

# Taste & Learn™

CSIRO's vegetable education program  
for Australian primary schools

Teacher resource manual

Unit 1: Foundation – Year 2



## USE OF TASTE & LEARN™ MATERIALS

Taste & Learn™ is an evidence-based program designed to provide teachers with lesson plans and activities to foster vegetable enjoyment in students by undertaking curriculum aligned activities. The Taste & Learn™ Teacher Resource Manuals and the Taste & Learn™ Digital Module (together, the “Taste & Learn™ Materials”) are provided for use by teachers in their classrooms for educational and non-commercial purposes only, as described in the Taste & Learn™ terms of use, found at <https://research.csiro.au/taste-and-learn/terms> (the “Terms”). If you access or use, or download, any of the Taste & Learn™ Materials, you are taken to have agreed to the Terms and the Privacy Policy, found at <https://www.csiro.au/en/About/Access-to-information/Privacy>. Please read the Terms carefully. If you do not agree with the Terms please cease using the Taste & Learn™ Materials immediately.

## PROJECT TEAM

---

<b>CSIRO Agriculture and Food</b>	Dr Astrid Poelman (project leader), Maeva Broch, Jess Heffernan, Dr Janne Beelen
-----------------------------------	--

---

<b>CSIRO Health and Biosecurity</b>	Dr David Cox, Bonnie Wiggins
-------------------------------------	------------------------------

---

<b>CSIRO Education</b>	Vicki Stavropoulos, Darren Vogrig, Rachel Rothwell, Dr Madeline Willcock
------------------------	--

---

<b>CSIRO Land and Water</b>	Dr Rod McCrea
-----------------------------	---------------

---

## ACKNOWLEDGEMENTS

Thanks to the teachers and students of the 29 schools in New South Wales and South Australia involved in the scientific evaluation of the Taste & Learn™ Materials and program.

The Taste & Learn™ Materials have been developed as part of a project funded by Hort Innovation, using the vegetable research and development levy and contributions from the Australian Government, and co-investment from CSIRO. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.



© Commonwealth Scientific and Industrial Research Organisation and Horticulture Innovation Australia Limited, April 2020.

Copyright subsists in the Taste & Learn™ Materials. CSIRO and Hort Innovation own the copyright, other than as permitted under the Copyright ACT 1968 (Cth). The Taste & Learn™ Materials (in part or as a whole) cannot be reproduced, published, communicated or adapted without the prior written consent of CSIRO or Hort Innovation.

## ACCESSIBILITY

CSIRO is committed to ensuring its online content is accessible to everyone regardless of ability. Please refer to <https://www.csiro.au/en/About/Footer/Accessibility> for further information.

# Contents

Objectives .....	ii
Lesson plan .....	1
Lesson 1: The five senses .....	2
Lesson 2: From seed to vegetable .....	10
Lesson 3: The basic tastes.....	17
Lesson 4: Becoming a food adventurer .....	24
Lesson 5: Picnic in class – sandwich .....	30
Appendix A: Unit 1 PowerPoint slides.....	36
Image credits .....	54

# Objectives

The specific objectives of Unit 1 are for students to:

- Increase knowledge and familiarity with common vegetables.
- Describe vegetables in terms of the five senses.
- Learn that liking/disliking of specific foods can change by repeated trying.
- Become more open to tasting a wide variety of vegetables.

# Lesson plan

LESSON	TITLE	LESSON OUTLINE
1	<b>The five senses</b>	Students: <ul style="list-style-type: none"><li>• Learn about the senses involved in eating.</li><li>• Experience the five senses through tasting vegetables.</li><li>• Taste and describe three vegetables with different colours, tastes and textures.</li></ul> <p><b>Homework</b></p> Students create a vegetable tasting record with their parents. <p><b>Extension</b></p> Students draw vegetables they would serve at a vegetable tasting party.
2	<b>From seed to vegetable</b>	Students: <ul style="list-style-type: none"><li>• Can recognise and name different types of common vegetables.</li><li>• Understand what plants need to grow.</li><li>• Understand which parts of plants are eaten as vegetables.</li><li>• Taste vegetables from three different plants parts.</li></ul> <p><b>Extension</b></p> Students grow a bean plant.
3	<b>The basic tastes</b>	Students: <ul style="list-style-type: none"><li>• Learn that we taste foods using the taste buds on the tongue.</li><li>• Can recognise the four key basic tastes (sweet, sour, salty and bitter).</li><li>• Give examples of foods for each of the basic tastes.</li><li>• Taste two vegetables and can identify their dominant taste (sweet and bitter).</li></ul> <p><b>Extension</b></p> Students categorise foods according to their basic taste.
4	<b>Becoming a food adventurer</b>	Students: <ul style="list-style-type: none"><li>• Learn that liking/disliking of foods can change by repeated trying.</li><li>• Learn about the role of variety in the diet (included colour in vegetables).</li><li>• Try foods they have not tasted before.</li></ul> <p><b>Extension</b></p> Students discover colour variety in vegetables.
5	<b>Picnic in class: sandwich</b>	Students: <ul style="list-style-type: none"><li>• Prepare a tasty sandwich with vegetables and other ingredients.</li><li>• Enjoy eating a sandwich together.</li><li>• Discuss their experiences of eating a sandwich that includes vegetables.</li></ul> <p><b>Extension</b></p> Students know at least ten vegetables that can be consumed on a sandwich.

# Lesson 1: The five senses

## 1

### Lesson outline

#### STUDENTS

- Learn about the senses involved in eating.
- Experience the five senses through tasting vegetables.
- Taste and describe three vegetables with different colours, tastes and textures.

#### HOMEWORK ACTIVITY

- Create a repeatable tasting record with their parents.

#### EXTENSION ACTIVITY

- Draw vegetables they would serve at a vegetable tasting party.

### Materials

#### FOR THE CLASS

- PowerPoint slides, lesson 1, slides 1–5.
- Three different vegetables with different colours, tastes and textures (one piece per child for tasting).
- Knife, cutting board, containers with lids.
- Tongs.
- One descriptive words recording medium e.g. class sheet 1.

#### FOR EACH STUDENT

- Homework sheet 1.
- Student journal (optional).

#### EXTENSION ACTIVITIES

- Activity 1. Paper plate or circle.
- Activity 2. Paper plate or circle.
- Activity 3. A4 sheet of paper.

#### VEGETABLES

##### Description

Three common vegetables that can be eaten raw with a variety of colours, shapes, tastes and textures. Choose at least one that most students would like and at least one more 'challenging' vegetable.

##### Suggestions

Carrot, cauliflower, cucumber

##### Alternatives

Tomato, capsicum, celery, broccoli



### Preparation



- Choose three common vegetables that can be eaten raw and that together have a variety of colours, shapes, tastes and textures (e.g. carrot, cauliflower, cucumber). We recommend the use of the same vegetables in the homework exercise.
- Wash vegetables well (see 5.2 How to safely prepare vegetables, Taste & Learn™, general information for teachers and schools, page 18).
- Cut vegetables into enough pieces for each student to have one small piece of each to taste.
- Store in closed containers in fridge until use.

## Teacher's background notes

This lesson engages students with the program and begins exploring the topics. Students will learn about the five human senses (sight, hearing, taste, smell, touch) and the role they play in eating and drinking, and about individual food preferences. They will start describing vegetable eating experiences using their five senses.

### THE SENSES

#### Sight – eyes

- Visual information is often the first characteristic we notice of a food product.
- Sight provides information on the colour, size, shape and surface texture (e.g. rough, smooth, shiny) of a food.
- On the basis of appearance, we often form expectations about the taste of a food.
- Appearance can also provide information about whether a food is suitable for eating, e.g. mould on tomatoes and green (unripe) banana.
- Examples of descriptive words: brown, large, round, shiny, rough looking.

#### Smell – nose

- The odour or smell of a product is detected by sniffing. Small molecules ('volatiles') enter the nose.
- Examples of describing words: strawberry smell, cheese smell, pea smell.

#### Taste – mouth

- There are five commonly acknowledged basic tastes: sweet, sour, salty, bitter and umami. Umami is a savoury taste and means 'deliciousness'.
- Basic tastes are detected through taste receptors on the tongue.
- Flavour, for example carrot flavour, is a combination of basic taste (sweet) and specific odours (from small molecules). The small flavour molecules are perceived when they travel from inside the mouth to the back of the nose. Together, they form a flavour impression.
- With a cold, the nose can be fully blocked and we can only taste the basic taste. This makes food taste very bland. The same happens when we deliberately pinch our nose.
- Examples of describing words: sweet, sour, strawberry flavour, caramel flavour.

#### Touch – fingers/hand and in-mouth

- The texture or consistency of a food is also perceived by sensors in the mouth.
- There are pressure sensors that are activated when we bite a food with our front teeth and chew it down with our molars.
- From these, we receive information about, for example, hardness (candy versus marshmallow, raw carrot versus cooked) and fracturability (the way a shortbread biscuit crumbles when you eat it).
- We also get textural information related to particle structure of the food, primarily when food interacts with soft tissues in the mouth (lips, tongue, gums, palate). Examples are smooth (avocado), rough (raw broccoli florets), chalky, fibrous (beans) and lumpy.
- We can also perceive whether food is watery, fatty or greasy. This is also part of the texture. When we touch foods with our fingers, this can often provide an idea of what it will feel like in the mouth.
- Examples of describing words: hard, sticky, chewy, smooth, rough, lumpy.

#### Hearing – ears

- Hearing plays an important role in daily life. It also plays a role in eating foods.
- Sound plays an important role in an assessment of freshness/staleness, e.g. the crunch of chips, an apple or a celery stalk.
- Examples of describing words: crunchy, crispy.

## INDIVIDUAL PREFERENCES

- Different people like to eat different things. What we like depends in large part on the culture in which we are raised and what we get offered at home.
- What we like can change.
- Sometimes, someone does not like a food the first time they try it. However, when they have tried it several times, they may start to like it.
- Sometimes it can take ten or more exposures before someone starts to like a food.
- Some foods may be liked more when they are prepared differently.
- It is important to try at least a little amount when something is offered. It only takes a small bit of the food to eventually start to like it.
- It is fun to try new foods. It is also adventurous and brave to try new things to eat or to keep trying things that you do not particularly like.

## Suggested activities / Lesson steps



### Suggested set up

Class discussion

### Additional resources

PowerPoint slides, lesson 1, slides 3–4

Student journal (optional)

### ENGAGE – TALKING ABOUT FOODS

- Conduct a guided discussion to introduce the program (a program of five lessons in which we will taste and learn about vegetables) and assess prior knowledge about foods and the senses and to develop an awareness of individual likes and dislikes.
- Foods. Use PowerPoint slide 3, pictures of bread, juice, cereal, cheese, carrot.

#### Ask questions such as:

- Can you identify the foods?
- Have you tried it?
- Do you like it?
- Are any of them vegetables?

- Five senses. We have five senses that help us make sense of our world.
  - Watch this video: “The 5 Senses Song” song by Dr Jean Feldman, video by Mr Harry (1.33min) <https://www.youtube.com/watch?v=4-jMyDR6kSQ>
- Display PowerPoint slide 4.

#### Ask questions such as:

- What senses do we have?
- What senses do you use when eating the foods?

- Individual likes and dislikes. Conduct a brainstorm. Ask the students to name some foods that they really like. List them. Ask the students to name some foods that they really do not like. List them.



**Ask questions such as:**

- Think of a food that you like. What is it that you like about it? (Is it the way it looks? Tastes? Feels in your mouth?)
- Think of a food you do not like. What is it that you do not like about it? (Look? Taste? Feel?)
- Do you think you can learn to like something that you do not like now?
- Are you expected to try foods at home, even if you do not like them?

**Suggested set up**

Class discussion

**Additional resources**

PowerPoint slides, lesson 1, slide 5

Tongs

Class sheet 1 or piece of paper to record descriptive words

Homework sheet 1

**EXPLORING VEGETABLES – USING THE FIVE SENSES**

- Ask the class to sit in a sharing circle. Introduce and discuss the vegetables that you have prepared. Show the students an example of the vegetable uncut as well as the prepared pieces.
- Explain that the students are encouraged to experience tasting each vegetable, even if it is something they do not usually eat. Ask the student to wash their hands and return to the sharing circle.
- Use tongs to serve one piece of each of the three vegetables to each student. Encourage them to experience tasting each vegetable.
- Create a word bank (on an interactive board, PowerPoint, class journal, large piece of paper) and discuss one of the vegetables in a systematic way. Use the word bank to record descriptive words the students suggest for each of the senses. (See suggested format below. Class sheet 1, 'Exploring vegetables using the five senses').

**Ask questions such as:****Appearance (Look)**

- What colour is it?
- What shape is the original vegetable?
- Is the surface smooth or rough?

**Smell**

- Does the vegetable have a smell?
- What does it smell like/remind you of?

**Sound**

- When you bit and chewed the vegetable, did you hear a sound?
- What kind of sound?

**Taste**

- What taste and flavour does it have? Sweet, bland, strong taste?

**Texture**

- What does it feel like in your mouth? Juicy, hard, crunchy?

- Introduce PowerPoint slide 5, Classroom record – liking of vegetables Day 1. Ask for a show of hands for each category and fill in the table. Save the completed table.
- Ask the students to return to their desks and write/draw about their experience tasting vegetables. This could be in the form of an A4 sheet folded into four or an A4 sheet with four circles on it. The students could write/draw about four observations made during their tasting experience.
- Invite the students back to a sharing circle to share their recorded observations.
- Explain that the students are encouraged to complete a homework activity.

### Additional resources

Homework sheet 1, 'Tasting sheet' Information note for parents

### Note

If it is unlikely that students will have the opportunity to complete the homework activity, it may be possible to provide the experience in class.

### Additional resources for each student

Activities 1 and 2 - paper plate or circle

Activity 3 - A4 sheet of paper

## HOMEWORK ACTIVITY

- Provide students with student homework 'tasting sheet' and parent note and introduce the homework activity.
- Explain that students will choose one of the three vegetables tasted during the lesson that they are prepared to taste eight times (twice a week over the next four weeks). Ask them to write/draw the name of the vegetable in the space provided on the homework sheet and the parent note. Scribe for them if necessary.
- Explain that preferences may change. It is possible to experience a change in our likes and dislikes of foods we try several times. Also explain that it is of importance to try the chosen vegetable.

### Discuss how they should use the homework sheet.

- Each time students taste the vegetable, they fill in one box with the date that it was eaten. They may choose to add a picture.
- Students will evaluate for themselves if they change their opinion of a specific vegetable once they have eaten it several times.
- Explain that in lesson 4, the class will revisit the homework sheet, taste the vegetable again and indicate how they think it tastes.
- When homework is returned in lesson 4, compile a classroom record for the vegetable (or vegetables) indicating students likes and dislikes. To determine likes and dislikes, you might ask children to stand and join a group that indicates how they found the taste of the vegetable, 'did not like', 'unsure', 'liked'.

## EXTENSION ACTIVITIES

### Activity 1

Using a paper plate or a paper circle representing a plate, students may draw (and possibly label) vegetables that they would include if they were having a vegetable tasting party.

### Activity 2

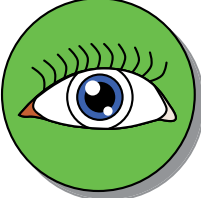




Using a paper plate or a paper circle representing a plate, students may use half the space to draw vegetables they have eaten during the past week and half the space to draw vegetables they would be happy to try.

### Activity 3

Using an A4 sheet of paper, students may create a place mat displaying vegetables they are familiar with.

## Class sheet 1 – Suggested format for a word bank

# Exploring vegetables using the five senses

Name of the vegetable:				
Sight	Smell	Sound	Taste	Feel (mouth)
				

# Homework sheet 1

## Tasting sheet

The vegetable I have chosen to eat eight times is: \_\_\_\_\_

Date:

Date:

Date:

Date:

Date:

Date:

Date:

Date:

Write the date that you are trying the vegetable in a box. Add a picture of the vegetable.

# Information note for parents and carers

Date \_\_\_\_\_

## Taste & Learn™

Our class is learning about vegetables and we aim to increase our familiarity with a range of vegetables.

When eating vegetables, we are using our five senses. We want to find out what happens when we try a vegetable several times over a period of time.

One activity you can help with is the “Tasting sheet”. Your child is asked to try a chosen vegetable at least eight times in the next four weeks. They can then compare their tasting experience with other members of our class.

Your child has chosen a vegetable that they have tried at school and that they are prepared to try eight times over the next four weeks. Their chosen vegetable is

---

I ask that you source and prepare the chosen vegetable, remind the student to eat it and help them fill in the ‘Tasting sheet’ when they try it.

The completed ‘Tasting Sheet’ is due back at school by \_\_\_\_\_ so that your child can compare their experience with classmates.

We thank you for your assistance in this educational activity.

Please let me know if it is not convenient for your family to be involved.

Class Teacher.



# Lesson 2: From seed to vegetable

## 2

### Lesson outline

#### STUDENTS

- Can recognise and name different types of common vegetables.
- Understand what plants need to grow.
- Understand which parts of plants are eaten as vegetables.
- Taste vegetables from three different plants parts.

#### EXTENSION ACTIVITY

- Grow a bean plant.

### Materials

#### FOR THE CLASS

- PowerPoint slides, lesson 2, slides 6–25.
- Three vegetables from three different parts of a plant (one piece of each per child to taste).
- Knife, cutting board, containers with lids.
- Tongs.

#### FOR EACH STUDENT

- Student worksheet 1, 'Today I ate plant parts'.
- Student journal.

#### EXTENSION ACTIVITY

- Student worksheet 2, 'Grow a plant in class'.
- Seeds from fresh green beans.
- Cups and water in spray bottles.
- Paper towel or cotton balls.
- Marker pen.

### VEGETABLES

#### Description

Three vegetables from three different plant parts

#### Suggestions

Root: beetroot (canned or pre-packaged)  
Leaves: baby spinach  
Flower: broccoli

#### Alternatives

Root: carrot, celeriac  
Leaves: lettuce, cabbage  
Flower: cauliflower  
Fruit: tomato, avocado, capsicum  
Stems: celery  
Seeds: peas



## Preparation



Choose and prepare three vegetables that come from different parts of a plant e.g. beetroot (root, from can), pea (seed), baby spinach (leaf), broccoli (flower), asparagus (stem), capsicum (fruit).

- Wash vegetables well (see 5.2 How to safely prepare vegetables, Taste & Learn™, general information for teachers and schools, page 18) or drain the beetroot.
- Cut vegetables into enough pieces for each student to have one small piece of each to taste.
- Store in closed containers in fridge until use.

2

### Teacher's background notes

- Plants need water, light, air and nutrients to grow.
- Most plants are made up of stems, leaves, flowers and roots and produce fruits containing seeds.
- Humans most commonly eat the fruit (e.g. apples, pears, tomato), roots (e.g. beetroot, sweet potato), seeds (e.g. corn, wheat, coffee, various nuts, peas), leaves (e.g. cabbage, lettuce, spinach) or flowers (e.g. cauliflower). In some cases, we eat stems (e.g. asparagus).
- Vegetables are edible parts of plants. Although there are different categorisations of vegetables, commonly the following six are considered: flower, fruit, seeds, leaves, root and stem.
- Fruits: technically, fruits are not vegetables, but there are fruits that are commonly considered to be vegetables (e.g. tomato, capsicum).
- Roots: technically, these can be subdivided into the vegetable roots themselves (e.g. carrot), tubers (e.g. potato, sweet potato) and bulbs (e.g. onion, garlic). This plant part is the energy reservoir of the plant and therefore typically contains a relatively high amount of carbohydrates.
- With some plants, we eat more than one part. An example is beetroot. Most people eat the root, but the leaves are also good to eat. Another example is onion where typically the bulb is eaten, but young stems are also edible.
- Some plants parts are poisonous to eat, for example the leaves of tomato plants.
- Many vegetables can be consumed raw, while some, such as cassava and bamboo shoots must be cooked to destroy certain natural toxins.
- Classification of vegetables according to their plant part:

FLOWER	FRUIT	SEEDS	LEAVES	ROOT / BULB	STEM
Broccoli	Avocado	Peas	Lettuce	Beetroot	Celery
Cauliflower	Beans	Sweetcorn	Spinach	Carrot	Leek
	Capsicum		Cabbage	Sweet potato	Asparagus
	Cucumber		Herbs	Garlic	
	Pumpkin			Onions	
	Tomato			Radish	
	Eggplant				
	Snow peas				
	Zucchini				

## TASTING OF VEGETABLES FROM DIFFERENT PLANT PARTS

Through tasting vegetables from different plant parts, students:

- Enhance their learning of plant parts.
- Build their ability to describe what they taste (taste/ mouth feel).
- Use describing words for suggested vegetables such as:
  - Beetroot: red colour, sweet, earthy, intense flavour, smooth texture, juicy.
  - Broccoli: green colour, hard, crunchy, rough on the tongue, mild flavour, slightly bitter.

Texture depends on preparation method and vegetable variety.

## Suggested activities / Lesson steps



### Suggested set up

Class participation

### Additional resources

PowerPoint slides, lesson 2, slide 7

Vegetables

YouTube video, 'Parts of plants'

Student journal

### EXPLORE – VEGETABLES ARE PLANT PARTS

- Conduct a guided discussion about plants.

#### Ask questions such as:

- Ask students to give examples of plants. (Are vegetables mentioned?).
  - Explain that vegetables are plants that we eat.
  - What do plants need to grow? Use PowerPoint slide 7.
- Show video “Parts of Plants” (first 5 minutes) by Mindset Learn <https://www.youtube.com/watch?v=3QjSD2AF5mg>
  - Introduce the three prepared vegetables. Discuss which parts of plants they came from.
  - Ask the students to wash their hands and form a sharing circle. Use tongs to serve each student three vegetables from different parts of the plant. Encourage them to experience tasting each vegetable.
  - After the students have tasted each piece of vegetable, ask them to share with the rest of the class what they think the vegetable smells, feels and tastes like. Add their words to the previously started word bank.
  - Ask the students if they can tell by tasting, which part of the plants the vegetables are from? (The answer is no).





## EXPLAIN – VEGETABLES AND THEIR CORRESPONDING PLANT PART

Form the students into groups. Distribute one A4 sheet of paper per group and ask the students to brainstorm and record all the vegetables they can think of. They may record with words or pictures.

### Suggested set up

Class discussion/  
group and  
individual work

### Additional resources

PowerPoint slides,  
lesson 2, slides  
8 – 25

One A4 sheet of  
paper per group

Student  
worksheet 1,  
'Today I ate  
plant parts'

### Additional resources

Student worksheet  
2, 'Grow a plant  
in class'

Bean seed

Clear plastic cup

Spray water bottles

Piece of paper  
towel or cotton  
balls

Marker pen

### Lead a discussion

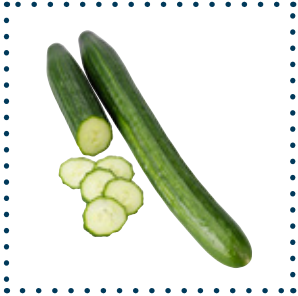
- Ask each group to share their records.
  - Use the PowerPoint slides 8 – 24 as back up for the vegetables the students do not know.
  - Which of the prepared vegetables have they never tasted before?
- Using PowerPoint slide 25, ask the students to click and drag each vegetable to the four plant parts displayed, fruit, stems, leaves and roots (answer sheet, next page). Ask them to categorise the prepared vegetables they tasted on the basis of which part of the plant they are from (fruit, root, leaves, stem, flower or seeds).
  - Introduce worksheet 1, 'Today I ate plant parts'. Students may draw the vegetable(s) they have eaten. They may also write the names and anything else they wish to record about the vegetable.
  - Invite the students back to a sharing circle to share their recorded observations.

### EXTENSION ACTIVITY – GROW A PLANT IN THE CLASS

Students grow a bean plant from a seed. Introduce Student worksheet 2, 'Grow a plant in class'. Over the weeks, the students watch the seed grow and develop from a seed to a plant. If time allows, it is recommended that each student grows their own seed.

# I can eat the whole plant

Fruits



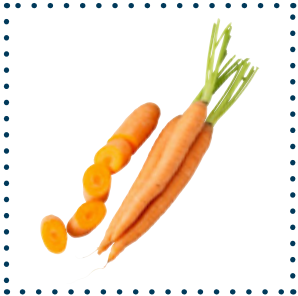
Stems



Leaves



Roots



## Student worksheet 1

# Today I ate plant parts

Name \_\_\_\_\_ Date \_\_\_\_\_

Draw the vegetables you tried today in the correct box.  
Add any other that you know.

Roots	Stems
Leaves	Fruits/seeds

## Student worksheet 2

# Grow a plant in class



### Equipment

One bean seed that has been soaked for one hour

One clear plastic cup

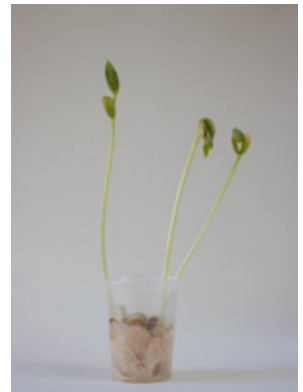
One piece of paper towel or six cotton balls

Water in a spray bottle

Marker pen to write your name

### Procedure

1. Collect a soaked seed, plastic cup and a piece of paper towel. Write your name on your cup.
2. Roll up the paper towel (or use cotton balls) and put it into the cup so that it is pressing against the sides.
3. Spray the towel with water until it is damp.
4. Place the seed between the inside of the cup and the paper towel.
5. Plants need sunlight to grow. Place your cup in a place in the classroom where it will get some sunshine.
6. Plants need water to grow. Check the paper towel daily and spray with some water if you notice the towel is getting dry. After a few days, you should see the bean seed sprouting.



### Well done!

After one and a half weeks, your bean plant should have grown roots, a stem and leaves.

It is ready to plant in the ground.

# Lesson 3: The basic tastes

## Lesson outline

### STUDENTS

- Learn that we taste foods using the taste buds on the tongue.
- Can recognise the four key basic tastes (sweet, sour, salty and bitter).
- Give examples of foods for each of the basic tastes.
- Taste two vegetables and can identify their dominant taste (sweet and bitter).

### EXTENSION ACTIVITY

- Categorise foods according to their basic tastes.

## Materials

### FOR THE CLASS

- PowerPoint slides, lesson 3, slides 26–28.
- 1 ½ tablespoon sugar.
- ¼ teaspoon salt.
- ½ teaspoon citric acid (if not available, can replace with lemon juice).
- 600 mL tap water.
- 200 mL tonic water (gone flat).
- Four sturdy beakers/ cups for taste solutions.
- Two vegetables: one sweet and one bitter (one piece per child for tasting).
- Knife, cutting board and containers with lids.
- Optional: small mirror(s).

### FOR EACH STUDENT

- Cotton buds (four per student) plus spares.
- Plastic cup for rinsing.
- Student worksheet 3, 'Today I tasted...'

### EXTENSION ACTIVITY

- PowerPoint slides, lesson 3, slide 28.
- Student worksheet 4, 'I know my vegetables'.

## VEGETABLES

### Description

One sweet and one bitter tasting vegetable. Ensure the bitter vegetable is not too unpleasant for your students.

### Suggestions

Sweet: corn (canned)  
Bitter: green capsicum

### Alternatives

Sweet: peas, sugar peas, carrot  
Bitter: broccoli (raw), Brussels sprouts (raw or cooked), zucchini (with skin), witlof



## Preparation



### PREPARE FOUR TASTE SOLUTIONS

- Label four sturdy cups or beakers one to four. Order: one–acidic, two– sweet, three–salty, four– bitter.
- Prepare different solutions in their respective cup or beaker:
  - Acidic: add ½ teaspoon of citric acid to 200 mL of water – mix well.
  - Sweet: add 1 ½ tablespoons of sugar to 200 mL of water – mix well.
  - Salty: add ¼ tea spoon of salt to 200 mL of water – mix well.
  - Bitter: pour 200 mL of tonic water – open bottle the night before so the tonic goes ‘flat’.
- Seal with lid or cling wrap, keep refrigerated if not used within four hours.

### PREPARE TWO VEGETABLES

- Choose one sweet (corn) and one bitter (green capsicum) vegetable.
- Wash vegetables well (see 5.2 How to safely prepare vegetables, Taste & Learn™, general information for teachers and schools, page 18). If using canned corn, drain the can.
- Cut vegetables into enough pieces for each student to have one piece of each to taste.
- Keep covered in containers in the refrigerator until use.

## Teacher’s background notes

- Taste is perceived by the tongue.
- Taste receptors are located in taste buds.
- Taste buds can be observed on the tongue. These are the ‘bumps’.
- The four most common basic tastes are sweet, salty, sour and bitter.
- Examples for each of the tastes:
  - Sweet: jam, cake.
  - Salty: soy sauce, cheese, chips.
  - Sour: lemon, lime, yoghurt.
  - Bitter: dark chocolate, grapefruit (coffee and beer for adults).
- There is also umami, a savoury/brothy taste (meaning ‘delicious’), present in e.g. parmesan cheese, soy sauce. This taste enhances flavour and is harder to recognise on its own than the other tastes.
- It is a misconception that we taste specific tastes on specific parts of the tongue. All parts of our tongue can perceive all tastes. Where the taste is best perceived may vary from person to person.
- Humans are born with an innate liking for the sweet taste and an innate disliking for the bitter taste. For our ancestors, sweet taste signalled energy, whereas bitter taste signalled potential toxins in plants.
- We can learn to like bitter tastes by repeatedly trying them. Thus, it is an acquired taste.
- When we perceive caramel flavour or strawberry flavour, this is a combination of a basic taste combined with smell.
- When we have a cold, we can only perceive basic tastes. Pinching the nose can also block odours.
- It is hard to recognise a food on the basis of taste alone and food can tastes very bland.

## Suggested activities / Lesson steps



### Suggested set up

Class participation

### Additional resources

PowerPoint slides, lesson 3, slides 27 – 28

Taste solutions

Cotton buds

Rubbish container

YouTube video 'How the tongue works'

Mirror (optional)

### EXPLAIN – THE FOUR BASIC TASTES

- Discovering the taste buds.
  - Conduct a guided discussion.**
    - Ask the students to stick out their tongues.
    - If using mirrors, let students look at their own tongue. Otherwise, ask them to check a classmate's tongue.
    - Can they see round parts on the tongue? What do they think they are?
- Tasting the four taste solutions.
  - Display cups with the four different taste solutions. Explain to the students that they are encouraged to taste each solution. Introduce PowerPoint slide 27 and indicate that you will fill in the boxes according to what most students think best describes the taste.
  - Ask the students to form a sharing circle. Inform them that, in order to avoid spreading germs, they will use a clean cotton bud each time they try a solution. Place the rubbish container in the centre of the circle.
  - Distribute one cotton bud to each student. Move around the sharing circle with solution one, so that each student may dip their cotton bud into the solution and taste it. They can then put their cotton bud into the rubbish container.
  - Ask students to pay attention to how and where they perceive this taste in their mouth.
  - Discuss what the majority of the students think the taste is. Use PowerPoint slide 27 and record the taste by dragging the blue cross into the right box. Then reveal the answer by pressing the space bar (this is an animated slide). If students were incorrect, discuss the taste with them by giving examples of foods with that taste. If correctly identified, ask students if they can give examples of other foods with this taste.
- Repeat with cups two to four.
- Optional. For older students (Year 2) this activity could be conducted individually or in groups by presenting them with a work sheet similar to PowerPoint slide 27 and discussing correct responses once all four solutions have been tasted.
- Watch the video "How the tongue works" by KidsHealth (5.01 minutes): <https://kidshealth.org/en/kids/bodymovies.html?WT.ac=en-k-htbw-main-page-a> (you will need to scroll down the list of videos to select the "How the tongue works" video).



### Suggested set up

Class discussion

### Additional resources

Vegetables

Student worksheet 3

'Today I tasted...'

### Additional resources

Activity 1

PowerPoint slides, lesson 3, slide 28

Activity 2

Student worksheet 4, 'I know my vegetables'

## ELABORATE – TASTING SWEET AND BITTER VEGETABLES

- Explain to the students that they are encouraged to taste a sweet and a bitter vegetable, initially with a squeezed (pinched) nose.
- Ask students to wash their hands, form a sharing circle and squeeze their nose closed.
- Present each student with one piece of the sweet vegetable and ask him or her to take a small bite and to tell you what they think is the predominant taste.
- Ask the student to taste the remaining part of the vegetable without pinching their nose, to discover the flavour of the vegetable. Discuss which other vegetables taste sweet.
- Direct the students to repeat the procedure with the other (bitter) vegetable.
- Conduct a discussion about liking of vegetables. Discuss how we naturally like the taste of sweet things and that we can learn to like the taste of bitter things if we try them enough times.
- Introduce student worksheet 3, 'Today I tasted...' and discuss how they could record what they tasted and what the vegetables tasted like, e.g. using pictures and/or words.
- Invite the students back to a sharing circle to share their recorded observations.

## EXTENSION ACTIVITIES

### Activity 1 – What is the dominant basic taste?

- Using PowerPoint slide 28, 'How do these foods taste?' discuss each food with the class.
- Ask the students to categorise each food according to the dominant basic taste and drag each picture to where it belongs on the table (PowerPoint slide 28).

### Activity 2 – individual

- Ask the students to complete student worksheet 4, 'I know my vegetables'.



## Student worksheet 3

# Today, I tasted...

Name \_\_\_\_\_ Date \_\_\_\_\_



The taste was \_\_\_\_\_

---

---

# How do these foods taste?

Sweet



Salty



Sour



Bitter

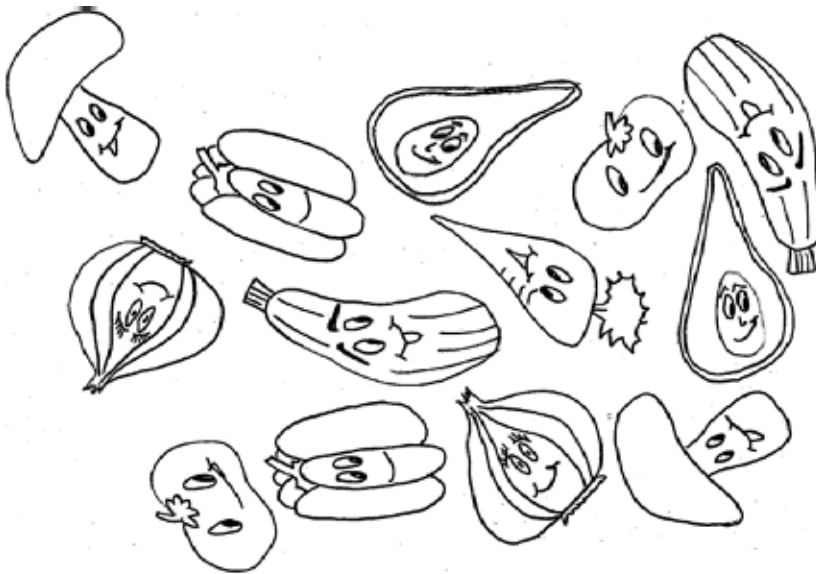


## Student worksheet 4

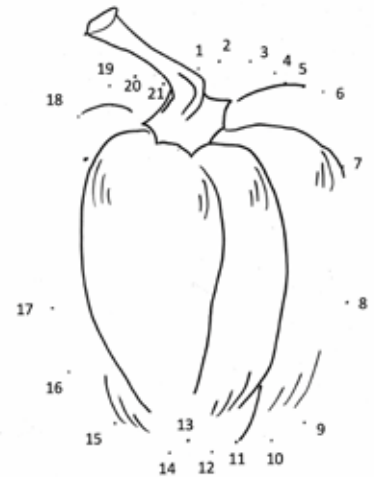
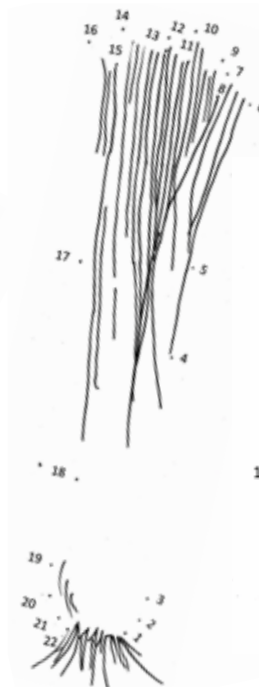
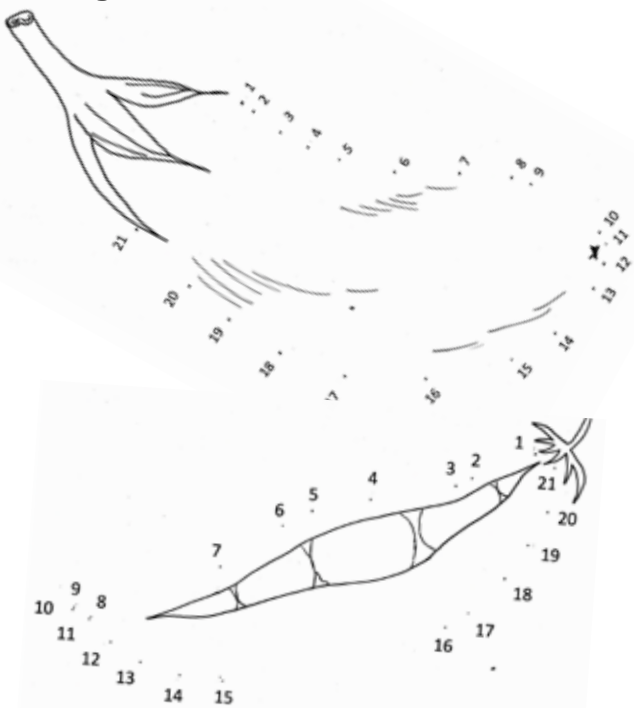
# I know my vegetables

**Matching vegetable pairs. Join the numbers and identify the vegetable.**

Find the pairs and circle them. Which vegetable is not part of a pair?



Connect the numbers in the correct order. Do you know the name of the vegetables?



# Lesson 4: Becoming a food adventurer

## Lesson outline

### STUDENTS

- Learn that liking of foods can change by repeated trying.
- Learn about the role of variety in the diet (included colour in vegetables).
- Try foods they have not tasted before.

### EXTENSION ACTIVITY

- Discover colour variety in vegetables.

## Materials

### FOR THE CLASS

- PowerPoint slides, lesson 4, slides 29–31.
- One to two adventurous foods (one piece per child for tasting).
- Two adventurous vegetables (one piece per child for tasting).
- Containers with lids to serve the foods.
- Tongs/spoons.

### FOR EACH STUDENT

- Student journal.
- Spoon (depending on food chosen).

### EXTENSION ACTIVITIES

- **Activity 1.** Student worksheet 5, 'Colour the vegetables' and student worksheet 6, 'The colour of vegetables.'
- **Activity 2.** A4 sheet of paper.

## VEGETABLES AND OTHER INGREDIENTS

### Description vegetables

Two 'adventurous' vegetables that your students may not have tasted before or might find a bit challenging to taste

### Suggestions

Radish  
Mushroom

### Alternatives

Rocket, fennel, celeriac (cooked), witlof, radicchio



### Description other ingredients

Two 'adventurous' foods from other core food categories that your students may not have tasted before or might find a bit challenging to taste

### Suggestions

Meat/fish: (smoked) fish from tin, cabanossi.

Dairy/dairy substitute: cheese other than Cheddar, (e.g. Gouda, goats cheese, soy cheese), plain yoghurt.

Grains: rice cracker, quinoa, couscous.

Fruit: fig, date, dried cranberry.

## Preparation



- One week to a few days in advance:
  - Choose two vegetables and one to two foods from ‘other’ core categories that your students may not have tasted before or may find a bit challenging to taste.
  - Ensure ‘other’ foods are easy to share in a classroom setting. Take allergies/ cultural sensitivities of students in your classroom into account (see 5.1 Taste & Learn™, general information for teachers and schools, page 16).
- Ideally, choose foods from different food categories – dairy (or alternatives), grains, meat/ fish, fruits.
- Prior to the lesson:
  - Prepare foods so that students can try a small piece/bite each.
  - Prepare vegetables. Cut up into small bites for each student to try.
  - Keep in fridge if not used immediately.

### Teacher’s background notes

With this lesson, we want the students to understand that their tastes can change. We want to encourage students to try new things and become more open to trying new foods. This has been shown to be of importance for learning to like a wide range of foods.

#### LEARNING TO LIKE THE TASTE OF FOODS

- People live in different parts of the world where different foods are naturally available – for example different plants. Our bodies have the opportunity to learn to like whatever edible foods are available to us.
- We can learn to like foods by repeatedly eating a small taste of them.
- It may take a long time to start liking something, sometimes ten times or more often.
- Encourage students to just take a little nibble of a food every time they get offered the food, so they get used to the taste.
- With increasing variety in the diet, it becomes easier for children to learn to like other new things.

#### VARIETY

- Variety is important for a healthy diet.
- The Australian Guide for Healthy Eating recommends eating a wide variety of foods. Foods are divided into five food groups that provide important nutrients the body needs. For further information: <https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating>.
- Eating a wide variety of foods has health benefits. However, a health focus should not be emphasized with the students as this impacts negatively on their vegetable enjoyment. Rather, focus on the benefits a wide variety of foods may have from a student’s perspective. For example, being a ‘food adventurer’ and being able to go to friend’s homes and to restaurants without worrying that they may not like the food served.

#### VEGETABLE VARIETY

- Different coloured vegetables provide different nutrients to the body.
- Therefore, eating a variety of coloured vegetables is recommended.
- Examples of vegetables for each colour are provided on the next page.

ORANGE AND YELLOW	WHITE	GREEN		RED AND PURPLE
Carrot	Bean sprouts	Asparagus	Green beans	Beetroot
Corn	Cauliflower	Avocado	Green cabbage	Chilli
Orange capsicum	Celeriac	Broad beans	Green capsicum	Eggplant
Pumpkin	Daikon	Broccoli	Kale	Purple asparagus
Squash	Fennel	Broccolini	Lettuce	Purple carrots
Sweet potato	Garlic	Brussel's sprouts	Okra	Purple potato
Yellow capsicum	Leek	Buk Choy	Peas	Purple sweet potato
Yellow tomato	Onion	Celery	Rocket	Radicchio
	Parsnip	Chinese broccoli	Silverbeet	Radish
	Potato	Chinese cabbage	Snow and sugar snap peas	Red cabbage
	Shallots	Chinese silverbeet	Spinach	Red capsicum
	Swede	Cucumber	Watercress	Red onion
	Turnip		Zucchini	Rhubarb
	White cabbage			Tomato
	White radish			
	Witlof			

## Suggested activities / Lesson steps



### Suggested set up

Class participation

### Additional resources

Novel foods, vegetables

YouTube video 'Healthy Foods'

Student journal

### ELABORATE – FOOD ADVENTURERS

- Conduct a class discussion about how eating a variety of foods is needed to grow and maintain health.
- Explain that variety in vegetables also comes from different colours. Brainstorm a few vegetables for each colour: orange and yellow, white, green and red and purple.
- Watch the video “Healthy foods” (2:46 min) by Sesame Street <https://www.youtube.com/watch?v=KBMxpDbp51A> (there is a button to display subtitles).
- Lead a discussion about how we can learn to eat and enjoy many different foods.

#### The discussion might include:

- We could try a little a number of times.
- We could try them prepared in different ways.
- We could use our senses when we eat food.
- We could use our knowledge – that they help our body to work with maximum efficiency.
- Ask the students what they think it means to become a ‘food adventurer’.
  - What is an adventurer? A person who enjoys and seeks adventures. Adventurers go places and try things they have never tried before.
  - What is a ‘food adventurer’? A person who enjoys and seeks adventures with the foods. ‘Food adventurers’ try things they have never tried before.
- Ask the students to wash their hands and form a sharing circle. Introduce the foods and vegetables prepared for tasting.

- Can students name these foods?
  - Explain that the students are encouraged to be ‘food adventurers’ and to experience tasting each of the foods. Use tongs/spoons to serve one piece of each food – two vegetables and one to two ‘other’ foods – to each student.
- Discuss how it is fun to become a ‘food adventurer’ and try things that we have never tried before.
  - Ask the students to return to their desks and write and/or draw in their journal about each food and vegetable they tried – “Today I tried ....”



### Suggested set up

Class participation

### Additional resources

PowerPoint slides, lesson 1, slide 5 and lesson 4, slides 30-31

Class record from lesson 1

Homework sheets from lesson 1

Student journal

## EVALUATE – VEGETABLE TRYING – FOLLOW UP FROM LESSON 1

- Remind students of the repeated eating experiment that was started at home. By now, if they followed the homework activity, they have completed eight tastings of the selected vegetable.
- Distribute the completed home worksheet 1. Discuss briefly how the tastings went. Did students complete all tastings? What were their experiences?
- Explain that you would like the students to stand and join a group that indicates how they found the taste of the vegetable, ‘did not like’, ‘unsure’, ‘like’. Discuss how people can learn to like foods by repeatedly eating them.
- Ask them to draw a smiley face on their home worksheet 1 that corresponds with how much they like their chosen vegetable now and to paste the sheet into their journal.
- Using PowerPoint slide 30, (adjusted to the vegetables selected for home tasting) complete the classroom record by asking how much students now like/are neutral/dislike each vegetable.
- Calculate the average liking from PowerPoint slide 5 and PowerPoint slide 30.
- Open slide 31 and go out of presentation mode / slide show (by pressing the Escape button).
- Double click on the table, an Excel file should open.
- Copy the numbers from Day 1 (slide 5) and Day 8 (slide 30) into the right columns; change the vegetable names if you have used different vegetables.
- The graphs will automatically update.
- Compare the results from today with the first session.
- Do students like the vegetables more now?
- Discuss how changes in liking can happen faster or slower in different people.
- Congratulate the students for trying the vegetables and encourage to keep trying them.

4

### Additional resources

Activity 1 student worksheet 5, ‘Colour the vegetables’ or student worksheet 6, ‘The colour of vegetables’

Activity 2 A4 sheet of paper

### EXTENSION ACTIVITY 1 – VEGETABLE VARIETY

Ask the students to complete the worksheet appropriate to the literacy level of the class, either:

- Student worksheet 5 ‘Colour the vegetables’. Ask the students to colour each vegetable with the correct colour.
- Student worksheet 6 ‘The colour of vegetables’. Ask the students to write the names of all the vegetables they can think of for each colour.

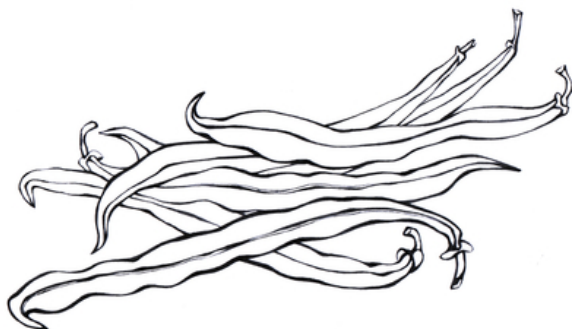
### EXTENSION ACTIVITY 2 – EATING A VARIETY OF FOODS

On a sheet of paper, ask the students draw pictures and/or write names of different foods they would like to eat/try in different food categories, including vegetables. Ask the students to take the sheet home to show their parents.

# Colour the vegetables

Name \_\_\_\_\_ Date \_\_\_\_\_

Colour the vegetable in the correct colour.





## Student worksheet 6

# The colour of vegetables

Name \_\_\_\_\_ Date \_\_\_\_\_

List all of the vegetables you know for each colour.

Orange and yellow	White	Green	Red and purple

# Lesson 5: Picnic in class – sandwich

## Lesson outline

### STUDENTS

- Prepare a tasty sandwich with vegetables and other ingredients.
- Enjoy eating a sandwich together.
- Discuss their experiences of eating a sandwich that includes vegetables.

### EXTENSION ACTIVITY

- Know at least ten vegetables that can be consumed in a sandwich.

## Materials

5

### FOR THE CLASS

- PowerPoint slides, lesson 5, slides 32-35.
- Foods for sandwich lunch for the whole class: e.g. bread, spread, cheese/cold meats, condiments.
- Four–five vegetables that can be eaten on a sandwich, preferably a mix of common and less common ones.
- Plates/trays to serve the foods.
- Several spreading knives suitable for the student to use.
- Knife and cutting board.
- Tongs, cutlery to serve and prepare foods.
- Table cover (optional).
- Picnic blankets (optional).

### FOR EACH STUDENT

- Student worksheet 7, 'Today I ate my sandwich'.
- One paper plate.
- Student journal.

## VEGETABLES AND OTHER INGREDIENTS

### Description

Vegetables: Four to five different vegetables that can be eaten in a sandwich. Preferably, choose a mix of common and less common ones.

### Suggestions

Beetroot (canned or pre-packaged)  
Carrot (grated)  
Cucumber (sliced)  
Baby spinach  
Lettuce

### Alternatives

Capsicum (red, green, yellow or orange)  
Radish  
Avocado  
Grilled eggplant



### Description. Other ingredients to make a sandwich lunch

Bread: wholemeal, multigrain.  
Protein source: cheese, cold meat (e.g. chicken, turkey, ham, salami), egg.  
Spread: margarine or dairy-free spread, hummus.  
Condiments: mustard, pickles, herbs.

## Preparation



We suggest that you conduct this lesson just prior to or running into lunch. As a way to acquire ingredients and to promote communication of the class work to the parents, you may like to ask parents to contribute some vegetables from a list that you provide. You may also want to advise parents that they do not need to provide lunch on that day (just a drink).

- Decide on the foods to source for the sandwich lunch. Take allergies and cultural sensitivities into account where relevant (see 5.1 Taste & Learn™, general information for teachers and schools, page 16). Choose bread, protein source, spread and condiments, using the suggestions above.
- Decide on vegetables for the sandwich. Preferably, offer a mix of common (e.g. cucumber, lettuce, avocado, tomato, and carrot) and less common vegetables (e.g. baby spinach, rocket, radish, capsicum, grilled eggplant, and radicchio). Choose uncommon vegetables that would be a bit “challenging” for your students, but that they may be willing to try.
- Wash and cut vegetables in a manner appropriate for a sandwich, e.g. sliced cucumber/tomato, grated carrot etc. (see also 5.2 How to safely prepare vegetables, Taste & Learn™, general information for teachers and schools, page 18)
- Put foods on plates or trays.
- Store materials in the fridge until use.
- Complete PowerPoint slide 33 with the foods that you have decided to use for the students.
- Decide on the location and food display area that will work best for the students to make their sandwich, such as classroom and classroom tables or other space where students can easily access the displayed food. Set up with the paper plates at the beginning, followed by the bread, the spread, the protein source, the vegetables and lastly, the condiments.
- Enlist assistance from parents or staff to serve the students with their choices for sandwiches. You may wish to prepare the bread with spread to facilitate a smoothly moving line of students making sandwiches.

### Teacher’s background notes

- We want to give students an opportunity to share a meal in the classroom and understand that a meal is a time of enjoyment and friendliness where you can share with others.
- We want to show them that vegetables can be consumed any time, not just at dinner.
- By adding vegetables, you make a sandwich more interesting to eat because of the additional flavour and texture dimensions.
- We want to offer students the opportunity to try a new vegetable or one that they previously may not have liked so much, but would now be ready to try again. Make sure that more ‘common’ vegetables are also available for the less adventurous.
- Students discuss their experiences of eating their sandwich together. This will help them become more aware of what they eat and pay attention to the different tastes and textures they are experiencing.
- Food hygiene is important when handling communal foods: wash hands, use cutlery and/or tongs to serve.
- This lesson is an evaluation activity where you can determine to what degree your students:
  - Have become more open to trying vegetables
  - Are actually enjoying vegetables, and
  - How well they are able to describe what they are consuming.

## Suggested activities / Lesson steps

This lesson will provide the teacher with opportunities to assess the extent to which the students:

- Have increased their knowledge and familiarity with common vegetables.
- Can describe vegetables in terms of the five senses.
- Have learned that liking/disliking of specific foods can change by repeated trying.
- Have become more open to tasting a wide variety of vegetables.



5

### Suggested set up

Class participation

### Additional resources

PowerPoint slides, lesson 5, slide 33

Sandwich foods

Vegetables

Tongs, cutlery to serve, plates, table cover (optional)

### EVALUATION

- Conduct a class discussion about when vegetables are eaten (dinner, lunch, snack, breakfast?).
- Introduce this week's lesson; a picnic in class – preparing a sandwich that includes vegetables.
- Explain that the students are going to prepare a lunch sandwich to enjoy together. Revise food handling procedures, such as having clean hands and using utensils such as tongs to serve food.

**Using PowerPoint slide 33, show the students the foods that are available for them to use in their sandwich.**

- Explain that they can create their own sandwich according to what they would like to eat.
  - Remind them that it is good to be a 'food adventurer' and encourage them to include at least three different vegetables in their sandwich.
  - Ask them to try include at least one vegetable they have not tried before or one that they have not liked so much in the past but are now ready to try again.
- Show the students the location of where the foods listed on PowerPoint slide 33 are to be served.
  - Explain basic food safety, indicating that the students will not touch the food with their hands while they prepare their sandwich. Explain the process of lining up to help themselves to their sandwich choices and indicate that they will have people helping them to:
    - Collect a paper plate, collect bread and spread, choose a protein source, choose at least three vegetables and choose a condiment.
  - Indicate the designated eating area (picnic blankets on the floor or outside, classroom table etc.) where they can sit to enjoy eating the sandwich lunch with their classmates.
  - Direct the students to wash their hands before they join the sandwich making line.
  - Invite them to join the sandwich making line and to prepare their sandwich.
  - Supervise the sandwich making and the movement to the designated eating area.
- As they eat their sandwich lunch, encourage the students to use their senses and describe to each other:**
- What they have selected.
  - How it tastes, using sensory descriptions (e.g. the radish tastes really crunchy and adds a punch of flavour).
  - The combination they selected.
  - Whether their sandwich tastes good.



**Suggested set up**

Individual

**Additional resources**

Student worksheet 7, 'Today, I ate my sandwich'

**Additional resources**

PowerPoint slides, lesson 5, slides 34–35.

**CONCLUDING ACTIVITY**

- Ask the students to join you for class instruction. Introduce and discuss student worksheet 7 'Today, I ate my sandwich'.
- Ask students to draw the foods and vegetables they ate in their sandwich. Depending on their literacy levels, they may be able to write about their experiences. Encourage them to use descriptive language, not just "yum" or "yuck", to describe the tastes they experienced. If they tried new vegetables, students could say what they tasted like and use a smiley face to indicate their enjoyment of the vegetable.
- Invite the students to share their work. Congratulate the students for trying the vegetables and encourage to keep eating them.

**EXTENSION ACTIVITY – SANDWICH VEGETABLES**

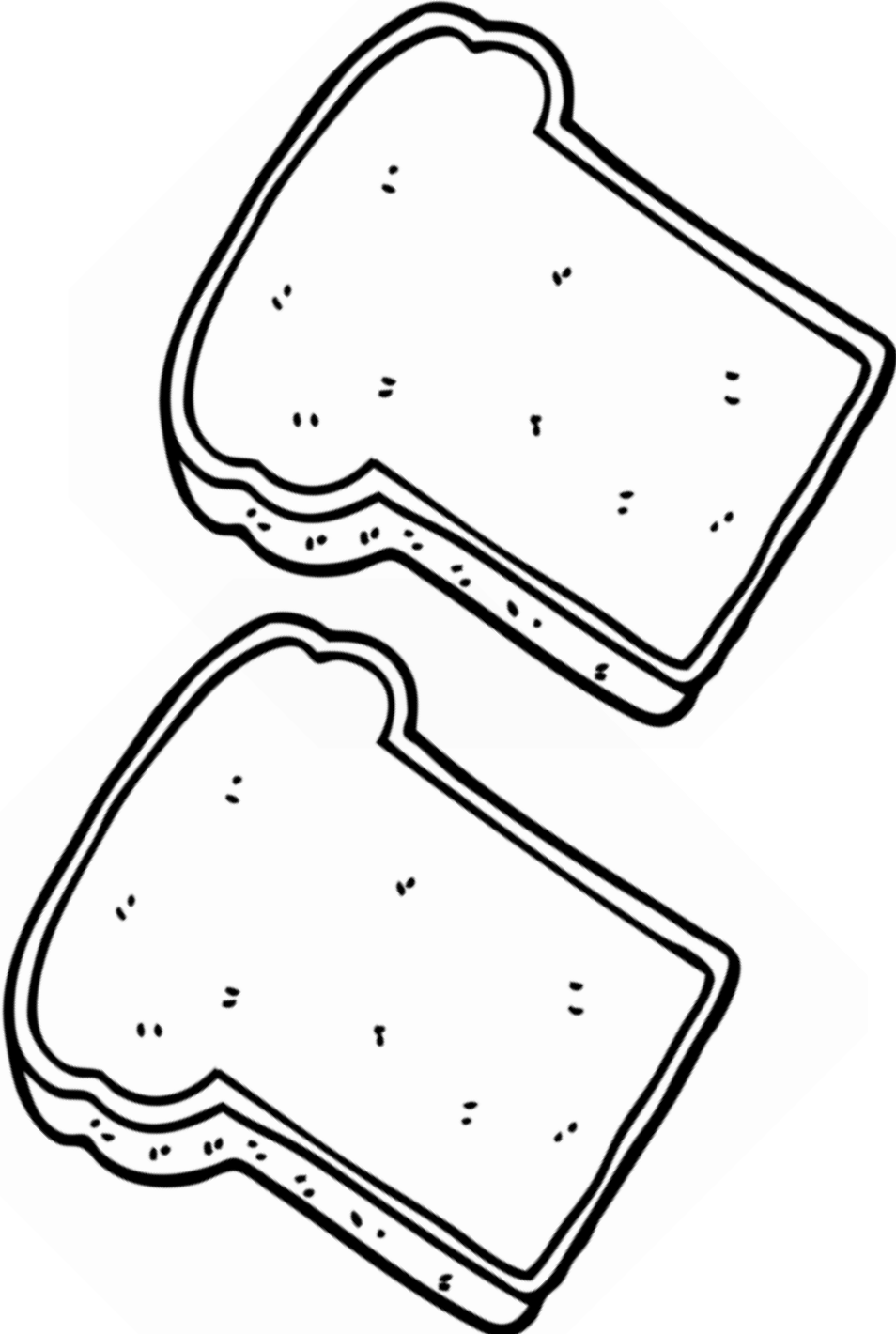
Using PowerPoint slides 34 and 35, discuss which vegetables are best to be consumed in a sandwich or wrap.

**Answer:** all vegetables can be consumed on a sandwich. Some vegetables are very commonly eaten on a sandwich and others are not. However, there are tasty sandwich recipes for all sorts of vegetables. It really depends on your taste, creativity and how much effort you want to put into making a sandwich.

# Today, I ate my sandwich

Name \_\_\_\_\_ Date \_\_\_\_\_

Draw and/or write what you ate on your sandwich





# Appendix A: Unit 1 PowerPoint slides



The slide features a background of light blue line-art illustrations of various fruits and vegetables, including apples, carrots, lemons, and bananas. The text is centered and reads: "Taste & Learn™" in a large, bold, black font. Below this, in a smaller black font, is "Teacher resource: Electronic whiteboard support Unit 1: Foundation – Year 2". At the bottom left, there is a blue horizontal bar with the text "www.csiro.au" in white. Below the bar is the "Hort Innovation" logo, with "Hort" in black and "Innovation" in red. At the bottom right, there is a circular logo for CSIRO, featuring a stylized bar chart and the text "CSIRO" below it.

**Taste & Learn™**

Teacher resource:  
Electronic whiteboard support  
Unit 1: Foundation – Year 2

[www.csiro.au](http://www.csiro.au)

**Hort  
Innovation**

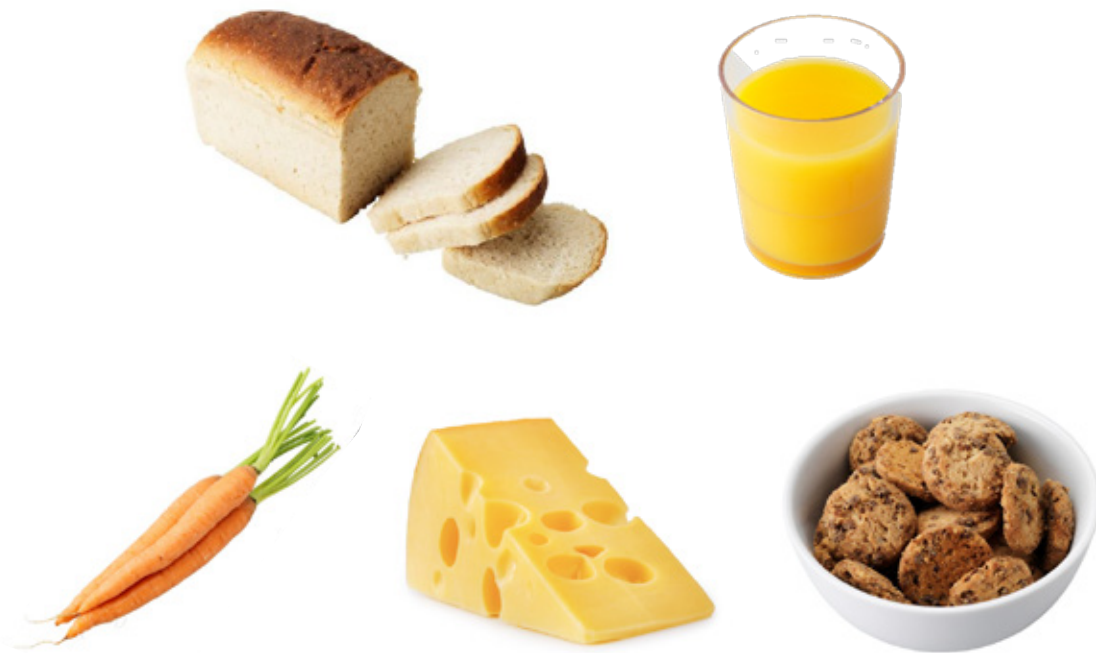
CSIRO

Slide 1



# Lesson 1: The five senses

Slide 2






Slide 3

## The five senses



Slide 4

## Classroom record: Liking of vegetables Day 1

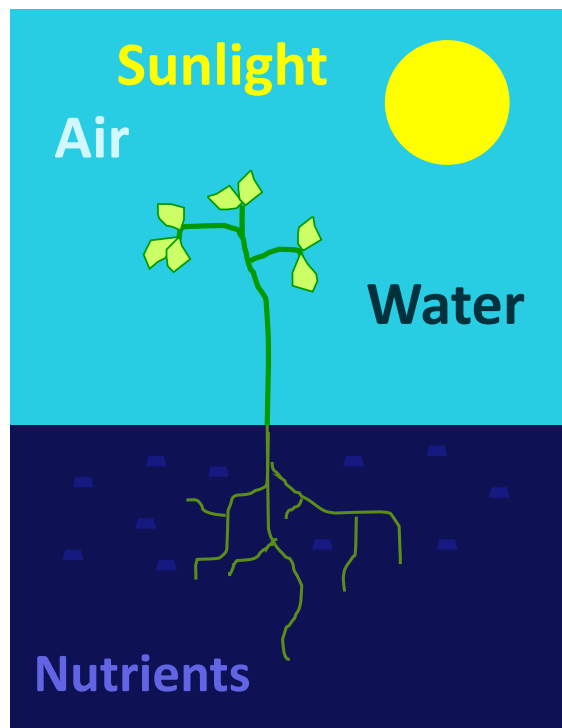
	 DO NOT LIKE	 UNSURE	 LIKE	NOT TRIED
Vegetable name (e.g. carrot)				
Vegetable name (e.g. cauliflower)				
Vegetable name (e.g. cucumber)				

Slide 5

## Lesson 2: From seed to vegetable

Slide 6

What does a plant need to grow?



Slide 7

## Avocado



Slide 8

## Baby spinach



Slide 9

# Beetroot



Slide 10

# Broccoli



Slide 11

## Capsicum



Slide 12

## Carrot



Slide 13

## Cauliflower



Slide 14

## Celery



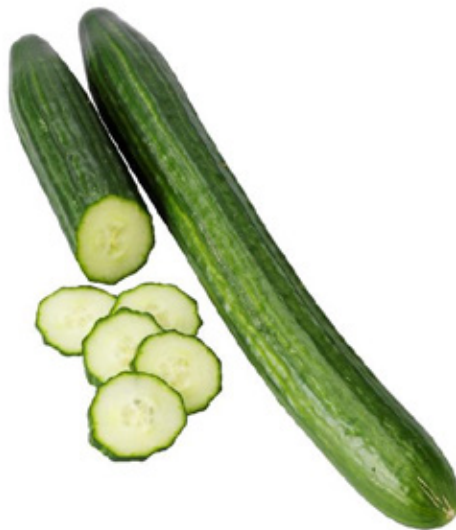
Slide 15

## Corn



Slide 16

## Cucumber



Slide 17



## Green beans



Slide 18

## Leek



Slide 19

## Lettuce



Slide 20

## Peas



Slide 21

# Pumpkin



Slide 22

# Sweet potato



Slide 23

# Tomato



Slide 24

## I can eat the whole plant

Fruits	<input type="checkbox"/>	<input type="checkbox"/>		
Stems	<input type="checkbox"/>	<input type="checkbox"/>		
Leaves	<input type="checkbox"/>	<input type="checkbox"/>		
Roots	<input type="checkbox"/>	<input type="checkbox"/>		


Slide 25

# Lesson 3: The basic tastes

Slide 26

## What do you taste?

Answer

	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Sweet	Sour	Bitter	Salty		Sour
<hr/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Sweet	Sour	Bitter	Salty		Sweet
<hr/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Sweet	Sour	Bitter	Salty		Salty
<hr/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Sweet	Sour	Bitter	Salty		Bitter

Slide 27

## How do these foods taste?




	<b>Sweet</b>	<b>Salty</b>		
				
	<b>Sour</b>	<b>Bitter</b>		
				

Slide 28

# Lesson 4: Becoming a food adventurer

Slide 29

## Classroom record: Liking of vegetables Day 8

	 DO NOT LIKE	 UNSURE	 LIKE	NOT TRIED
Vegetable name (e.g. carrot)				
Vegetable name (e.g. cauliflower)				
Vegetable name (e.g. cucumber)				

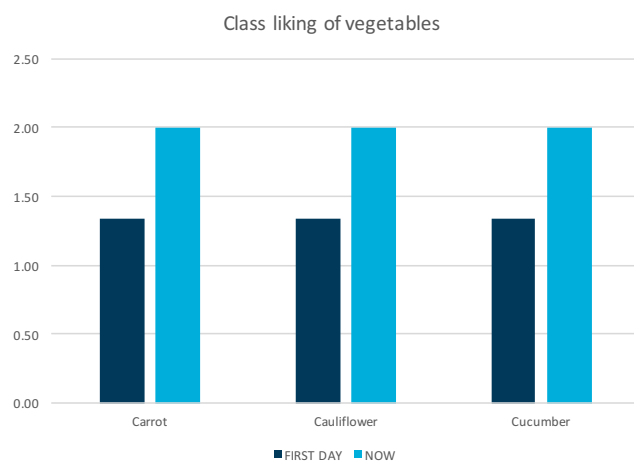
Slide 30

## How do we like the vegetables now?

FIRST DAY	Did not like (1)	Unsure (2)	Liked (3)	Did not try	Total	Average
Carrot	2	1	0	0	3	1.33
Cauliflower	2	1	0	0	3	1.33
Cucumber	2	1	0	0	3	1.33

NOW	Did not like (1)	Unsure (2)	Liked (3)	Did not try	Total	Average
Carrot	1	1	1		3	2.00
Cauliflower	1	1	1		3	2.00
Cucumber	1	1	1		3	2.00

	FIRST DAY	NOW
Carrot	1.33	2.00
Cauliflower	1.33	2.00
Cucumber	1.33	2.00



Slide 31

# Lesson 5: Picnic in class

Slide 32

## Picnic in class

The image shows the Australian Guide to Healthy Eating wheel, a circular diagram divided into five main sections: Grains, Vegetables and legumes/beans, Fruit, Protein, and Dairy. Each section contains various food items. A glass of water is shown next to the Vegetables section. Callout boxes with blue arrows point to specific items in the wheel:

- Wholegrain slice** (points to the Grains section)
- Tuna Egg** (points to the Protein section)
- Cheese Spread** (points to the Dairy section)
- Mustard Pickles** (points to the Vegetables and legumes/beans section)
- Beetroot, Carrot, Cucumber, Spinach, Lettuce** (points to the Vegetables and legumes/beans section)

Additional text on the wheel includes: "Enjoy a wide variety of nutritious foods from these five food groups every day. Drink plenty of water.", "Use small amounts" (with icons of oil, vinegar, and honey), and "Only sometimes and in small amounts" (with icons of alcohol, sugary drinks, and high-fat foods).

Source: National Health and Medical Research Council

Slide 33



## Can I be eaten on a sandwich?



Slide 34

## Can I be eaten on a sandwich?



Slide 35

# Image credits

Screencraft – cover image

Copperplate Design – page 7, 38 (image on slide 4)

Rob Palmer – pages 14, 22 (strawberry, pumpkin, crisp, ham, pickles and chocolate image), 37 (bread, juice, carrot and biscuit image), 40-48 (all vegetable images), 50 (strawberry, pumpkin, crisp, ham, pickles and chocolate image), 53

Maeva Broch – page 23

All images © CSIRO.



As Australia's national science agency and innovation catalyst, CSIRO is solving the greatest challenges through innovative science and technology.

CSIRO. Unlocking a better future for everyone.

**Contact**

1300 363 400

+61 3 9545 2176

[csiroenquiries@csiro.au](mailto:csiroenquiries@csiro.au)

[research.csiro.au/taste-and-learn/contact-us/](https://research.csiro.au/taste-and-learn/contact-us/)

**April 2020**

The Taste & Learn™ Materials have been developed as part of a project funded by Hort Innovation, using the vegetable research and development levy and contributions from the Australian Government, and co-investment from CSIRO. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

