

Crunch&Sip® Operation: Vegetables

Curriculum Resource Years 3-4



Welcome!

Crunch&Sip[®], in partnership with Healthway and Cancer Council Western Australia, are delighted to present the Operation: Vegetables Curriculum Resources developed for students in years 3-4.

While most Western Australian primary school aged children meet the recommended intake for fruit, only 1 in 6 eat enough vegetables. Currently, students predominantly bring fruit for Crunch&Sip[®], so there is a big opportunity to increase vegetable intake overall by encouraging students to choose vegetables for their Crunch&Sip[®] break.

Activities

While teaching children about the health benefits of vegetables is an important component of health and physical education, children can have difficulty relating their dietary habits to long term health outcomes. The aim of this teaching resource is to encourage students to consider the environmental, social and biological significance of vegetables beyond just their appearance on the dinner plate. Promoting positive associations with vegetables through school programs in cooking and gardening has been shown to lead to an increase in vegetable intake.

The activities in this teaching resource include lessons from across the curriculum areas of Science, Health and Physical Education, English, Mathematics, Media Arts and Humanities and Social Sciences. Each lesson is mapped to the Western Australian Curriculum with hyperlinks to the School Curriculum and Standards Authority website for ease of use. Worksheets for individual lessons can be found in the companion document *Crunch&Sip[®] Operation: Vegetables Toolkit for Teachers Years 3-4*.

Additional Activities

Additional activities can be used to extend the lesson if you would like to deliver the content over multiple sessions or can be used to grade the lesson up or down. These activities can also be set as homework tasks.

Alternative Activities

Some lessons such as cooking and gardening are more resource intensive and require access to particular facilities such as a student friendly kitchen. For these lessons, an alternative activity is provided for schools that are unable to complete the main activities.

Acknowledgements

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Crunch&Sip[®] was developed by the Department of Health Western Australia in partnership with Cancer Council Western Australia.

For further information on Crunch&Sip[®] and access to additional resources visit:

www.crunchandsip.com.au



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2 Planting Seeds	Students plan a simple experiment to see the effect of light on plant growth. Students gain knowledge and skills in the scientific method as well as developing confidence in growing plants.	Science
3 Kids in the Kitchen	Hands on vegetable cooking activity. Includes discussion of food and kitchen safety.	Health and Physical Education
4 Why Vegetables?	Students learn about everyday and sometimes foods. The focus is on the health benefits of vegetables. Students write an imaginative text about a vegetable character.	English
5 Vegetable Rainbow	Students learn why they should eat vegetables from across the rainbow. Students prepare a rainbow Crunch&Dip platter.	Health and Physical Education
6 Crunch the Numbers	Introduction to serve sizes and recommended intake. Students calculate the number of serves of vegetables they eat each day, and display this data in a table and column graph.	Mathematics
7 What's on the Menu?	Students consider the barriers to eating vegetables and how these barriers can be overcome. Students identify strategies to increase the amount of vegetables in food prepared by the school canteen.	Health and Physical Education
8 Making Healthy Food Choices	Exploration of the way in which images, sounds, music, characters and sequencing are used to convey health messages in television advertising. Students plan an advertisement promoting vegetable eating to primary school students.	Media Arts

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<ul style="list-style-type: none"> • Humanities and Social Sciences Locate and collect information from a variety of sources • Humanities and Social Sciences Record selected information and/or data • ACHGK015 	<ul style="list-style-type: none"> • Humanities and Social Sciences Locate and collect information from a variety of sources • Humanities and Social Sciences Record selected information and/or data 	4
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<ul style="list-style-type: none"> • ACPPS036 • Humanities and Social Sciences Draw conclusions and give explanations, based on the information and/or data displayed in texts, tables, graphs and maps 	<ul style="list-style-type: none"> • ACPPS036/040 • Humanities and Social Sciences Draw conclusions and give explanations, based on the information and/or data displayed in texts, tables, graphs and maps 	16
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Lesson 1 – Bush Tucker

WA Curriculum Links

Main curriculum area: Humanities and Social Sciences

Year 3

- **Humanities and Social Sciences** Locate and collect information from a variety of sources (e.g. photographs, maps, books, interviews, internet)
- **Humanities and Social Sciences** Record selected information and/or data (e.g. use graphic organisers, develop note-taking strategies)
- **ACHGK015** Language groups of Australia's Aboriginal and Torres Strait Islander Peoples divides their Country/Place and differs from the surveyed boundaries of Australian states and territories

Year 4

- **Humanities and Social Sciences** Locate and collect information from a variety of sources (e.g. photographs, maps, books, interviews, internet)
- **Humanities and Social Sciences** Record selected information and/or data (e.g. use graphic organisers, develop note-taking strategies)

General capabilities

- Literacy
- Critical and creative thinking
- Intercultural understanding

Resources

- Aboriginal Australia language map
- A range of printed or online information on bush foods

Preparation

- Download and print a copy of the Aboriginal Australia language map from nationalunitygovernment.org/pdf/aboriginal-australia-map.pdf
- Print information on bush food, access books from the school library and/or ensure sufficient computer facilities for students to access online information sources, e.g.
 - sercul.org.au
 - www.northernriverslandcare.org.au/bush-foods.html
 - www.gofor2and5.com.au/Portals/0/PDFs/2and5_NSW_FeedingYour%20Mob_RecBk.pdf
 - www.anfab.org.au
 - tasteaustralia.biz/bushfood
- Check that multimedia facilities play online videos

LESSON OVERVIEW

In this lesson students are introduced to Australian bush tucker foods and conduct research to learn more about one of the bush tucker vegetables. The significance of bush foods in traditional Indigenous Australian culture is also explored.



ACTIVITIES

1. Ask students if they know what **bush tucker** is. Ask if anyone has ever tried eating or growing bush tucker.
2. Explain to students that life in Australia was very different before European settlement. Aboriginal people lived a hunter gatherer lifestyle (ask if anyone knows what the term **hunter gatherer** means) and they had to have good knowledge of the land and plants in order to survive. The kind of vegetables and fruit that Aboriginal people ate during these times was very different to what we see in the supermarket today.
3. Show students the video **Bush Food** – www.abc.net.au/btn/story/s3775984.htm
4. Discussion questions
 - What bush foods were mentioned in the video?
 - Do you ever see bush foods at the supermarket?
 - Why is it important for younger generations to learn about bush tucker?
 - What is the name of the traditional owners of the land on which the school is built? Refer to the Aboriginal Australia language map to assist with this.
 - What do you notice about the language groupings? (Many different languages, no dominant language). Explain that Country is defined by the different language groupings and each language group has unique customs, beliefs, history and laws.
 - Are the divisions between language groupings the same as the Australian state and territory boundaries? Why not?
5. Using printed or online resources, identify some bush tucker vegetables (e.g. Warrigal greens, bush tomato, bush yam, milkmaids, bulrush).
6. Ask each student to research one of the bush tucker vegetables and record some information in their exercise books such as:
 - Scientific name
 - Describe or draw what the plant looks like
 - What part of the plant is eaten
 - What regions in Australia the plant grows
 - Interesting fact about the plant
7. Now is a good time for a Crunch&Sip® break!

Additional activities

- **WATCH:** Bush Tucker – www.abc.net.au/btn/story/s3527750.htm.
- **LISTEN:** Invite a member of the local Aboriginal community to the class to talk with students about different bush foods.
- **FIELD TRIP:** Visit a local cultural centre that has information on Australian bush tucker foods.
- **APP:** Download and explore the **Welcome to Country** app. Details available at www.welcometocountry.mobi/about/.

Lesson 2 – Planting Seeds

WA Curriculum Links

Main curriculum area: Science

Year 3

- **ACSI054** With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment
- **ACSI215** Compare results with predictions, suggesting possible reasons for findings

Year 4

- **ACSSU073** Living things depend on each other and the environment to survive
- **ACSI065** With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment
- **ACSI216** Compare results with predictions, suggesting possible reasons for findings

General capabilities

- Numeracy
- Critical and creative thinking

Resources

- A3 size 'Class growing journal' (Toolkit p. 2)
- Vegetable seeds
- Trowels, gardening gloves, potting mix, plant pots
- Sunscreen and hats for each staff member and student
- Rulers (for follow up activity)
- Camera (optional)

Preparation

- Ask parents to donate (or loan as appropriate) vegetable seeds, potting mix, trowels, gardening gloves, plant pots.
- Decide on a shady area outside to complete the activity.
- Print 'Class growing journal' in A3 size.

LESSON OVERVIEW

In this activity students plan a simple experiment to see the effect of light on seed germination and plant growth. Students gain knowledge and skills in the scientific method as well as developing confidence in growing plants. This is a hands on activity designed to engage students and increase their understanding of how the food they eat is produced.

Additional information for teachers

- Radishes and salad greens are a great vegetable to start with when gardening with children as they are quick to grow and can be planted most of the year.
- Short videos and easy to read advice and tips for vegetable growing available at www.yates.com.au/vegetables#kcHBbKJOWhy2MLAg.97.

Want to take the next step in growing a vegetable garden in your school?

- Check out the Stephanie Alexander Garden Foundation resources to help get you started at www.kitchengardenfoundation.org.au.
- Apply for a Junior Landcare grant, see landcareaustralia.org.au/junior-landcare/grants.
- Many local councils offer school groups the opportunity to apply for a small grant to fund projects such as developing a food garden, composting system or worm farm. Visit the website of your local Government council for further details.
- Bunnings regularly helps schools and kindergartens by providing hands on assistance with their projects. Contact the Activities Organiser at your local Bunnings store or visit www.bunnings.com.au/about-us/in-the-community/local-community-support.
- The Beyond Gardens Team deliver garden workshops to school and community groups throughout WA. For further information see www.beyondgardens.com.au.
- Growing guides for remote Indigenous communities available at eon.org.au/materials-foodwheel and www.remoteindigenousgardens.net/new-gardens-guide.



ACTIVITIES

1. Inform students that today they will be designing an experiment to see the effect of light on plant growth.
2. Ask students to think about what things plants need to take from the environment in order to grow (sunlight, water, air, nutrients/fertiliser).
3. Explain to students that plants require light for *photosynthesis*. Explain **that photosynthesis is when plants convert light from the sun into food. Humans have to eat plants or other animals to get food, but plants can make their own! Photosynthesis takes place in the leaves of a plant. Leaves contain chlorophyll (a substance that gives leaves their green colour) which 'traps' sunlight.**
4. As a class students will design an experiment to test how different amounts of light effect plant growth. Discuss how you will vary the amount of light different plants receive (e.g. position some plants in full sunlight, some under a tree, and some covered by a box).
5. Students will develop a hypothesis about which light condition will make plants grow the quickest. Explain that a *hypothesis* is an educated guess about what will happen.
6. As a class, plant seeds into each pot and place pots in different positions so that they receive different amounts of light. Make sure that everyone is SunSmart while outside!
7. Decide on a watering roster and choose a time each week to measure the height of the plant using a ruler. Record this information in the table on the 'Class growing journal'.
8. Students may also take photos of their plants each week. Photos can be printed out and used to create a poster showing plant growth under different light conditions.
9. Once the data has been collected over a number of weeks, discuss the results as a class. Some example discussion questions include:
 - Under which light conditions did seedlings first emerge from the soil? (i.e. plants in full sunlight, shade, or in darkness)
 - Under which light conditions did plants grow the quickest?
 - Was there a difference in the colour of plants grown under different light conditions? Why might this be?
 - How do your observations compare with what you expected to happen?
 - What can you conclude about the relationship between sunlight and plant growth from this experiment?
10. Now is a good time for a Crunch&Sip® break!

Additional activities

- **GRAPH:** As a class and with the assistance of the teacher, create a line graph to show plant height over time for the three light conditions.
- **LAB REPORT:** Write up a lab report for the experiment including a title, aim, hypothesis, materials, method, results and conclusion. This can also be done as an assignment task.
- **WATCH:** How plants work: splash.abc.net.au/home#!/media/104100/how-plants-work

Alternative activities

- Use the online game **Fair Test** to test the effect of varying environmental conditions (light intensity, light duration, temperature or nitrogen) on the growth of vegetable plants, available at splash.abc.net.au/home#!/media/1390357/fair-test

Lesson 3 – Kids in Kitchen

WA Curriculum Links

Main curriculum area: Health and Physical education

Year 3

- **ACPPS036** Actions in daily routines that promote health, safety and wellbeing: healthy eating, appropriate levels of physical activity

Year 4

- **ACPPS036/040** Strategies to ensure safety and wellbeing at home and at school, such as: following school rules, identifying and choosing healthier food for themselves

General capabilities

- Literacy
- Numeracy
- Personal and social capability

Resources

- Butchers paper
- Foodbank WA's Healthy Recipes For All booklet – volume 1, 2, 3 or 4
- Ingredients as per recipe
- Cooking equipment as per recipe
- Serving equipment e.g. plates/bowls, cutlery

Preparation

- Prior to the lesson check that students do not have allergies or intolerances to any of the foods used and all of the ingredients are culturally appropriate.
- Download and print one of Foodbank WA's free Healthy Recipes for All booklet from www.superherofoodshq.org.au and choose a vegetable based recipe to make.
- Invite parent helpers to join the class for the cooking lesson.
- Ask parents to donate (or loan as appropriate) recipe ingredients, serving equipment, cooking equipment.
- Photocopy recipe sheets for each student/group.
- Set up the preparation and cooking area.

LESSON OVERVIEW

This lesson gives students the opportunity to develop their food preparation and cooking skills. Existing messages around food and kitchen safety rules are reinforced. Students prepare a healthy recipe featuring vegetables and share their creation as a class. This lesson helps students to develop confidence in preparing healthy meals.

Additional information for teachers

- Using knives in a safe manner should be emphasised and students should be supervised at all times. Child friendly knives that require a sawing rather than chopping action can be purchased if you are concerned about your students using regular knives.

Want to get your class more involved in cooking?

- Schools signed up to Foodbank's School Breakfast Program can receive free Food Sensations sessions at the school or in Foodbank WA's teaching kitchen, for further details see www.superherofoodshq.org.au.



ACTIVITIES

1. Before commencing, remind students of the importance of following food and kitchen safety rules when preparing and cooking food. Discuss the rules below. See if students can suggest some consequences of not following these rules (e.g. getting sick from germs, burns from hot water or stove top, knife injuries).

Food Safety	Kitchen Safety
<ul style="list-style-type: none"> • Wash and dry your hands before preparing food and after coughing or sneezing 	<ul style="list-style-type: none"> • Have an adult supervising at all times
<ul style="list-style-type: none"> • Long hair needs to be tied back 	<ul style="list-style-type: none"> • Wipe up spills immediately
<ul style="list-style-type: none"> • Keep cold food cold and hot food hot 	<ul style="list-style-type: none"> • Use safe knife cutting techniques
<ul style="list-style-type: none"> • All rubbish and food scraps go into the bin or compost 	<ul style="list-style-type: none"> • No running where food is being prepared
<ul style="list-style-type: none"> • Make sure cooking equipment and benches are cleaned properly when you are finished 	<ul style="list-style-type: none"> • Turn handles of saucepans towards the back of the stove when cooking
<ul style="list-style-type: none"> • Wash fruit and vegetables before preparing 	<ul style="list-style-type: none"> • Use oven mitts when taking food out of the oven
<ul style="list-style-type: none"> • Don't let raw meat touch other food 	<ul style="list-style-type: none"> • Wear closed in shoes
	<ul style="list-style-type: none"> • Don't put knives in the sink

2. Read the recipe together as a class.
3. Every student must wash and dry their hands before beginning.
4. Divide students into groups of 3-4.
5. Provide each group with a set of cooking equipment.
6. Each group will decide as a team who will be responsible for different aspects in preparing the recipe (e.g. chopping ingredients, adding ingredients to the pan and stirring) and then work together to prepare the recipe.
7. Clean up the cooking area and wash and dry any dishes.
8. Enjoy your creation!

Additional activities

- **PLAY:** Webisodes and online games about hand washing and germs available at www.scrubclub.org.

Alternative activities

- Discuss the importance of food and cooking in different cultural and religious events. Some example discussion questions include:
 - What are some of the important days that you celebrate in your family (e.g. Christmas, Easter, Chinese New Year, Hanukkah, Ramadan, weddings, birthdays)
 - Does your family prepare special dishes for these events or are there any restrictions on eating?
 - How important is food in these celebrations/events?
 - Who in your family prepares food for these events? Do you help to cook?
 - Discuss some similarities and differences in how different events are celebrated or how the same event is celebrated in different families/cultures.

Lesson 4 – Why Vegetables?

WA Curriculum Links

Main curriculum area: English

Year 3

- **ACELY1682** Plan, draft and publish imaginative, informative and persuasive texts demonstrating increasing control over text structures and language features and selecting print, and multimodal elements appropriate to the audience and purpose
- **ACPPS036** Actions in daily routines that promote health, safety and wellbeing: healthy eating, appropriate levels of physical activity

Year 4

- **ACELY1694** Plan, draft and publish imaginative, informative and persuasive texts containing key information and supporting details for a widening range of audiences, demonstrating increasing control over text structures and language features
- **ACPPS036/040** Strategies to ensure safety and wellbeing at home and at school, such as: following school rules, identifying and choosing healthier food for themselves

General capabilities

- Literacy

Resources

- Foodbank WA's Superhero Foods collector cards (optional)

Preparation

- Download and print Foodbank WA's free Superhero Foods collector cards from www.superherofoodshq.org.au.

LESSON OVERVIEW

In this lesson students are introduced to the concept of everyday and sometimes foods. Students learn that feeding their bodies healthy foods most of the time will give them energy to work, grow and play. The health benefits of vegetables are explored. Students write an imaginative text about a vegetable character that centres on how being nutritious has made the character a hero.

Additional information for teachers

- Activities 2-3 use Foodbank WA's Superhero Foods terminology to explain 'everyday' healthy foods (Superhero Foods) and 'sometimes' junk food (Zombie Foods). See www.superherofoodshq.org.au for further details. This can be adjusted at your discretion to meet the needs of your students.
- For further information about sometimes and everyday foods see www.eatforhealth.gov.au.

Want to include some lessons on healthy eating across the food groups?

- Check out Foodbank WA's Superhero Foods Headquarters for access to lesson plans and other resources (including recipe books, playing cards, placemats, posters and clip art), see www.superherofoodshq.org.au.
- Refresh.ED is a suite of nutrition curriculum support materials available free online. For further details see www.refreshedschools.health.wa.gov.au.
- Eat for Health's online food balance game is an interactive way of teaching students about balanced diets, see www.eatforhealth.gov.au/nutrition-calculators/food-balance



ACTIVITIES

1. Begin by asking students if they can name some healthy and unhealthy foods.
2. Explain to the class that **healthy foods give your body energy to work, grow and play. Food contains many different tiny particles called nutrients. We need to eat a variety of healthy foods so that we don't get bored with our diet and we get the right balance of nutrients that our body needs. There are no bad foods, just foods we can eat every day and foods that we should only have occasionally. Healthy foods are 'Superhero Foods,' and unhealthy junk foods are 'Zombie Foods.' If we feed our body Superhero Foods most of the time we will have energy to play, we won't get sick as often, and we will have brain power to concentrate at school. While it is okay to have Zombie Foods as a treat, eating Zombie Foods every day can make us feel too tired to play and learn and we can become sick. Zombie Foods invite the Body Monsters of decay, illness and obesity into our bodies.** Use Foodbank WA's Superhero Foods collector cards to illustrate these points.
3. Tell students that today they are going to be focusing on one of the Superhero Foods – vegetables. Explain that although we know that vegetables are really good for you, most kids don't eat enough.
4. Ask students why vegetables are good for you, using the information below as a guide.

- Eating vegetables helps to protect us from getting sick from colds and flu.
- Vegetables contain fibre. Fibre keeps your digestive system healthy and stops you getting constipated (explain the term **constipated**).
- Vegetables have vitamins and minerals. Vitamins and minerals help move oxygen around the body, make your muscles work and keep your skeleton strong.
- Eating plenty of vegetables means you will stay healthy as you get older.
- Vegetables provide your meals with colour, crunch, and taste – best of all there are so many different types to try!

5. Ask students to pick a favourite vegetable and come up with a character name based on that vegetable, for example, Aspara-Gus, Carrotman or Carly Kale. Students will plan and draft an imaginative text in their exercise books about the adventures of their character. The story should centre on how being nutritious has made them a hero.
6. Now is a good time for a Crunch&Sip® break!



Lesson 5 – Vegetable Rainbow

WA Curriculum Links

Main curriculum area: Health and Physical Education

Year 3

- **ACPPS036** Actions in daily routines that promote health, safety and wellbeing: healthy eating, appropriate levels of physical activity

Year 4

- **ACPPS036/040** Strategies to ensure safety and wellbeing at home and at school, such as: following school rules, identifying and choosing healthier food for themselves

General capabilities

- Literacy
- Numeracy

Resources

- 'Rainbow vegetable dip' recipe sheets (Toolkit pp. 3-7)
- Ingredients for rainbow vegetable dips (see recipe sheets)
- Different coloured raw vegetables (~1kg per 10 students)
- Chopping boards, knives, peelers
- Serving platter, serving bowls
- Other equipment as specified on recipe sheets

Preparation

- Prior to the lesson check that students do not have allergies or intolerances to any of the foods used and all of the ingredients are culturally appropriate.
- Invite parent helpers to join the class for the cooking lesson.
- Ask parents to donate (or loan as appropriate) recipe ingredients, vegetables, chopping boards, knives, peelers, serving platter, serving bowls, other equipment.
- Cooked vegetables used to make dips can be pre-prepared to reduce the lesson time or if you do not have access to a stove/oven that students can use.
- Choose 1-2 'Rainbow vegetable dips' to make and print recipe sheets.
- Prepare the cooking area.

LESSON OVERVIEW

This lesson introduces students to the idea that different coloured vegetables contain different and complementary nutrients, and that eating a variety of vegetables from across the rainbow will confer the greatest health benefit. Students prepare a rainbow vegetable Crunch&Dip platter with different coloured vegetable dips and cut-up vegetables.

Additional information for teachers

- Using knives in a safe manner should be emphasised and students should be supervised at all times. Child friendly knives that require a sawing rather than chopping action can be purchased if you are concerned about your students using regular knives.
- Some examples of vegetables from different colour groups and some of the key nutrients they contain are shown below:

Colour group	Vegetable examples	Key nutrients
RED	Tomato, red capsicum, red kidney beans, radish, red skinned potato	Phytonutrients like lycopene, carotenoids and flavonols. Some red vegetables are also high in vitamin C.
ORANGE and YELLOW	Carrot, pumpkin, sweet potato, orange and yellow capsicum, corn, squash	Carotenoids like beta-carotene, lutein and zeaxanthin. Some orange and yellow vegetables also contain good amounts of vitamin A, potassium and vitamin C.
GREEN	Spinach, broccoli, Asian greens, celery, green capsicum, asparagus, cabbage, Brussel sprouts, peas, cucumber, avocado, lettuce, zucchini, kale, green beans, snow peas, sugar snap peas	A range of phytonutrients including carotenoids, flavonoids and indoles (cabbage, bok choy and broccoli). Leafy greens also contain folate and vitamin K.
BLUE and PURPLE	Eggplant, beetroot, purple cauliflower, purple carrot	The purple-blue hue shows the presence of anthocyanin, an antioxidant.
WHITE and BROWN	Cauliflower, onion, chickpeas, lentils, leeks, mushroom, potato	Commonly contain inulin and allium sulphur compounds. Some members of this group are a source of potassium, vitamin C and folate.

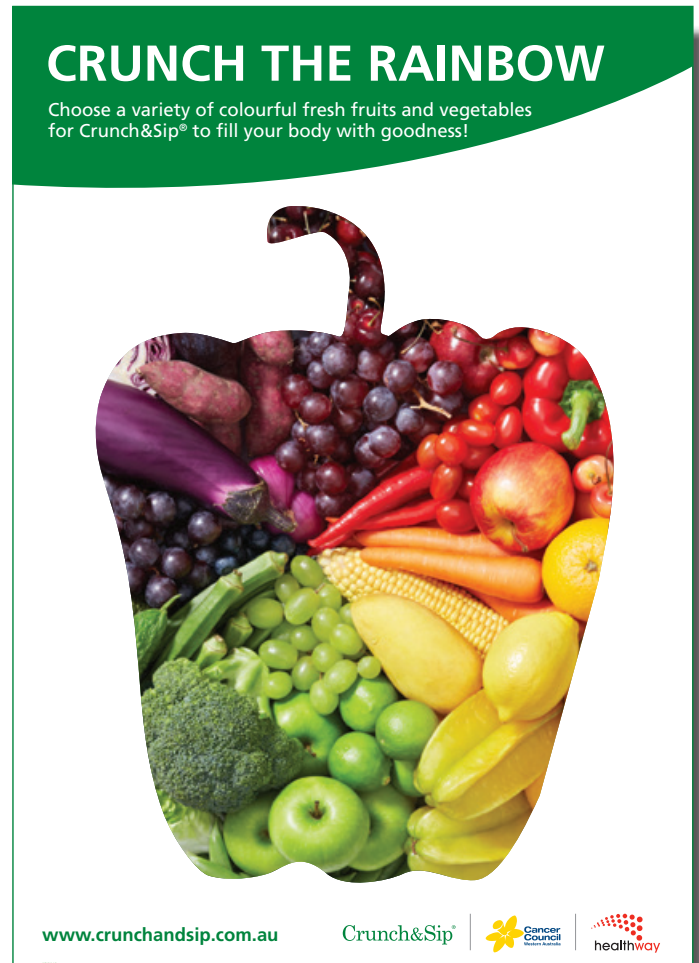
- When talking about nutrients with students emphasise that no one nutrient is more important than the other and that the biggest health benefit is seen when eating across the colour groups to get a range of different nutrients (eating a massive amount of one nutrient won't give you superpowers!)
- For more information and resources on the nutrients in different vegetables visit www.veggycation.com.au
- A Vegetable Challenge would fit in well with this lesson. Students aim to bring in vegies each day for Crunch&Sip® for one week, and try to choose different coloured vegetables each day. Vegetable Challenge cards available at www.crunchandsip.com.au

ACTIVITIES

1. Ask students if they have heard of 'eating a rainbow' and what they think this means.
2. Tell students that **vegetables come in lots of different colours and different coloured vegetables contain different nutrients. If you eat a rainbow of vegetables you will get all the nutrients you need to be healthy.**
3. Let students know that today they will be participating in a special rainbow vegetable Crunch&Dip tasting event.
4. Go over food and kitchen safety rules.
5. Before preparing food every student must wash and dry their hands.
6. Divide students into 5 groups and assign each group one of the following roles:
 - ▶ Peel and chop vegetables – red, orange and yellow vegetables
 - ▶ Peel and chop vegetables – purple, white and brown vegetables
 - ▶ Peel and chop vegetables – green vegetables
 - ▶ Prepare rainbow vegetable dip 1
 - ▶ Prepare rainbow vegetable dip 2
7. Provide students who will be preparing dips with a recipe sheet. Students will work together to prepare the rainbow dip.
8. Place the dips in serving bowls and arrange the cut up vegetables onto the platter.
9. Clean up the cooking area and wash and dry any dishes.
10. Enjoy eating your rainbow vegetable Crunch&Dip creation

Alternative activities

- Explain the benefits of eating a rainbow of vegetables. Students will then create a 'Crunch the Rainbow' poster encouraging school children to bring in different coloured vegetables for their Crunch&Sip® breaks.



Lesson 6 – Crunch the Numbers

WA Curriculum Links

Main curriculum area: Mathematics

Year 3

- **ACMNA057** Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies
- **ACMSP069** Collect data, organise into categories and create displays using lists, tables, picture graphs and simple column graphs, with and without the use of digital technologies

Year 4

- **ACMNA076** Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder
- **ACMSP096** Construct suitable data displays, with and without the use of digital technologies, from given or collected data. Include tables, column graphs and picture graphs where one picture can represent many data values

General capabilities

- Numeracy
- ICT

Resources

- Worksheet 1 – 1 per student
- Worksheet 2 – 1 per student
- Plickers app and class set of Plickers cards (optional)
- Calculators
- Kitchen gloves – 2 pairs
- 1 set of measuring cups
- 1 large Pyrex or clear plastic bowl
- 500g cucumber or carrot (or other inexpensive vegetable)

Preparation

- Print worksheets
- Prior to the lesson ask students to keep a vegetable record using Worksheet 1. Over a 24 hour period students will record each time they eat vegetables and estimate how many cups they have each time.
- Enter the questions and answers for activity 8 and 11 into your Plickers library (alternatively, ask the questions verbally).
 - ▶ Question 8a answers – 1, 5, 17.5, 35
 - ▶ Question 8b answers – 0.5, 5, 17.5, 35
 - ▶ Question 11 answers – 2 or less, 3, 4, 5 or more
- Ask parents to donate (or loan as appropriate) raw vegetables, kitchen gloves, set of measuring cups, bowl.
- Roughly chop cucumber/carrot and place into sealed container.

LESSON OVERVIEW

In this lesson students learn about the serve sizes of vegetables and the amount of vegetables they should be eating each day. Students calculate the number of serves of vegetables they eat each day, and display this data for the class in a table and column graph.

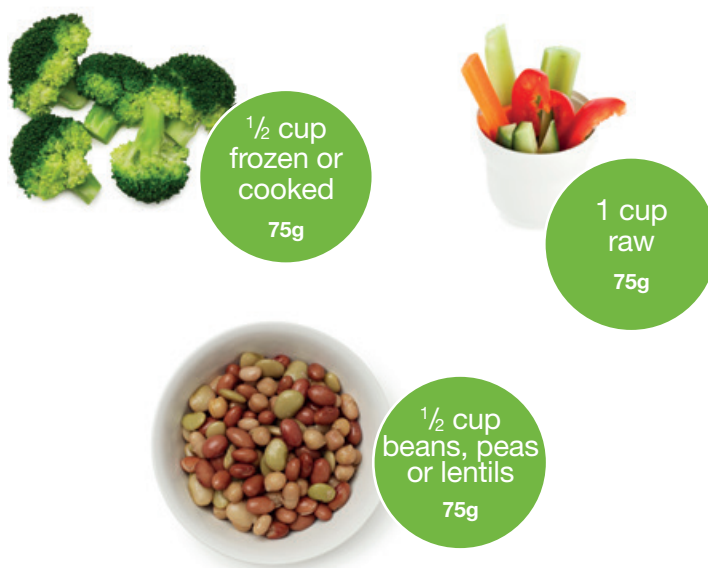
Additional information for teachers

- Plickers is a free application for teachers that can be downloaded from plickers.com. It allows you to collect instant feedback from your students to check their understanding of content and allow students to answer honestly without worrying what other classmates think about their answers. Setup involves downloading the app onto your smartphone or tablet, printing a class set of Plickers cards, and entering questions into the app.
- While this lesson teaches children to aim for 5 serves of vegetables, the actual serving recommendations vary across the age groups (shown below).

Age	Daily vegetable serves needed
2 – 3	2½
4 – 8	4½
9 – 11	5
12 – 18	5 (girls) – 5½ (boys)

- For further information on serve sizes see www.eatforhealth.gov.au

One serve of vegetables is:



ACTIVITIES

1. Explain that although we know vegetables are good for you, we also need to know how many serves you should be eating to stay healthy.
2. Demonstrate the serving size for raw and cooked vegetables using measuring cups ($\frac{1}{2}$ cup for cooked vegetables, 1 cup for raw vegetables).
3. Ask students if they know how many serves of veg they should eat each day (5 serves).
4. Choose 2 students to come to the front of the class. Ask students to wash and dry their hands and put on a pair of kitchen gloves before measuring out:
 - ▶ 1 cup of raw chopped vegetables
 - ▶ 5 cups of raw chopped vegetables
5. Discussion questions:
 - ▶ What does the 5 servings of raw vegetables represent? (the amount that most children should be eating every day)
 - ▶ Are you surprised that you should be eating this amount of vegetables?
6. Remind students that it is important to eat a rainbow of different vegetables and that eating 5 cups of carrots will not be as good for you as eating 5 cups of different vegetables. It is also healthy to eat a mix of raw and cooked vegetables.
7. Hand out Plickers cards to each student.
8. In pairs students will calculate the following and use the Plickers cards to share their answers (or ask students to share their answers verbally):
 - ▶ How many cups of vegetables would you need to eat **each week** if you only ate **raw** veg
(1 cup x 5 serves/day x 7 days = 35 cups)
 - ▶ How many cups of vegetables would you need to eat **each week** if you only ate **cooked** veg
($\frac{1}{2}$ cup x 5 serves/day x 7 days = 17.5 cups)
9. Ask students to take out their 'Vegetable record' (Worksheet 1).
10. Students will add up the total number of vegetables serves they ate over 24 hours.
11. Using the Plickers app (or take a tally on the whiteboard), see how many serves of vegetables the class ate over the 24 hours (2 or less, 3, 4, 5 or more).
12. Ask students to record the aggregated data in the table on Worksheet 2.
13. Students will then create a column graph to present this data using Worksheet 2. This can be completed individually or in pairs.
14. Share the cut up vegetables for your Crunch&Sip® break!



Lesson 7 – What’s on the menu?

WA Curriculum Links

Main curriculum area: Health and Physical Education

Year 3

- **ACPPS036** Actions in daily routines that promote health, safety and wellbeing: healthy eating, appropriate levels of physical activity
- **Humanities and Social Sciences** Draw conclusions and give explanations, based on the information and/or data displayed in texts, tables, graphs and maps

Year 4

- **ACPPS036/040** Strategies to ensure safety and wellbeing at home and at school, such as: following school rules, identifying and choosing healthier food for themselves
- **Humanities and Social Sciences** Draw conclusions and give explanations, based on the information and/or data displayed in texts, tables, graphs and maps

General capabilities

- Literacy
- Critical and creative thinking

Resources

- Canteen menu for your school (or canteen menu in Toolkit p. 10) – 1 per student pair
- Completed copies of Worksheet 2 from Lesson 6

Preparation

- Print canteen menus

LESSON OVERVIEW

In this lesson students are encouraged to consider the barriers to eating more vegetables and how these barriers can be overcome. Students explore strategies for increasing the amount of vegetables that appear in meals and snacks served by the school canteen.



ACTIVITIES

- Ask students to look at the vegetable intake graphs (Worksheet 2) completed in Lesson 6 and compare recommended intakes to actual intakes. Discuss:
 - Is it difficult to eat 5 serves of vegetables each day?
 - What stops people from eating more vegetables?
 - What would help kids to eat more vegetables (e.g. Crunch&Sip® vegetable breaks, make vegetables cheaper to buy, vegetable cooking classes etc)
- Read the following scenario to students: **The canteen manager has come to your class looking for some advice. He would like to put more vegetables on the canteen menu, and would like some ideas from students about how to do this.**
- Provide each student pair with a copy of the canteen menu. In pairs students will write down 5 possible changes to the menu to increase vegetables. The examples below can be used to guide students.

Recess	<ul style="list-style-type: none"> Add vegie sticks and hummus Include vegetables on cheese toasties e.g. sliced tomato, baked beans, diced capsicum, shredded spinach Add savoury muffins or pikelets with grated carrot & zucchini
Sandwiches, roll and salads	<ul style="list-style-type: none"> Add extra salad like grated carrot, lettuce, tomato, sprouts or strips of capsicum to sandwiches & rolls Include a baked beans, grated vegies & cheese toasted sandwich option Offer a super salad filled with vegies, a small portion of protein foods (e.g. tuna, chicken, egg, lean meat, beans, sunflower seeds) and a small portion of grains/cereals (e.g. pasta, brown rice, couscous, corn)
Hot food	<ul style="list-style-type: none"> Offer pumpkin soup and bread Add extra salad into burgers Include a salad on the side of hot meals Add extra vegies like mushroom, capsicum, tomato and spinach to pizzas, lasagne, shepherd's pie or stuffed potatoes Add kidney beans, diced celery, corn, grated carrot, grated zucchini and diced capsicum into tomato based pasta or nacho sauce
Crunch&Sip®	<ul style="list-style-type: none"> Include more vegetable options such as celery, cucumber, capsicum, cauliflower, snow peas, cherry tomatoes, broccoli and mushrooms

- Now is a good time for a Crunch&Sip® break

Additional activities

- PLAY:** Students can learn how to build a healthy lunchbox with this online game www.goforyourlife.vic.gov.au/hav/articles.nsf/html/index.html?Open



Lesson 8 – Making Healthy Food Choices

WA Curriculum Links

Main curriculum area: Media Arts

Year 3

- **ACAMAM058** Exploration of how sequenced images (still or moving), sound and text can be used to tell a story or convey a message
- **ACAMAR061** Responses that involve identifying, and reflecting on, the use of codes and conventions of media in their own and others' media works, using media terminology
- **ACPPS039** Choices and behaviours conveyed in health information and messages

Year 4

- **ACAMAR061** Responses that involve identifying, and reflecting on, the meaning and purpose of their own and others' media works, using media terminology
- **ACPPS039** Ways in which health information and messages can influence health decisions and behaviours

General capabilities

- Literacy
- Critical and creative thinking

Resources

- Worksheet 3 – 2 per student pair

Preparation

- Print worksheets

LESSON OVERVIEW

This lesson explores advertising used to convey health messages and the way in which media elements such as images, characters, music, sounds and sequencing are used to tell a story and create mood. Students develop a concept for an advertisement promoting vegetable eating to primary school students. The term 'storyboard' is introduced and students are asked to create a simple storyboard for their advertisement.

Additional information for teachers

- For more information on junk food marketing to children see junkbusters.com.au



ACTIVITIES

1. Ask students to name some food advertisements they have seen on television/Netflix etc. Are these advertisements mainly for healthy or unhealthy foods?
2. Show students **Go for 2&5** – www.youtube.com/watch?v=q1_PhPKzjoA
3. Class discussion:
 - ▶ What is the message of this advertisement?
 - ▶ What character is featured? Why is this character used?
 - ▶ What music or sounds are included? How do these add to the message?
 - ▶ Do you think that this advertisement would influence what you eat?
4. As a class, students will come up with a concept for a television advertisement to promote vegetables to primary school children. Discuss:
 - ▶ The main message or story
 - ▶ Characters that will be used to tell the story
 - ▶ Images that will be shown and the reason for choosing these images
 - ▶ Any music or sounds that will be included and what these will add to the storyline
 - ▶ What the characters will wear and what this adds to the overall message
5. Show students **How to Storyboard** – www.youtube.com/watch?v=DVXMQMUDITs
6. In pairs, students will develop a simple storyboard that maps out the sequence of shots in the advertisement using Worksheet 3. Although based on the class discussion, each student pair may develop different final versions.
7. In the notes section, ask students to describe other relevant elements of the advertisement such as costumes, music, sounds, dialogue, text etc
8. Now is a good time for a Crunch&Sip® break!

Additional activities

- Participate in the **Rethink Sugary Drink Critic's Choice** initiative – www.rethinksugarydrink.org.au/critics-choice. Students first view a show reel of advertisements on the health impacts of drinking sugary drinks. Students then vote on the advertisement they think is most effective.
- Use the discussion points in question 3 to explore the media elements that junk food advertisers use to sell their products. The following advertisements could be used:
 - ▶ Coco Pops – www.youtube.com/watch?v=nJryldiHQOA
 - ▶ McDonalds – www.youtube.com/watch?v=zAGRVQG2dyc
 - ▶ Cadbury and Oreo – www.youtube.com/watch?v=HrhHtDtZw20
 - ▶ At the end of the lesson play **The Vegetable Plot's 'Avocado' song** – www.youtube.com/watch?v=DTwLji5IQOs



Crunch&Sip[®]

For further information visit:

www.crunchandsip.com.au

or contact us at:

schools@cancerwa.asn.au

Supported by:



Crunch&Sip® Operation: Vegetables

Toolkit for Teachers Years 3-4



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Class growing journal

Each week record the height of your vegetable plants grown in full sun, part sun and with no sun. Record any other observations you notice. You could also take photos of your plant each week to create a photo diary!



Week	Light conditions	Height (cm)	Other observations
1	No sun		
	Part sun		
	Full sun		
2	No sun		
	Part sun		
	Full sun		
3	No sun		
	Part sun		
	Full sun		
4	No sun		
	Part sun		
	Full sun		
5	No sun		
	Part sun		
	Full sun		

Hearty hummus

WHITE / BROWN



Hearty hummus

Preparation time: **10 minutes**

Ingredients:

- 1 clove of garlic, peeled
- 400 g can chick peas, drained and rinsed
- 1 tablespoon sweet chilli sauce
- 1 tablespoon lemon juice
- 1 tablespoon olive oil
- 1 teaspoon ground cumin (optional)
- Pepper to taste
- Water

Equipment:

- Food processor

Method:

- Blitz the garlic in a food processor.
- Add the chickpeas, sweet chilli sauce, lemon juice, olive oil and pepper and blitz.
- The mixture will probably be too thick for the food processor to work on at this stage. Add a few tablespoons of water, then blitz. Repeat until you are happy with the texture.
- Serve with vegie sticks.

Hint: if you don't have a food processor, finely chop the garlic and mash the chickpeas and other ingredients with a fork or potato masher.



Fun fact!

Ancient Egyptian labourers who built the pyramids were paid wages in radishes, onion and garlic

Broccoli bonanza

GREEN



Broccoli bonanza

Preparation time: **10 minutes**

Cooking time: **8 minutes**

Ingredients:

- 3 cups broccoli
- 1 spring onion (including green top)
- 1 teaspoon olive oil
- 60 g reduced-fat cream cheese
- 1 tablespoon coriander, freshly chopped
- Freshly ground or cracked black pepper, to taste

Equipment:

- Large pot or microwave safe bowl
- Colander
- Food processor

Method:

- Chop broccoli into medium size florets.
- Cook broccoli until soft. This can be done on a stove top or using a microwave.
 - If cooking on the stove top heat water in the pot until boiling and then add the chopped broccoli. Cook for approximately 8 minutes or until soft.
 - If using a microwave place the chopped broccoli into a microwave safe bowl and add two tablespoons of water. Heat on high for approximately 2 minutes or until soft.
- Finely chop the spring onion (including the green top).
- Drain well in colander then transfer to a food processor or blender. Add remaining ingredients and blitz. Stop processor to scrape the sides several times until dip is smooth.
- Serve with vegie sticks



Fun fact!

Broccoli heads are actually made up of lots of tiny flowers

Pico de gallo

RED



Pico de gallo

Preparation time: 10 minutes

Ingredients:

- 4 large tomatoes
- 1 medium red capsicum
- ½ red onion
- 2 tablespoon fresh coriander or flat leaf parsley
- 1 lime
- 1 tablespoon olive oil
- Freshly ground or cracked black pepper, to taste

Equipment:

- Manual juicer

Method:

- Wash and dry tomatoes and red capsicum. Remove core and dice.
- Remove outer layers from the red onion and finely dice.
- Roughly chop coriander.
- Juice lime.
- Combine all ingredients in serving bowl.
- Serve with vegie sticks

Fun fact!

Just one carrot, half a potato, and half a tomato is enough to give you about half your daily vegetable requirement



Carrot and cumin dip

YELLOW / ORANGE



Carrot and cumin dip

Preparation time: **15 minutes**

Cooking time: **10 minutes**

Ingredients:

- 4 large carrots
- 1 teaspoon ground cumin
- 1 ½ tablespoon lemon juice
- ⅓ cup reduced fat Greek yoghurt
- 1 tablespoon olive oil
- Freshly ground black pepper, to taste
- Vegie sticks

Equipment:

- Food processor
- Medium pot
- Colander

Method:

- Bring a saucepan of water to the boil over high heat.
- Wash carrots and chop into rounds.
- Place carrots in boiling water and cook for 10 minutes, or until soft.
- Drain carrots over the sink using a colander. Ask your teacher for assistance with this step. Set carrots aside to cool for 5 minutes.
- Blitz carrot, cumin, paprika, lemon juice, olive oil, pepper and yoghurt in the food processor.
- Transfer to a serving bowl.
- Serve with vegie sticks.



Fun fact!

The edible skins of vegetables contain lots of vitamins, minerals and fibre so instead of peeling just give them a good wash

Hint: if you don't have a food processor, mash ingredients together with a potato masher.

Beetroot dip

PURPLE / BLUE

1 Drain then roughly chop beetroot. Mash beetroot in a bowl until smooth.



2 Peel then grate garlic. Juice lemon. Mix 2 teaspoons of lemon juice into beetroot with garlic and yoghurt.



3 Use scissors to finely cut spring onion or chives. Stir into dip.



4 Chop carrots and capsicum into strips.



5 Arrange vegetables and crackers on a platter and serve with dip.



Recipe tip:
Use as a healthy alternative to mayonnaise on hamburgers and rolls or swap beetroot for grated cucumber to make tzatziki!

Beetroot Dip



Ingredients for Dip:

- 225g tin sliced beetroot
- 1 garlic clove
- ½ lemon
- 1 cup plain Greek yoghurt
- 1 spring onion OR sml bunch chives

For dipping:

- 2 carrots
- 1 red and 1 yellow capsicum



- 150g snow or sugar snap peas
- 1 punnet of cherry tomatoes
- 1 packet of plain rice crackers

Equipment:

- chopping boards, knives,
- bowl, potato masher, fine grater,
- juicer, scissors, spoon, peeler,
- teaspoon, serving platter

Vegetable record



Name: _____

Date: _____

Time	Vegetable(s) eaten	Raw or cooked?	Amount of vegetable in cups	Number of vegetable serves
Total serves:				

Remember that one serve of vegetables is equal to ½ cup for cooked vegetables and 1 cup for raw vegetables

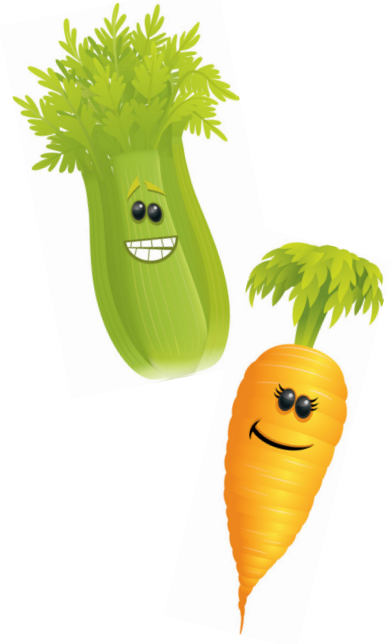


Crunch the numbers

Activity 1.

Fill the table below.

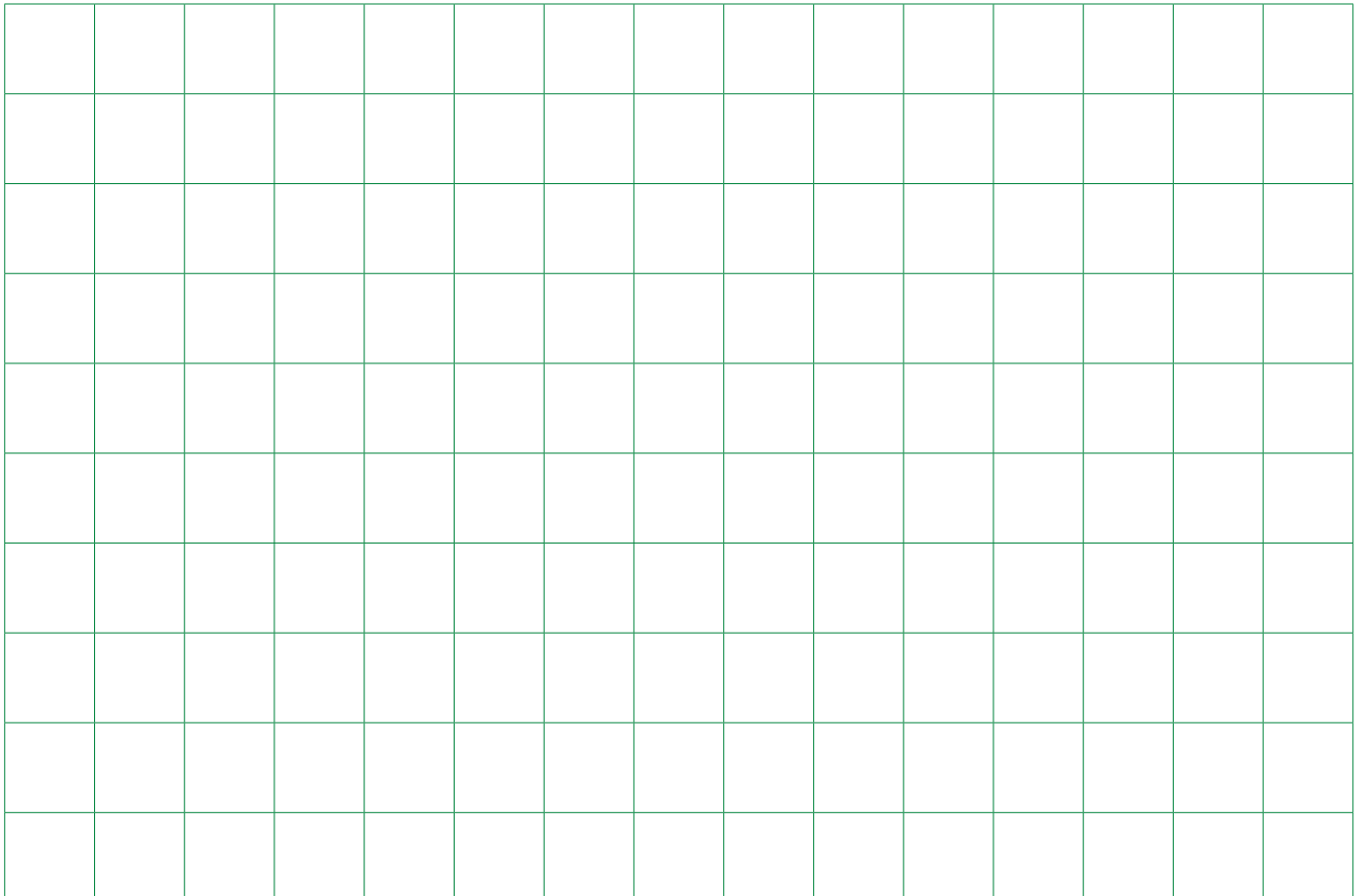
Number of vegetable serves	Number of students
2 or less	
3	
4	
5 or more	



Activity 2.

Display your data in a **column graph** on the graph paper below. Make sure to label your x-axis and y-axis and give your graph a title.

Title: _____

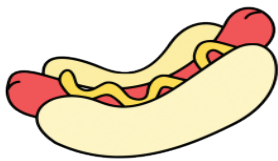




CANTEEN MENU

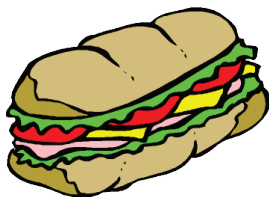
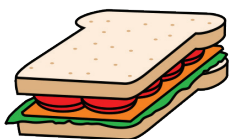
RECESS

<i>Cheese toastie</i>	\$1.50
<i>Pikelets</i>	\$0.50
<i>Pizza single</i>	\$2.00
<i>Mini hotdog</i>	\$1.50
<i>Chocolate yogo</i>	\$2.00
<i>Apple muffin</i>	\$1.50
<i>Homemade banana bread</i>	\$2.00
<i>Fruit salad & yoghurt</i>	\$2.50



SANDWICHES AND ROLLS (wholemeal or multigrain)

<i>Cheese</i>	\$3.50
<i>Ham & cheese</i>	\$4.00
<i>Cheese & tomato</i>	\$3.50
<i>Chicken strip sub</i>	\$4.50
<i>Egg</i>	\$4.00



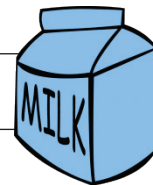
HOT FOOD

<i>Chicken burger with lettuce</i>	\$5.50
<i>Vegie burger with lettuce</i>	\$5.00
<i>Chicken nuggets</i>	\$3.00
<i>Sausage roll</i>	\$2.50
<i>Beef pie</i>	\$3.50
<i>Chicken fried rice</i>	\$4.50
<i>Baked potato with ham&cheese</i>	\$4.00
<i>Spaghetti bolognaise</i>	\$4.00
<i>Pizza (ham/pineapple, cheese/bacon)</i>	\$3.50



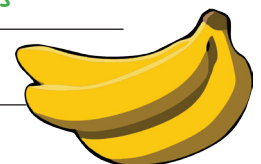
DRINKS

<i>Water (600mL)</i>	\$1.50
<i>Plain milk</i>	\$2.00
<i>Flavoured milk (300mL) - strawberry, chocolate, banana</i>	\$2.50
<i>100% juice (250mL) - orange, apple</i>	\$1.50

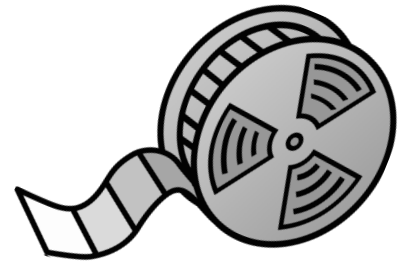


CRUNCH&SIP®

<i>Banana</i>	\$0.50
<i>Apple and pear slices</i>	each
<i>Carrot sticks</i>	
<i>Chopped melon</i>	



Storyboard



1

Notes:

2

Notes:

3

Notes:

4

Notes:
