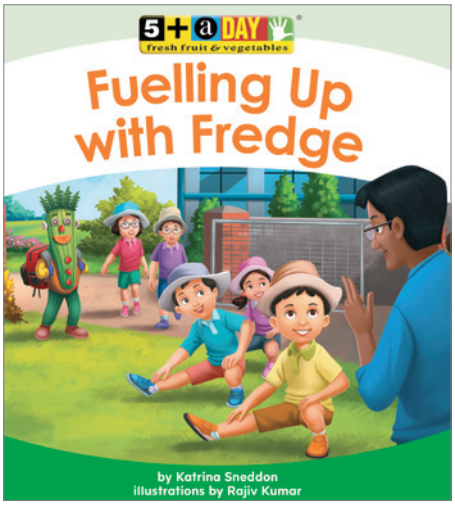
Begin the lesson by sharing the eBook, *Fuelling Up with Fredge*.

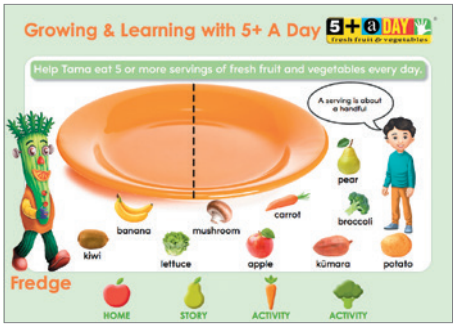
There is audio for this story that you can use, or students can take turns to read the text.

The messages in this eBook introduce the topic of making good food choices and eating healthily when you are exercising. For information on using 5+ A Day eBooks, click the 'eBooks' tab on **www.5adayeducation.org.nz**.

There are two interactive activities that follow the eBook. They work on a computer, a tablet, or an IWB. They can be used during or at the end of the lesson or in choosing time to reinforce key information from the story. Students will get the most from these activities if you model them first and explain the actions required and the aims of the activity. Then students can do them independently or in pairs.

For Activity 3, help Tama eat 5 or more servings of fresh fruit and vegetables every day by dragging two servings of fruit and three servings of vegetables onto the plate. Support the students to understand that half the plate should be filled with fruit and vegetables. For Activity 4, click on the dice and throw a 3, 5, or 2 to enable Tama and the children to play 5+ A Day football.





Key Messages from the eBook

After you have read *Fuelling Up with Fredge* together, talk about the key messages in the story: Just like a car needs the right kind of fuel to run well, your body needs good fuel (food) to help you exercise or go for a run.

- *What happened to Tom and Kayla during the run?* (pages 6 and 7) (They got puffed and had to walk)
- *Has this happened to you when you've been exercising?*
- *Why do you think the children ran out of energy?* (They hadn't eaten the right kind of food for doing a run)
- *What do you eat before you exercise or play sport?*
- *What things did the children say they need to do before exercise?* (Drink plenty of water, do stretches, and eat healthy food like plenty of fruit and vegetables)
- *What do you do before you exercise?*

Discuss the importance of eating fruit and vegetables every day to stay healthy.

- *Fredge talked about the importance of eating plenty of fresh fruit and vegetables. It's important to eat 5 or more servings of fresh fruit and vegetables every day. What fruit do you like to eat?/He aha ngā huarākau pai ki a koe?*
- *What vegetables do you like to eat?/He aha ngā huawhenua pai ki a koe?*

Fact File: All about fresh fruit and vegetables/ He kōrero katoa mo ngā huarākau me ngā hua whenua

Now show the children the Fact File: *All about fresh fruit and vegetables/He kōrero katoa mo ngā huarā kau me ngā hua whenua.*

Then discuss the kinds of fruit and vegetables the children bring in their school lunches.

- *What vegetables do you eat at school?/He aha ngā huawhenua ka kaingia e koe i te kura?*
- *What fruit do you eat at school?/He aha ngā huarākau ka kaingia e koe i te kura?*
- *What are your favourite fruit and vegetables?/ He aha āu tino huawhenua, āu tino huarākau hoki?*

Photo Card: Green fruit and vegetables/ He huarākau, he huawhenua kakariki hoki

Show the students the Photo Card: *Green fruit and vegetables/He huarākau, he huawhenua kakariki hoki.*

- *What do you notice about these fruit and vegetables?* (They are all green.)/*He aha o kitenga ki ēnei huarakau, huawhenua hoki?* (He kākāriki te katoa)
- *What fruit and vegetables do you see?/He aha ngā huarakau, me ngā huawhenua ka kitea?*
- *Does your mum or dad ever say "Eat your green vegetables"?/Ka whāki o mātua kia kaingia āu huawhenua, āu huarākau hoki?*

Brainstorm with the students other green fruit and vegetables they know. Explain that vegetables with green leaves like spinach, broccoli, and lettuce are packed with minerals and vitamins. Some of these help our bodies grow or stop us from getting sick.

Photo Card: Other coloured fruit and vegetables/Ētahi atu hua rākau, ētahi atu huawhenua ā-tae

Now show the students the Photo Card: *Other coloured fruit and vegetables/Ētahi atu hua rākau, ētahi atu huawhenua ā-tae.*

- *What do you notice about these fruit and vegetables?* (They are different colours)
- *What fruit and vegetables can you see?*

Brainstorm with the students other coloured fruit and vegetables they know like blueberries, red apples, peaches, red capsicum, pumpkin, beetroot, and carrots. Explain that these coloured fruit and vegetables also contain different vitamins and minerals that help us think, work, and play during the day.

Remind the students about eating 5+ A Day (eating five or more servings of fresh fruit and vegetables every day).

- *So now we've learned about how good fruit and vegetables are for us and that it's important to eat 5 or more servings a day, we're going to talk about what a serving size is*

Fact File: What is a Serving Size?/He aha te rahi o te raurau?

Introduce the concept of a serving size by showing and discussing the Fact File: *What is a serving size?/He aha te rahi o te raurau?*

Hold out your hand to illustrate a handful and then ask the students to hold out their hands.

- *This is a handful/He ringa pohapoha tēnei*

Then take the fruit and vegetables you have brought in and hold each one or group in your hand. Pass around the vegetables and fruit and the students can take turns holding each vegetable or fruit to see how it fits in their hands.

The students can now do Activity 3 that follows the eBook, independently or in pairs, and help Tama to eat 5+ A Day.

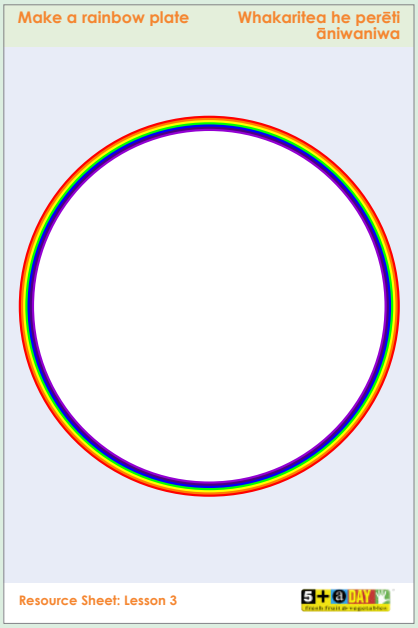
Reflect on the Learning

This is the time to reflect on the learning outcomes for the lesson. It is also a time for students to talk about and share ideas that are still unclear. In reflecting on this lesson, focus the discussion on the importance of eating a rainbow of fruit and vegetables to fuel up for exercise.

To reinforce the learning, the students can use Resource Sheet: *Make a rainbow plate/Whakaritea he perēti āniwaniwa* to make a plate of fruit and vegetables in a rainbow pattern.

What are the colours of the rainbow? (red, orange, yellow, green, purple)/*He aha ngā tae o te aniwaniwa?* (whero, karaka, kōwhai, kākāriki, waiporoporo)

Hand out the magazines and newspapers and ask the children to cut out pictures of different coloured fruit and vegetables to paste on to the plate in a rainbow pattern.



LESSON 4:
Eating and Exercise

In this lesson, students will continue to explore the importance of keeping their bodies healthy and ready for exercise. They will also discuss the sports and exercise they do and create a plan to prepare for a sport at the beginning of the season.

Learning Intentions

Students will:

- *explore* the importance of being prepared for playing a sport or doing exercise
- *learn* about the different ways to exercise their muscles
- *understand* that when you are preparing to begin a sport or exercise you need to build up slowly

Possible Achievement Objectives

HEALTH AND PHYSICAL EDUCATION: LEVELS 1 & 2

Safety Management

Students will:

- identify risk and use safe practices in a range of contexts and identify people who can help

Regular Physical Activity

Students will:

- participate in creative and regular physical activities and identify enjoyable experiences

Societal Attitudes And Values

Students will:

- explore how people's attitudes, values, and actions contribute to healthy physical and social environments

HEALTH AND PHYSICAL EDUCATION: LEVEL 2

Personal Growth And Development

Students will:

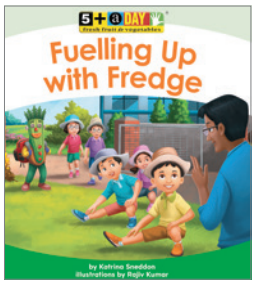
- describe their stages of growth and their development needs and demonstrate increasing responsibility for self-care, for example, in relation to their exercise needs, learning needs, nutritional needs, and social needs, the preparation of snack food, appropriate clothing, digestion, expressing their feelings, hygiene, personal medication, and relaxation

Preparation

Photo cards, fact files, eBooks, resource sheets & additional resources are available for download at **www.5adayeducation.org.nz**

What You Need

- **eBook:** *Fuelling Up with Fredge*
- **Fact File:** *Getting ready to play/Whakareri kia tākaro*
- **Photo Card:** *In action/Oho mauri*
- **Resource Sheet:** *Fitness calendar/ Maramataka whakapakari tinana*



Key Vocabulary

Students will have met some of these words in Lesson 3. Others should be used and defined in context:

serving/raurau: the amount of food (a handful) that represents one serve of fruit or vegetable

vitamins/huaora: found in food, they are made by plants and animals, and they help your body grow and stay healthy

minerals/kohuke: found in food, they come from the soil and water, and they help your body grow and stay healthy

fibre/weu: helps with digestion and helps prevent disease

glucose/kuhuka: a type of sugar in the blood; it provides energy

Learning Opportunity

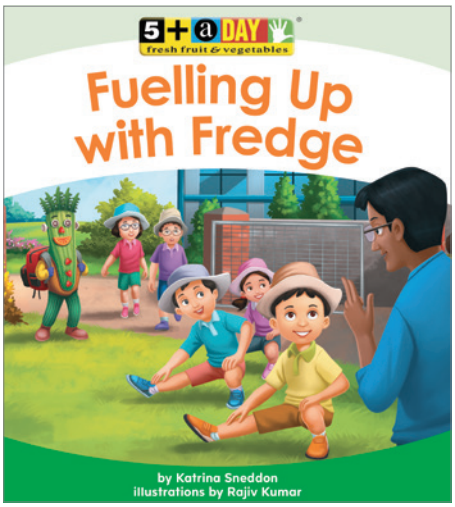
This practical lesson is a follow-on from Lesson 3. In this lesson, the students will take responsibility for their learning by exploring the sports and activities they do and creating a plan to prepare for their sport. Your role will be to facilitate this and reinforce the key message of eating healthily and preparing for exercise.

The Lesson

eBook: Fuelling Up with Fredge

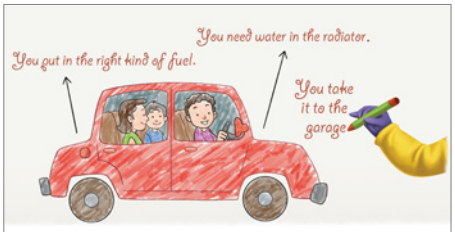
Begin the lesson by revisiting the eBook, *Fuelling Up with Fredge*.

Refer to Lesson 3 on page 15 for eBook and activities information.



Key Messages from the eBook

After you have read *Fuelling Up with Fredge* together, talk about the key messages in the story: Just like a car needs the right kind of fuel to run well, your body needs good fuel (food) to help you exercise or go for a run.



"How can we make sure this car runs well?" Fredge asked.
The children called out their ideas.
"You put in the right kind of fuel," said Maia.
"You need water in the radiator," said Tama.
"You take it to the garage if there's something wrong," said Lizzy.
"These are all great ideas," said Fredge.

- *What happened to Tom and Kayla?* (They got puffed; they stopped running)
- *Why do you think they got tired?* (They ran out of energy.)/*Ki o whakaaro, he aha rāua i ngēngē ai?* (Kua pau ō rātou kaha)

Point out that Kayla said she had eaten enough for breakfast, but Fredge said it may not have been the right kind of food like fresh fruit and vegetables.

- *What is fuelling up?* (eating healthy food like fruit and vegetables before you do exercise)
- *So it's really important to eat a balanced diet and be fuelled up for physical activity like sport and exercise. Sometimes you may get tired because you haven't had a good sleep or maybe you haven't eaten properly or eaten the right kinds of food*
- *What other things did the children need to do before and after exercise in the story?* (stretch and drink water)

Emphasise that it's good to drink water before and after exercise because it keeps your body hydrated and replaces the fluid that you've lost from your body during the exercise.

- *Would you drink juice or fizzy drinks? Why/why not?/Ka hiahia koe ki te inu te wairaraua, i te waireka rānei? He aha ai?*

If students have difficulty answering, explain that juice and fizzy drinks contain a lot of sugar, which gives a quick burst of energy before making you feel tired.

- *Why do we stretch before exercise?* (to warm up our muscles and get them ready for exercise)/ *He aha tātou e hōkari ai i mua i te whakapakari tinana?* (kia whakamahanatia ou uaua, kia rite mo te whakapakari tinana)

Getting Ready for Exercise

Talk about any sports and exercise the students have done today and how they got ready. Then explore the concept of getting ready for exercise by using the Fact File: *Getting ready to play/Whakareri kia tākaro*.

Discuss how Tama got ready to play football.

- *What did he do first? Next? Last of all?/He aha tana mahi tuatahi? Tuarua? Hei te mutunga?*

Now create a chart with two columns labelled "Sport" and "Getting ready". Brainstorm the sports or kinds of exercise the students do, such as cross country, soccer, gymnastics, swimming, karate, netball, rugby, flipper ball, and write them in the left-hand column.

- *What kinds of things do you do to get ready to play a sport or do some exercise?*

Write the student's answers in the right-hand column of the chart (stretches, jog, eat healthy food for energy, drink water/take a water bottle).

Photo Card: In action/Oho mauri

Now show the students the Photo Card: *In action/ Oho mauri.*

- *What sport is the girl playing?* (soccer)/ *Ko tēwhea te hakinakina tākaro ai e te kōtiro?* (poiwhana)
- *What is she doing?* (running; kicking the ball toward the goal)
- *What is the goalie doing?* (Her arms and legs are outstretched to try and stop the ball from going in the goal)
- *How do you think the two players warm up before a game of soccer?* (stretches, jogging, passing the ball)

Making a Plan

Tell the students that they're going to use what they know to create a two-week plan to get ready to play their sport.

- *At the start of the season, do you just turn up and start playing your sport?*
- *What might happen if you weren't fit or didn't have enough energy?* (You might injure yourself, like pull a muscle during the game, or get really tired and puffed)
- *What do you eat before a game or exercise?/He aha ngā tūmomo kai ka kaingia i mua i te whakapakari tinana?*
- *What kind of warm ups do you do to stretch your muscles?*

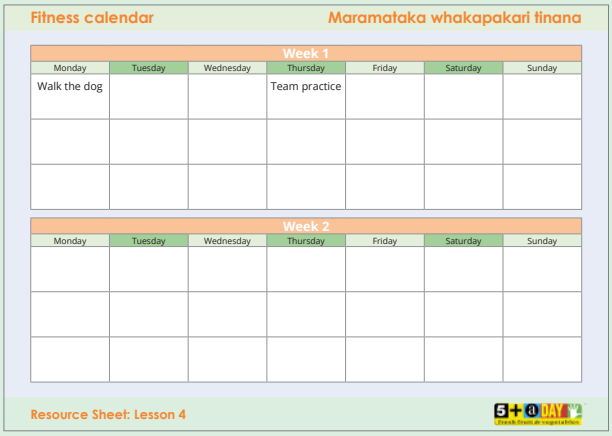
Model some exercises you might do before sport, or have the students demonstrate ones that they know.

Emphasise that many of the everyday activities the students do actually exercise their muscles. Before you start, you could brainstorm such things as walking to school, walking the dog, doing chores, and playing games at lunchtime. Record the students' ideas on a chart and display it in the classroom for them to refer to.

Reflect on the Learning

Give each student a copy of Resource Sheet: *Fitness calendar/Maramataka whakapakari tinana.*

They can either complete the active PDF by typing directly into the spaces provided or use a printed copy. Based on what they have been learning during these two lessons, the students can work in pairs to make a two-week planning chart to get ready for the first game of the season for a sport of their choice.


Fitness calendar — Maramataka whakapakari tinana

Week 1

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Walk the dog			Team practice			

Week 2

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

Resource Sheet: Lesson 4

Emphasise that when we get ready to play a sport we need to build up slowly so we don't injure ourselves. They could start off their chart with some simple activities like 10 minutes of stretching, an easy jog, or even walking the dog. They could have a team practice in the middle of the week where they warm up, do drills, and play a short game. The day before the game they need to get a good night's sleep. At the end of two weeks, together review the students' fitness calendars. Tell the students that their calendars are just a start and that in reality they would need longer to prepare for playing a sport.

- *Could you use this chart to get ready to play your first game of the season?*
- *What changes might you make after having looked at other students' calendars?*

Notes

The 5+A Day Charitable Trust Est. 2007

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