# 5+ A Day fruit and Vegetalde food Technology Teaching Resource

Years 7 and 8 Curriculum Levels: 3, 4 and 5







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www.5aday.Co.WZ

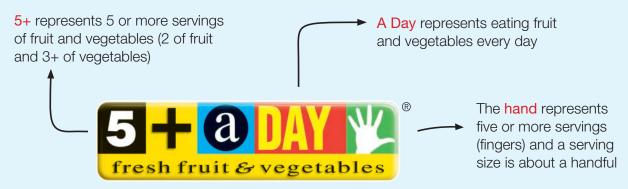
# Introduction

5+ A Day is about eating and enjoying five or more servings of fresh fruit and vegetables every day for health, taste and variety.

This resource will help students put 5+ A Day into action. As technology teachers we have the perfect platform for engaging our students and celebrating their diverse natures through real life activities.

In this series of lessons students will have the opportunity to work co-operatively in groups and develop their own 5+ A Day recipes.

# The 5+ A Day logo



# Teaching the students about a serving

It couldn't be easier. A serving is about a handful and everyone uses their own hand.



# How many servings should I eat?

At LEAST five handfuls a day. This is why we have the hand in our logo so that students can count the number of servings on their fingers and measure a serving in their hand.

# Why should I 'eat my colours'?

By "eating your colours" every day you will stay fit and healthy. Colourful fruit and vegetables contain many of the nutrients, minerals and phytochemicals (fight-o-chemicals) your body needs to maintain good health and energy. They also protect against the effects of ageing and can help reduce the risk of some of the major lifestyle diseases. Many of the phytochemicals and other compounds that make fruit and vegetables such healthy foods also give them their colour. There are many different phytochemicals and compounds associated with the colour – so to ensure you get a wide range of them you need to try and eat fruit and vegetables from each of the colour groups every day. For good health it is essential to eat at least five servings each day and ideal if you can eat from each colour group. That is why we say eat 5+ A Day and try to eat the colour way!

# The New Zealand Curriculum Vision

What we want for our young people:

Our vision is for young people to be:

#### Confident

- Positive in their own identity
- Motivated and reliable
- Resourceful
- Enterprising and entrepreneurial
- Resilient

## Connected

- Able to relate well to others
- Effective users of communication tools
- Connected to the land and environment
- Members of communities
- International citizens

# Actively involved

- Participants in a range of life contexts
- Contributors to the well-being of New Zealand – social, cultural, economic, and environmental

## Lifelong learners

- Literate and numerate
- Critical and creative thinkers
- Active seekers, users, and creators of knowledge
- Informed decision makers

# Principles

Foundations of curriculum decision making:

The principles relate to how curriculum is formalised in a school; they are particularly relevant to the processes of planning, prioritising, and review. The values are part of the everyday curriculum – encouraged, modelled, and explored.

All curriculum should be consistent with these eight statements:

## High expectations

The curriculum supports and empowers all students to learn and achieve personal excellence, regardless of their individual circumstances.

#### Treaty of Waitangi

The curriculum acknowledges the principles of the Treaty of Waitangi, and the bicultural foundations of Aotearoa New Zealand. All students have the opportunity to acquire knowledge of te reo Māori me ōna tikanga.

## **Cultural diversity**

The curriculum reflects New Zealand's cultural diversity and values the histories and traditions of all its people.

#### Inclusion

The curriculum is non-sexist, non-racist, and non-discriminatory; it ensures that students' identities, languages, abilities, and talents are recognised and affirmed and that their learning needs are addressed.

# Learning to learn

The curriculum encourages all students to reflect on their own learning processes and to learn how to learn.



# Community engagement

The curriculum has meaning for students, connects with their wider lives, and engages the support of their families, whānau, and communities.

#### Coherence

The curriculum offers all students a broad education that makes links within and across learning areas, provides for coherent transitions, and opens up pathways to further learning.

## Future focus

The curriculum encourages students to look to the future by exploring such significant future-focused issues as sustainability, citizenship, enterprise, and globalisation.

# Values

Students will be encouraged to value:

- Excellence, by aiming high and by persevering in the face of difficulties
- Innovation, inquiry, and curiosity, by thinking critically, creatively, and reflectively
- Diversity, as found in our different cultures, languages, and heritages
- Integrity, which involves being honest, responsible, accountable, and acting ethically and to respect themselves, others, and human rights.

Reference: http://nzcurriculum.tki.org.nz/Curriculum-documents/The-New-Zealand-Curriculum



The key competencies underpin everything that happens in teaching and learning (keycompetencies.tki.org.nz/ln-teaching)

## **Thinking**

Thinking is about using creative, critical, and metacognitive processes to make sense of information, experiences, and ideas.

## Using language, symbols and texts

Using language, symbols, and texts is about working with and making meaning of the codes in which knowledge is expressed.

#### Managing self

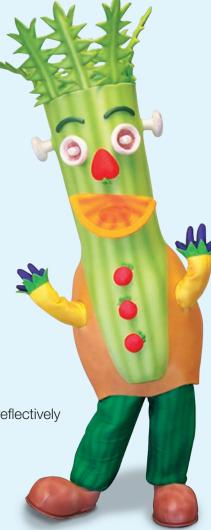
This competency is associated with self-motivation, a "can-do" attitude with students seeing themselves as capable learners. It is integral to self-assessment.

#### Relating to others

Relating to others is about interacting effectively with a diverse range of people in a variety of contexts. This competency includes the ability to listen actively, recognise different points of view, negotiate, and share ideas.

## Participating and contributing

This competency includes a capacity to contribute appropriately as a group member, to make connections with others, and to create opportunities for others in the group.



# From the Technology Curriculum Achievement objectives

# Technological practice

Students will be able to:

- Plan for practice
- Develop a brief
- Complete outcome development and evaluation

# Technological knowledge

Students will understand:

Technological products

## Nature of technology

Students will understand:

- Characteristics of technology
- Technological outcomes

Reference: http://nzcurriculum.tki.org.nz/Curriculum-documents/The-New-Zealand-Curriculum/Learning-areas/Technology/Technology-curriculum-achievement-objectives

# Key vocabulary

Sensory Vocabulary: Taste, texture, colour, viscosity

Culinary terms: Slice, dice, peel, chop, julienne, bake, grill, standing time, roast, mash, seasonal

# Resources

Cooperative Learning in New Zealand Schools ISBN / ISSN: 9780864693457 Don Brown and Charlotte Thomson

www.5aday.co.nz

www.potatoes.co.nz

www.vegetables.co.nz/

www.thinkshop.org/

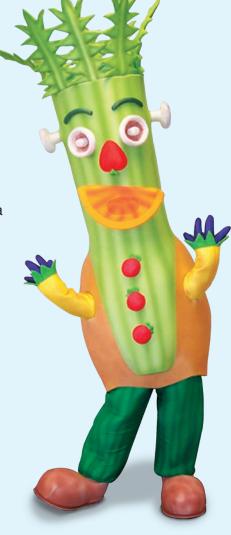
www.healthy food.co.nz/articles/2006/june/taste-smell-and-flavour-how-it-all-works

www.healthyfood.co.nz



# Information for teachers

- These lessons make the assumption that students have:
  - Some basic cooking skills
  - Some understanding of sensory evaluation
  - An understanding of safe food practices in the preparation of food
  - Knowledge of how to write recipes
- Teachers could use these lesson plans to:
  - develop an existing unit plan
  - to form the basis of a school wide integrated topic around fresh fruit and vegetables e.g. sustainability, edible gardens in schools, etc.
- These 'lessons' are based on 1.5-hour blocks of time
- Cooperative groups: There should be teacher selection of groups to ensure a heterogeneous mix. Students should be allowed to allocate the roles within the group to recognise each other's strengths and be given strategies to solve any problems or disagreements.
- Each lesson needs:
  - A learning intention and
  - The success criteria for the lesson (this will depend on your students' abilities)
- Teachers will need access to a variety of resources in addition to those found in a food technology room, e.g. computers, cardboard, pictures, laminator
- Teachers will need to decide which key competencies and values they wish to incorporate for these lessons
- Self reflection and peer assessment are an important component of this resource
- The self assessment sheet included in this resource can be used after each lesson
- It is recommended that teachers go to www.5aday.co.nz, www.potatoes.co.nz and www.vegetables.co.nz/resources to order appropriate resources
- PMI Charts are a type of chart, a graphic organiser in which a student examines the Plusses, Minuses, and Interesting things (or Implications) associated with a topic, decision, or idea







LEARNING OUTCOMES Students will:	Lesson Content Suggestions for how students will learn For example: Through the use of effective literacy strategies, thinking tools, co-operative activities	Suggested Activities
• Understand the 5+ A Day logo	Lesson One: 5+ A Day • 5+ A Day logo and key messages	Visit www.5aday.co.nz to learn the meaning of the 5+ A Day logo
<ul> <li>Understand the role fruit and vegetables has in our diets</li> </ul>	<ul> <li>Why consuming 5+ A Day is important for health</li> </ul>	Use the 5+ A Day work sheets (teachers notes and students work sheets)
<ul> <li>Be able to describe the sensory characteristics of fruit and vegetables</li> </ul>	Recap sensory evaluation	Use solutions* to get students to identify the different taste receptors in mouth (refer *Healthy Food Magazine June 2006 "Taste, smell and flavour: How it all works")  *www.healthyfood.co.nz/articles/2006/june/taste-smell-and-flavour-how-it-all-works
	<ul><li>What's in season?</li><li>Use your 5 + A Day Availability Chart to complete the in-season activities</li></ul>	Complete the activities on in-season fruit and vegetables (refer to student work sheet Season's Choice and 5+ A Day Availability Chart)
	<ul> <li>Ask students to identify/taste fruit and vegetables.</li> <li>Link to sensory evaluation. Choose some less well known varieties where possible</li> </ul>	Have a variety of fresh, in-season fruit and vegetables available for students to taste and describe



LEARNING OUTCOMES Students will:	Lesson Content	Suggested Activities
	Lesson One: 5+ A Day continued	
To understand the social and cultural importance of fruit and vegetables	<ul> <li>Extension activities</li> <li>Ask students from other countries in your class to talk about fruit and vegetables available in their own countries (or research online)</li> </ul>	Design a bookmark based on a theme of students' choice e.g. ethnic produce, health benefits, 5+ A Day key messages.
	<ul> <li>Discuss whether these fruit and vegetables have cultural and social significance</li> </ul>	Use a PMI chart to help discussions
	<ul> <li>Ask your grandparents what fruit and vegetables they had when they were young?</li> </ul>	
	To encourage critical thinking:	
	<ul> <li>Why is there more variety today?</li> </ul>	
	<ul> <li>Why are the seasons of some fruit and vegetables longer these days?</li> </ul>	
	<ul> <li>What impact has importing vegetables had on the local markets?</li> </ul>	
	<ul> <li>What will be in fruit and vegetable shops in 50 years?</li> </ul>	



# The 54 A Day Story

# Teacher's Notes

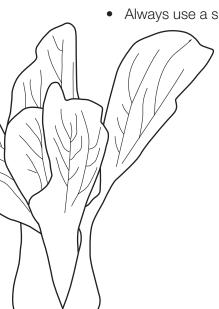
# Instructions for picture dictation:

- 1. Students use "The 5+ A Day Story" worksheets
- 2. Explain the 'rules' to the students:
  - i. Listen to each statement carefully
  - ii. Draw a picture for each statement no words or numbers
  - iii. Use a pencil
  - iv. Leave the lines blank (do not write out the statement)
- 3. Read each statement three times, clearly and slowly
- 4. Students draw pictures in boxes (allow 2–3 minutes per statement)
- 5. Once all statements have been read, students work in pairs or groups to write statements on lines under boxes
- 6. Repeat the statements so students can check



# Statements:

- Eat at least five servings of fresh fruit and vegetables each day for health, taste and variety
- A serving is about a handful
- Citrus fruit include lemons and grapefruit
- Stone fruit include peaches and plums
- Choose fresh fruit and vegetables in season when they are at their most economical
- Store potatoes in a cool dark place
- Store bananas away from other fruit
- Remember to eat your colours every day
- Always use a sharp knife to cut fruit and vegetables





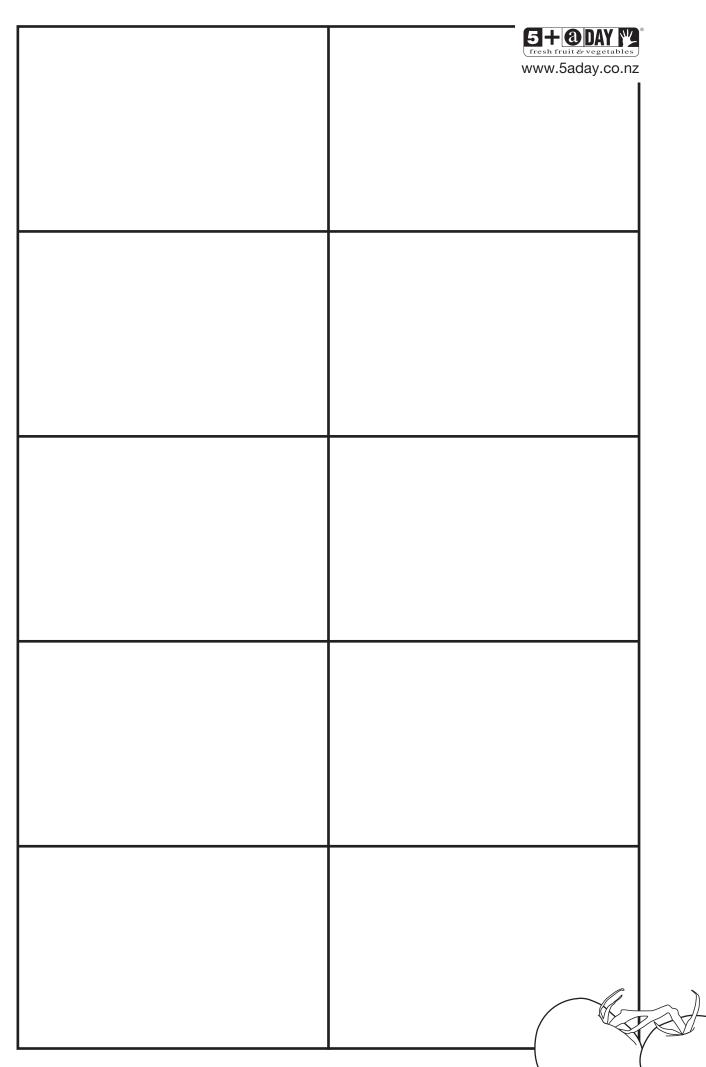


The St A Day

5+@DAY W fresh fruit & vegetables www.5aday.co.nz

Draw a picture in the LEFT hand
 column to represent the sentence your teacher
 reads out. DO NOT use any words or numbers
 AFTER the teacher finishes in the right
 hand column you will write down

 hand column what th	you will write ne pictures me	an	27	
				V
	24			



# season's choice

# ACTIVITY

Using the names of the seasons down the centre of your page choose fruit
or vegetables that are eaten at that time of the year, e.g. raspberries going
through the letter "S" of the word summer)

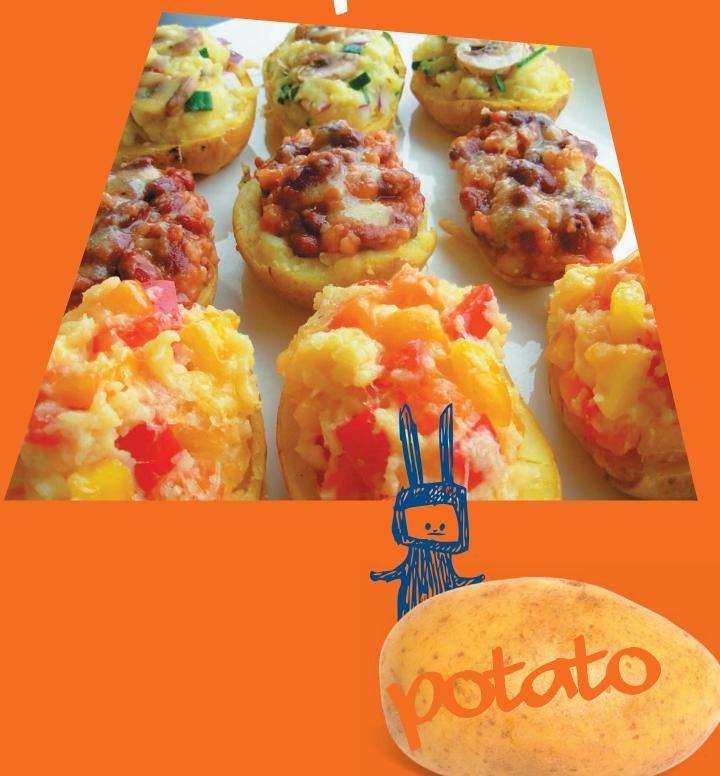
# **EXTENSION ACTIVITIES**

- · Create an acrostic poem using one of your chosen fruit or vegetables
  - Create a bookmark that represents fruit and vegetables.

    Include your poem on your bookmark

7	RASPBERRIES	
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E BIE	E	
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	N	5+@DAY V
	6	fresh fruit & vegetables

# baked potatoes



I EABNING OUTCOMES	Lesson Content	Suggested Activities
Students will:		
<ul> <li>Learn how to bake and microwave a potato</li> </ul>	Lesson Two: Baked potatoes Focus on potatoes Discuss with students what they know about potatoes:  • How they grow	Visit www.potatoes.co.nz for information on potatoes
	<ul> <li>History of potatoes</li> <li>Potatoes as a staple food</li> <li>Different varieties and characteristics and their uses for cooking (e.g. floury, waxy, colours)</li> </ul>	
	Skill development:  • Students to bake or microwave a potato What happens if we don't prick the potatoes? What is meant by standing time?  • Correct preparation of potatoes demonstration  Taste the difference. Record results	<ul> <li>Complete the "Sensory Evaluation" sheet to compare potatoes cooked by microwave and by baking</li> <li>Decide which method of cooking (oven/microwave) your group will use to cook your potato</li> </ul>
<ul> <li>Develop a stuffed potato recipe</li> <li>Follow food hygiene practices built into practical sessions</li> </ul>	Baked potatoes Set up a variety of fresh in-season vegetables that are suitable for use in baked potatoes, e.g. corn, capsicum, mushrooms, onions, celery, courgette. Cheese can be used for toppings	<ul> <li>Worksheets for <ul> <li>recipes</li> <li>sensory evaluation</li> <li>self evaluation</li> </ul> </li> <li>Self evaluation</li> <li>Word search to recap vocabulary and benefits of potatoes</li> </ul>



# LEARNING INTENTION

Students will be able to make a stuffed baked potato

# SUCCESS CRITERIA

- · Will be able to use a vegetable peeler
- · Will be able to use a cook's knife safely
- Will be able to manage time
- Will be able to work in a group successfully

This recipe will make enough for one person

# INGREDIENTS

I medium sized potato seasoning I tablespoon of milk selected vegetables, prepared 25g cheese

# TO BAKE

- 1. Turn your oven onto 200°C
- 2. Scrub potato until it is clean
- 3. Using a skewer/fork stab the potato 6 times
- 4. Place potatoes on an oven tray and bake for about 60 minutes or until soft

# TO MICROWAVE

- 1. Scrub potato until it is clean
- 2. Using a skewer/fork 'stab' the potato 6 times
- 3. Each medium sized potato takes about 3 4 minutes to cook on high power. So two potatoes will take about 6 - 8 minutes
- 4. Place potatoes on a paper towel and stand for 2 minutes

# FILLING\_

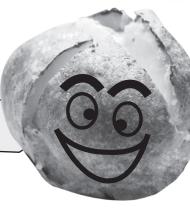
- 1. To stuff potatoes choose 3 ingredients from the selection available. Prepare as directed
- 2. Cut a baked potato in half, Scoop out the flesh, place in bowl, mash it with a tablespoon of milk
- 3. Mix in prepared vegetables
- 4. Pile back into the potato skins
- 5. Grate a little cheese over the top and re-heat for 2 minutes in the microwave

To be organised get out all your equipment before you start

- · Cook's knife
- · Board
- Measuring equipment
- · Wooden spoon
- Potato masher
- Mixing bowl
- Eating bowl

If you want a crunchier topping,

grill until the cheese melts





# Sensory Evaluation



from the word bank complete the chart



	BAKED POTATO	MICROWAVED POTATO
Taste		
Texture	• Inside	• Inside
	• Outside	. Outside
Colour		

	WORD BANK	
COLOUR	TEXTURE	FLAVOUR
dark	hard	salty
light	soft	sweet
pale	mushy	sour
	tender	bitter
	tough	spicy
	dry	bland
	crisp	
	soggy	
	crunchy	
	chewy	
	sticky	
	smooth	



We liked the \_\_\_\_\_ potato best. This was because \_\_\_\_\_

This is the way we will cook our baked potato.









Write the ingredients:			
How much did you like your product?	$\odot$	<u>(i)</u>	
Explain (say why) your answer:			
Put a mark along the lines below to mark have used my time:	where you thin	nk you are:	
uccessfully			unsuccessfully
have safely used equipment:			
consistently			occasionally
have worked well as a team member:			
onsistently			occasionally
	av ability		
I have completed all tasks to the best of m	ly ability:		
•	19 ability:		occasionally
consistently	ability:	<u>••</u>	occasionall)
consistently  How hard have you been working?	<u></u>	<u>••</u>	occasionall)
I have completed all tasks to the best of m  consistently  How hard have you been working?  I am most pleased with:  I need help with:	<u></u>		occasionally

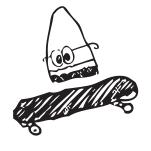




G C M Z X U D Q E 0 K Т D D D C Н C E Н Ζ 0 Т W Y Т Н Ε X 0 Q Ζ Α J Ζ J L Ζ S Α S P Y Н Y U U 0 R F I D В R R S Q C Q R E C R S C E U X J Y Α J D ı K Q C Y В W O P Ν X X V 0 M N R Н Y 0 V I Y K D П L N L Н C Т U Ν Q 0 Т 0 M Ε K Α B 0 S C Н L В Α W Α M Ε L Α C 0 L Α R R C C S E N Ε Y M D N R G X Т U Α I 0 M P K W Ζ J L 0 ı 0 Ζ C 0 Ν S F G В B D K W Ε E C F Z Т Т W 0 Ν G Ζ N Y В Ν W W P S Т 0 R M B M T В R K Z G E L Т Α S R E V G U Т C O N

> BAKE CARBOHYDRATE COLOURS CONVENIENT **DELICIOUS**

ENERGY LOCAL LOW COST VERSATILE VITAMIN C



# SPADELE COUS

# answers

C Z K M X U D D Q G D 0 C Н C Т Н E Н Ζ 0 W X 0 Y Ζ J S Q Α J Ζ Ζ Р Y Н Y U U F D В S 0 R Q Q R C Ε S J Y J R Ε U X П K Α X Q C В W P Ν X N M R V Ł D L Y Υ Н K I C Ν Μ Т 8 Н Α M C Α R D S E N E ¥ U X M Р Т K W Ζ J L 0 Ø F 0 0 G В D K W Ζ Ε В Ζ Ζ Ø W Ν G N F Υ 0 В N W Т W 0 R G M B P M В S R 7 K U G Т C O N E

(over, down, direction)

**BAKE** (13, 8, W)

CARBOHYDRATE (0, 12, NE)

**COLOURS** (15, 9, NW)

**CONVENIENT** (9, 5, S)

**DELICIOUS** (9, 0, SW)

**ENERGY** (10, 10, E)

**LOCAL** (14, 9, W)

**LOW COST** (8, 7, SW)

**VERSATILE** (9, 15, W)

**VITAMIN C** (8, 6, SW)



# salads



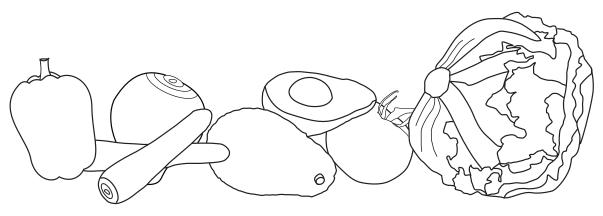
# www.5aday.co.nz e.g. writing it out in an appropriate format, recording the way they made their salads Students should use some method of or making a photographic record Refer to student sheets for: Suggested Activities Salad dressing Summer salad Winter salad Sensory evaluate commercial dressings (the same process In cooperative groups, students will decide which vegetables/fruit to choose, e.g. in groups of four each Use a variety of appropriate vegetables for salads. student could choose one vegetable to prepare could be used to evaluate their own dressings) Lessons Three and Four: Seasonal salads Winter and Summer Salads: **Lesson Content** Learn how to make salads Learn how to make salad dressings LEARNING OUTCOMES Try new ingredients Improve knife skills Students will:

# Salad Activities ingredient suggestions

A range of colour and texture will give students good variety. Students should choose something from each group. These are only suggestions.

SUMMER SALADS		
Soft	Watercress, red and green oakleaf, baby spinach	
Crunchy	Cos lettuce, Iceburg lettuce	
Herby	Mint, basil, parsely, rocket, thyme, etc.	
Vegetables	Cucumbers, celery, radishes, tomatoes, carrots	
Toppings	Croutons, feta cheese, pine nuts, mixed nuts or seeds	

M	VINTER ROAST VEGETABLE SALADS		
Hard	Potatoes, kumara, yams, parsnips, carrots, onions, beetroot, pumpk		
Soft	Peppers, courgettes, garlic, aubergines		
Herb/Spices	Rosemary, thyme, cumin, smoked paprika		
Toppings	Parmesan or other cheese, pine nuts (toasted)		





# Lets Create www.5aday.co.nz ...a pick and mix salad

- · CHOOSE ONE ingredient from each group
- · REMEMBER there are no real rules just fresh and a variety of textures will make a great salad
- · Just enjoy

Choose ingredients from each group as your teacher directs e.g. Take a few leaves, Cos lettuce, iceburg lettuce A small handful basil 6 slices cucumber aTbsp croutons

# Method

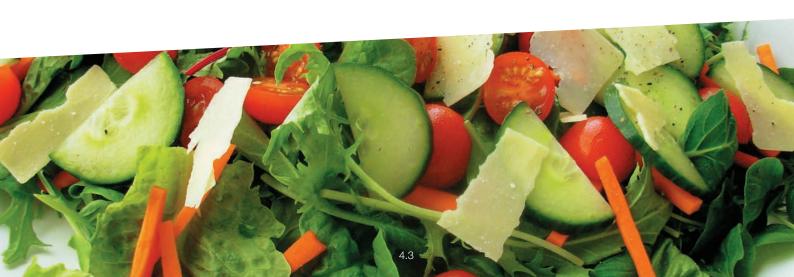
- 1. Wash and dry the leaves. Use a salad spinner if you have one otherwise gently dry them in some paper towels
- a. Pick herb leaves off their stalks
- 3. Prepare vegetables by either finely slicing or peeling
- 4. Toss everything together
- 5. Dress your salad with your own dressing

# REMEMBER

· To only use a little dressing

0

· Pour on just before serving





# Lets Create www.5aday.co.nz ...a roast vegetable salad

- · CHOOSE four vegetables from each group
- · REMEMBER to add the vegetables that take the least amount of time to cook in later or cut them bigger



- 1. Preheat oven to 220℃
- a. Prepare vegetables according to type. For example leave garlic and shallots whole and cut larger vegetables into acm square cubes. Toss vegetables in oil
- 3. Line a roasting tin with baking paper. Heat a small amount of oil
- 4. Spread vegetables out onto roasting tray. Coat with oil and season. Cover with herbs. Try to not crowd the vegetables
- 5. Place vegetables in oven and roast for 10 20 minutes shaking tray from time to time. Variation in time will depend on your choice of vegetables. Serve on a platter of salad leaves
- 6. Drizzle with your own dressing (balsamic is nice) and top with nuts, bacon or cheese
- 7. Enjoy



# Sensory Evaluation of bought salad dressings

- Go around each of the stations set up by your teacher.

  Taste (REMEMBER TO GET IT ALL OVER YOUR TOUNGE)

  a small sample of the dressing (Remember NO DOUBLE DIPPING.

  Use a clean stick each time)
- · Fill in your chart
- Try and think about what it TASTES like not how you feel about it. NO yums or yuks

	Dressing One	Dressing Two	Dressing Three	Dressing Four
Colour				
Taste				
Viscosity				

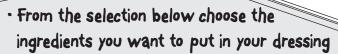
Which salad dressing did you like?	 
Why?	 

	WORD BANK	
COLOUR	VISCOSITY	FLAVOUR
dark	runny	salty
light	lumpy	sweet
pale	thin	sour
	oily	bitter
	thick	spicy
		bland

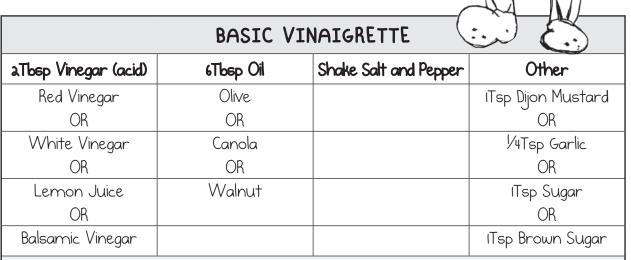




# Teshfrui www.5a



- · CHOOSE ONE from each column
- REMEMBER to keep the ingredients in the correct proportions and to taste your dressing before you put it on your salad.
   It should taste a little acidic - it will be perfect on your salad!



METHOD: Choose ONE ingredient from each column. Put all ingredients into a jar with a lid. Shake well.

SWEET or SPICY ?





5+ A Day® Charitable Trust
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