Vegetable Gardening in the Classroom

Teacher Resource

Health Promotion
Northern NSW Local Health District
Email: NNSWLHD-eatmoveplay@health.nsw.gov.au

Northern NSW
Local Health District

NSW

This resource is designed to be used to grow plants inside the classroom. However many activities can be completed using a school garden if you have access to one.

This resource is best utilised in digital format as links to further information are included.

This booklet was updated by Maddison Wright,
Health Promotion Officer in June 2025.

Adapted from original ideas by Cayli Shubitz under the supervision of Anna Huddy for the University of Wollongong.

Contents

Why grow vegetables?

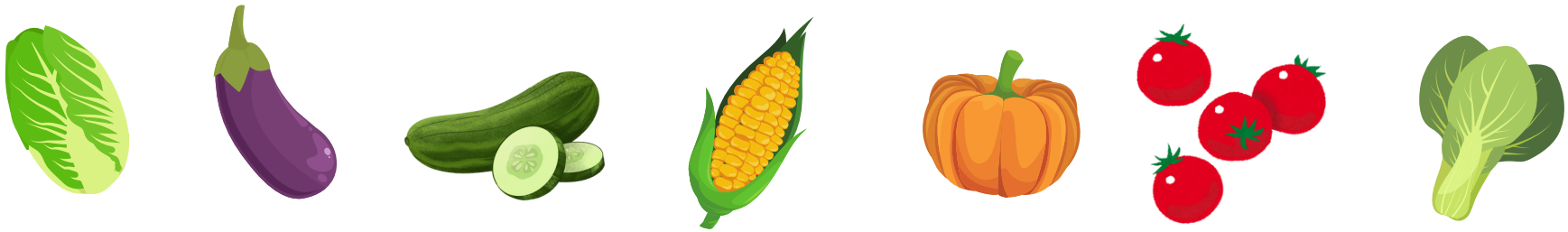
Growing vegetables in the classroom is a hands-on, engaging way to teach students about science, nutrition, responsibility, and environmental stewardship.

By providing children with hands-on growing experiences they are more likely to have:

- Positive attitudes towards vegetables with greater consumption levels.
- Exposure to vegetables they may have not been exposed to previously.
- Improved willingness to identify and taste new vegetables.

Facts

- The 2013 Australian Dietary Guidelines recommend that children aged 5-12 eat around 5 serves of vegetables and legumes daily.
- Only 1 in 20 children (5%) consume the daily recommendation of vegetables (SPANS survey 2015).
- Vegetables contain phytochemicals, antioxidants, vitamins and minerals which help fight disease and prevent chronic disease later in life.
- Vegetables are high in dietary fibre that helps maintain a healthy body.
- Vegetable consumption habits established early in life often persist into adulthood.



What You Will Need

Pots or containers with drainage holes

Many recycled materials are suitable containers for plants. These include; toilet paper rolls, old mini pots, compostable cups, yoghurt containers, the bottom part of plastic bottles, and milk cartons.
Vertical Gardens are also a great way to maximise limited space and reclaim overlooked areas of the classroom.

Growing medium

Potting mix or hydroponic medium

Seeds, seedlings or cuttings

Many vegetables thrive on a windowsill with the right conditions. This includes lettuce, radishes, cherry tomatoes, spinach, and shallots. Microgreens, carrots, and herbs like basil, parsley, mint and chives can also be successfully grown indoors. Some of these will also grown well from cuttings.

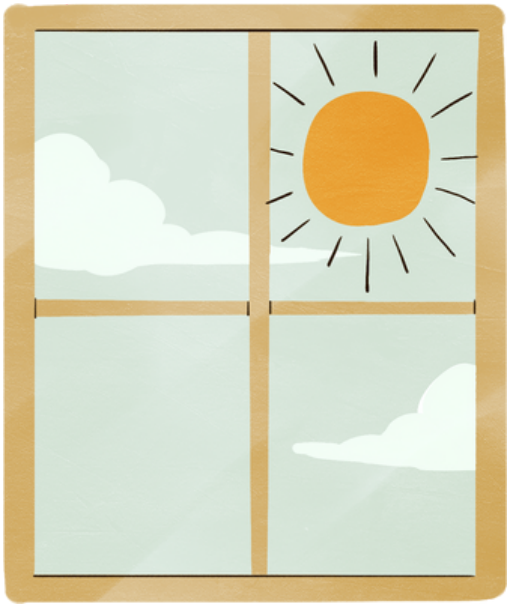
Other items

- Watering can or spray bottle
- Labels and markers
- LED grow lights (if no direct sunlight)

Considerations

Set Up the Garden Space

- Choose a bright location (near a window if possible).
- Organise plants so students can access them easily.
- Use trays or mats to protect surfaces from spills.



Maintain and Observe

Keep a garden journal or chart to track:

- Planting dates
- Germination and growth
- Watering schedule
- Problems and solutions (e.g. pests, mould)

Celebrate and Share

- Host a tasting day or classroom plant sale.
- Take photos and display progress.
- Share plants or produce with families or school staff.

If you reach a point where it's no longer sustainable to keep your plants indoors:

- Send them home with the students or teachers
- Plant them in a school garden outside

Safety information

Safety when gardening

Be aware of disease causing microorganisms found in potting mix and ensure children take these precautions when handling it:

- Always wear tight fitting gloves when handling potting mix and rinse gloves afterwards.
- Ensure students with asthma or respiratory sensitivities wear a mask when handling potting mix.
- Masks can help prevent inhaling dust and potentially harmful microorganisms.
- Make sure the working area is well ventilated if indoors
- To open bags of potting mix safely; ensure the bag is away from your face and open with a pair of scissors
- Wet down potting mix to reduce dust
- Wash hands thoroughly with soap and water after using potting mix
- Clean and cover broken skin with a dry dressing
- Store potting mix in a cool area away from direct sunlight to reduce bacterial growth
- For more information see Potting Mix Safety

Food safety and hygiene

During any activities that involve food, it is important to consider food safety and hygiene.

Things to remember:

- Ensure children wash hands with soap and warm water before touching food and dry their hands completely with a single use towel.
- Make sure children wash vegetables thoroughly with clean water before they prepare or eat them.

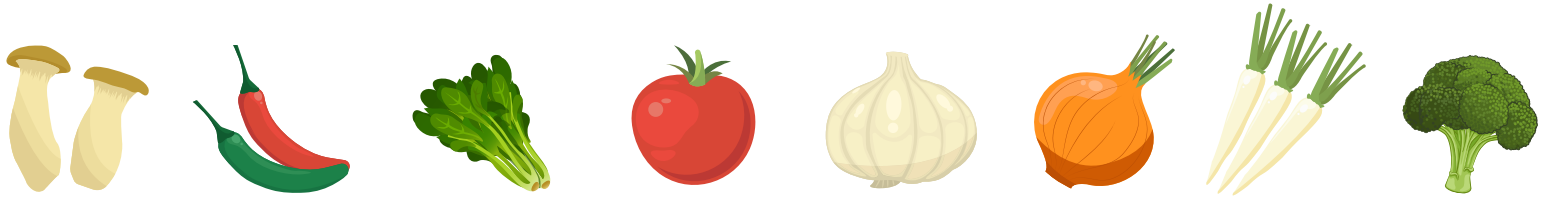
Ideas for funding resources

There are many ways to generate resources for your gardening activities:

- Ask parents if they can bring in or donate the ‘materials’ required.
- Seek donations and support from local nurseries, vegetable producers, green grocers or supermarkets.
- Apply for a funding grant, e.g. Life Education’s Growing Good Garden Grants, Kitchen Garden Foundation Grants, Junior Landcare Grants.
- Seek free mushroom kits from the Australian Mushroom Growers Association .
- Contact your local Health Promotion Officer by emailing NNSWLHD-eatmoveplay@health.nsw.gov.au for further advice and assistance

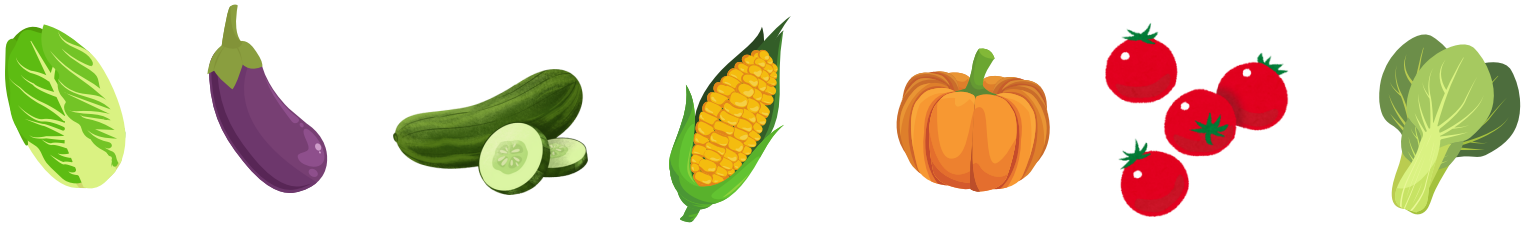
Vegetable growing activities and links to NSW syllabus outcomes

English				
ENGLISH K-10 SYLLABUS OUTCOMES	**Early Stage 1**	**Stage 1**	**Stage 2**	**Stage 3**
ORAL LANGUAGE AND COMMUNICATION	ENE-OLC-01	EN1-OLC-01	EN2-OLC-01	EN3-OLC-01
Discuss which part of the plant the vegetable has come from				
Interview a class member about their favourite vegetable				
CREATING WRITTEN TEXTS	ENE-CWT-01	EN1--WT-01	EN2-CWT-01 EN2-CWT-02 EN2-CWT-03	EN3-CWT-01
Write the method for growing a vegetable				
Write a poem or rhyme about your favourite vegetable				
Write a recipe for a salad sandwich				
Write a newspaper article about the vegetable grown – see if you can get it published in the school newsletter!				
Write a narrative about a vegetable				
READING	ENE-RECOM-01	EN1-REFLU-01 EN1-RECOM-01	EN2-REFLU-01 EN2-RECOM-01	EN3-RECOM-01
Read the directions on a seed packet				
Read texts related to gardening and growing				
SPELLING	ENE-SPELL-01	EN1-SPELL-01	EN2-SPELL-01	EN2-SPELL-01
Use words related to vegetable growing as part of class spelling activities				



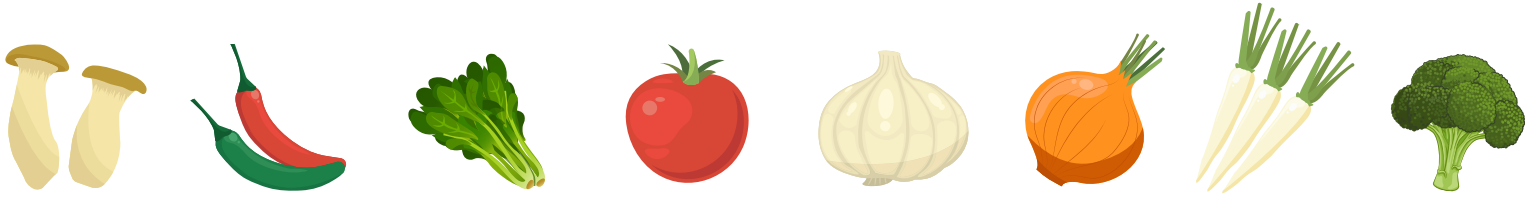
Vegetable growing activities and links to NSW syllabus outcomes

Mathematics				
ALL CONTENT = MAO-WM-01	**Early Stage 1**	**Stage 1**	**Stage 2**	**Stage 3**
Representing numbers, Combining and Separating Quantities, Forming Groups	MAE-RWN-01 MAE-RWN-02 MAE-CSQ-01 MAE-FG-01 MAE-FG-02	MA1-RWN-01 MA1-RWN-02 MA1-CSQ-01 MA1-FG-01	MA2-AR-01 MA2-AR-02 MA2-MR-01 MA2-MR-02	MA3-AR-01 MA3-MR-01 MA3-MR-02
Count out a cup worth of seeds before planting or something you have grown (tomatoes, peas etc) • Write out that number • Create it with MAB blocks • Draw it on a ten frame • Separate them into groups of 2/3/4 etc • Add the groups together • Use the groups to practise subtraction -Use two vegetables to create a pattern • Use groups to solve multiplication and division problems				
Use vegetables you have planted as visual representations when solving addition and subtraction problems				
Use vegetables you have planted as examples in a number talk				



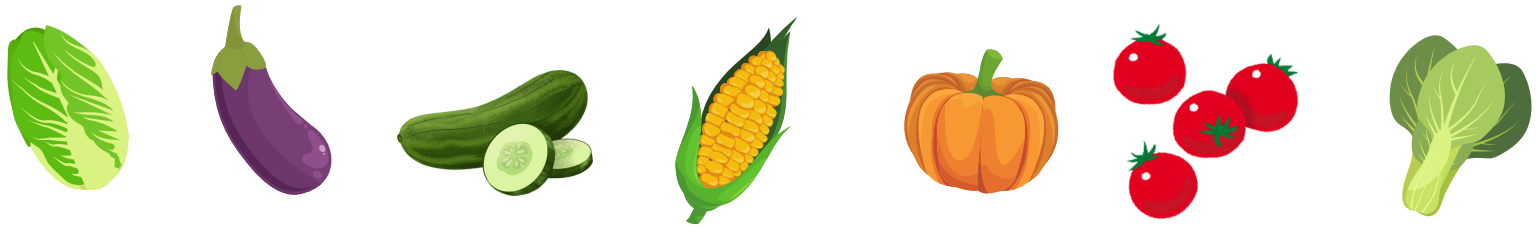
Vegetable growing activities and links to NSW syllabus outcomes

Mathematics				
ALL CONTENT = MAO-WM-01	Early Stage 1	Stage 1	**Stage 2**	**Stage 3**
Geometric measure, Two-dimensional (2D) spatial structure, Three-dimensional (3D) spatial structure, Non-spatial measure	MAE-GM-02 MAE-3DS-02 MAE-NSM-01	MA1-GM-02 MA1-3DS-02 MA1-NSM-01	MA2-GM-02 MA2-3DS-02 MA2-NSM-01	MA3-GM-02 MA3-3DS-02 MA3-NSM-01
Estimate, measure, record and compare the growth of vegetables daily/weekly				
Estimate, measure, record and compare water volume when watering the garden or the volume of the garden beds				
Estimate, measure, record and compare the area of the containers or vegetable gardens				
Estimate, measure and compare the masses (weights) of different vegetables,				
Data	MAE-DATA-01	MA1-DATA-01 MA1-DATA-02	MA2-DATA-01 MA2-DATA-02	MA3-DATA-01 MA3-DATA-02
Create a picture graph or tables of vegetables planted/harvested				
Compare tables planted vs harvested – create dot plots or column graphs to represent differences				
Graph the growth process of vegetables				



Vegetable growing activities and links to NSW syllabus outcomes

Science and Technology				
SCIENCE AND TECHNOLOGY K-6 SYLLABUS OUTCOMES	Early Stage 1	**Stage 1**	**Stage 2**	**Stage 3**
Science	STE-SCI-01 STE-PQU-01	ST1-SCI-01 ST1-PQU-01 ST1-DAT-01	ST2-SCI-01	ST3-PQU-01 ST3-DAT-01
Set up and monitor an experiment where seeds are grown under different conditions, e.g one receives no water, the other no sunlight, or play music to one and not the other. Describe the plants, pose questions based on observations of the growing plants. Collect and compare data.				
Discuss which vegetables grow above and below ground				
Discuss the importance of watering plants efficiently. Investigate the water cycle, recycling grey water, or other processes eg. the desalination process.				
Draw pictures of seeds planted and predictions of what the seeds will look like fully grown				
Identify and label parts of a plant and discuss which parts can be eaten				
Observe sort and classify seeds				
Label parts of a seed				



Vegetable growing activities and links to NSW syllabus outcomes

HSIE				
HSIE K-6 SYLLABUS OUTCOMES	Early Stage 1	Stage 1	Stage 2	Stage 3
History	HSE-ACH-01 HSE-HIS-01	HS1-ACH-01 HS1-HIS-01	HS2-ACH-01 HS2-HIS-01	HSE-ACH-01 HSE-HIS-01
Research the history of food cultivation				
Research how different cultures grow and use vegetables e.g. ES1 – How you use or grow plants at home S1 – How ancient cultures grew and used plants S2 – How Australian settlers grew and used plants S3 – How developing Australian colonies used and grew plants				
Research local indigenous plants, how Aboriginal peoples grew and used plants				
Research where our food comes from, how it is grown, how and when it is harvested and how it is produced				
Discuss how people care for environments with ecofriendly practices such as water conservation, worms farms and what to do with organic waste				
Discuss the history and the pros and cons of the green revolution.				

Tweed/Byron Shire Native Plant Guides

Northern Rivers Natives

Lismore Native Garden Guide

Australian Native Plant Database

Australian Native Plants Society

Vegetable growing activities and links to NSW syllabus outcomes

<table>
<tr><th colspan="5">PDHPE</th></tr>
<tr><td>PDHPE K-6 SYLLABUS OUTCOMES</td><td>Early Stage 1</td><td>Stage 1</td><td>Stage 2</td><td>Stage 3</td></tr>
<tr><td>Research and discuss how healthy eating contributes to health and wellbeing</td><td rowspan="2">PHE-IWH-01</td><td rowspan="3">PH1-IHW-01</td><td rowspan="4">PH2-IHW-01</td><td rowspan="6">PH3-IHW-01</td></tr>
<tr><td>Identify foods that contribute to healthy eating habits and wellbeing</td></tr>
<tr><td colspan="2">Discuss the benefits of bushtucker to improve health and wellbeing</td></tr>
<tr><td colspan="3">Describe the benefits of healthy eating and drinking habits that reflect the Australian Government dietary guidelines</td></tr>
<tr><td colspan="4">Investigate nutritional information of foods grown using the Australian Government Dietary Guidelines</td></tr>
<tr><td colspan="4">Identify the recommended daily vegetable intake for children and adults per the Australian Dietary guidelines. Compare this to the statistics for adequate/inadequate vegetable intake in your area, state or Australia wide.</td></tr>
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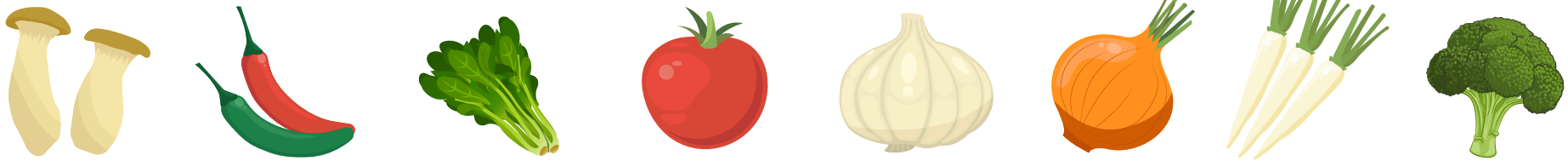
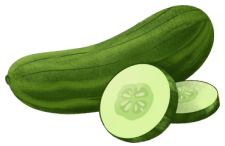
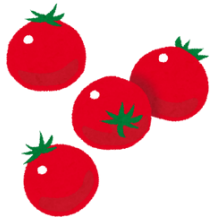


Vegetable growing activities and links to NSW syllabus outcomes

Creative Arts				
CREATIVE ARTS K-6 SYLLABUS OUTCOMES	**Early Stage 1**	**Stage 1**	**Stage 2**	**Stage 3**
Dance + Drama	CAE-DAN-01 CAE-DRA-01	CA1-DAN-01 CA1-DRA-01	CA2-DAN-01 CA2-DRA-01	CA3-DAN-01 CA3-DRA-01
Create and perform a dance or a play to represent vegetables throughout their lifecycle				
Music	CAE-MUS-01	CA1-MUS-01	CA2-MUS-01	CA3-MUS-01
Teach songs with garden or plant themes				
Create musical instruments using fruits and vegetables - try this **carrot flute**				
Visual Arts	CAE-VIS-01	CA1-VIS-01	CA2-VIS-01	CA3-VIS-01
Paint, draw, sketch or digitally create the lifecycle of the fruits or vegetables - try these **cute anime style veggies** for some fun				
Use the plants as an inspiration to create an artwork				
Use parts of the plants to paint with,e.g **carrot tops or celery leaves**				
Use l**eaf rubbings** to create artworks				






Vegetable growing experiences

Egg heads

Grow Time
1 week

Resources:
Egg shells, egg cups (or egg carton), alfalfa or water cress seeds, permanent marker, cotton wool, water

Activity

1. Clean out the inside of an eggshell
2. Draw a funny or smiley face on the shell using a permanent marker
3. Stand the eggshells up in the egg cup/egg carton
4. Place cotton wool loosely inside the shell up to half way
5. Moisten with 2 tablespoons of water
6. Sprinkle ½ teaspoon of seeds into each shell
7. Set the shells on a sunny window sill
8. Water the sprouts regularly. The sprouts should be ready to eat within a week.

Try adding some sprouts to a salad sandwich.

Allergy Tip
For an egg free activity use the bottom 1/4 of a foam cup

Seedlings in a bag

Grow Time
4-7 days

Resources:
1 zip lock plastic bag per student, 1-2 sheets paper towel per student, stapler, dried lima beans, masking tape, water

Activity

1. Soak lima beans overnight
2. Label bag with child's name and planting date
3. Inside the bag place a folded paper towel
4. Measure 7cm from the top of the bag using a ruler
5. Going from one edge to the other, staple a row of staples through the plastic bag and paper towel. This mini pocket is where the seeds are going to sit
6. Pour enough water into the bag so that it soaks up the paper towel
7. Place the seeds in the mini pocket so that they are sitting on the top line of the staples
8. Seal the bag so no air can escape or get in to it
9. Tape the bag to a sunny window with the seed side facing the room
10. The seeds will begin to germinate within a few days

Beans in a jar

Grow Time
4 days to 2 weeks

Resources:
Large wide mouth jar, broad bean seeds (chickpea or whole green lentil seeds also work), paper towel, water

Activity:

1. Thoroughly rinse an empty clear jar and leave it wet inside
2. Place a folded piece of paper towel inside the jar and press it up against the glass
3. Place a broad bean seed between the paper towel and the glass
4. Place the jar on a windowsill and label with the child's name
5. Add a spoonful of water to the seeds every day, enough to keep the jar moist
6. After a few days the broad beans should begin to sprout
7. After a couple of week's children will notice in the jar a broad bean seedling
8. Encourage children to take these seedlings home and plant them in a pot

Grow your own salad leaves

Grow Time
4 to 8 weeks

Resources:
Loose leaf lettuce seeds e.g. butter, cos, iceburg, coral, oak, plastic containers, potting mix, spray bottle, water

Activity:

1. Wash a clear empty plastic container – empty margarine tubs or yoghurt tubs work well
2. Poke drainage holes in the bottom of the container
3. Fill container with moistened potting soil. Add water until the mix is evenly moist
4. Follow directions on seed packets when sowing seeds
5. Use a spray bottle to water the seeds – don't over do it. The soil must be moist but not too soaked
6. Place the containers near the sunniest window in the classroom
7. Water the lettuce plants daily in order to maintain the moisture of the soil.
8. Seeds should germinate in 1 to 2 weeks

   After 4 to 8 weeks the leaves will be ready to harvest

Grow your own salad pot

Grow Time
Dependent on veg used

Resources:
Mixed seeds - cucumber, tomato, lettuce, snow pea, radish and capsicum seeds, large garden pot, potting mix, water

Activity:

1. Choose a large pot and place outdoors in a sunny position
2. Fill pot with potting mix
3. Plant seeds or seedlings according to the directions on the packet
4. Mulch well to save water and keep the potting mix in good condition. Seedlings can be mulched immediately after planting. If planting seeds, wait until they have sprouted before mulching. Otherwise the mulch can prevent them from growing through the surface.
5. Water vegetables every two days, and if the weather is warm, water daily. When watering, make sure you give the mix a thorough drenching so that water drains from the drainage holes.
6. See seed packet for growing time
7. Once vegetables are ready to harvest they can be tasted

Warrigal greens

Grow Time
8-12 weeks

Resources:
Large pot or container, soil, seeds or seedlings (can be sourced from nurseries or harvested from foreshore/coastal environments)

Activity:

1. Choose a pot and place outdoors in a sunny position
2. Fill pot with potting mix
3. Sow seeds directly in well-draining soil in spring or summer. Seedlings can be raised indoors and transplanted outside once established.
4. Water plant daily keeping soil moist
5. Watch the greens grow and they will be ready to prepare for eating (see below).

Bush Tucker

It is important to ensure Warrigal Greens are prepared correctly before consumption to remove low levels of oxalates present in the vegetable. Ensure the leaves are blanched in hot water for one minute, then rinsed in cold water before cooking or consumption.
For more information --> ABC Organic Gardener

Warrigal Greens

Warrigal Greens are an Indigenous plant also known as Warrigal Spinach, New Zealand Spinach and Botany Bay Greens.

Growing mushrooms

Grow Time
2-3 weeks

Resources:
Mushroom Kit, water

Activity:

1. Purchase mushroom kit online or from a local hardware store
2. This kit is designed to be started immediately. If you choose to delay starting your kit for a few weeks, store the kit in a cool location
3. Open the box and remove the bag of dry peat moss called casing
4. Leave the large bag of compost inside the box. If the compost is brown, close the kit and keep it at 18-22 degrees for 7-10 days before adding the peat moss casing layer
5. Open the plastic and evenly spread the casing over the compost, leaving it loose and fluffy. Leave the kit open and out of direct sunlight
6. Every 2-3 days mist with water
7. After two to three weeks the mushrooms will begin to form
8. Twist each mushroom out, removing any remaining stump
9. Have students add mushrooms to a sandwich or salad for lunch

Tip

Mushroom growing kits can be purchased online or at some garden centres.

Seek free mushroom kits from the Australian Mushroom Growers Association .

Permission note

Dear Parents/Carers,

Our class will participate in vegetable growing activities in the classroom this term. Children will grow a variety of vegetables and taste what they grow. This is a fun and enjoyable way to improve children's attitudes towards vegetables. It may encourage them to try and taste new vegetables.

Please sign and return the permission slip below, and let us know if your child has any allergies relevant to the activities.

Regards
(name here)
Teacher

Permission Slip for children to grow vegetables in class

I give permission for my child/children _____ to take part in the vegetable growing and tasting activities.

1. **Does your child have any food or other allergies?** **Yes / No**

If yes, please specify the allergy and which foods should be avoided.

_____

Signed

(Parent/Guardian) Name:

Resources

Free resources, lesson plans , activities

kids GARDENING .ORG
HELPING YOUNG MINDS GROW

DoE kitchen gardens page

NSW GOVERNMENT | Education

An ABC video series

GARDENING AUSTRALIA

Tips about growing and enjoying food on school grounds

sustainable schools
NEW SOUTH WALES

Kitchen Garden Initiative
A practical resource for teachers

NSW Primary Industries Schools Program

connect • grow • learn
DPI in SCHOOLS