INVESTIGATING PRACTICES THAT HELP PROMOTE AND MAINTAIN HEALTH AND WELLBEING. ASSESSING THE IMPACT OF SUBSTITUTING VEGETABLES FOR MAIN INGREDIENTS IN A TRADITIONAL RECIPE.

ESSENTIAL QUESTION:
HOW MANY VEGETABLES CAN YOU HIDE IN A CAKE?

WHAT ARE WE LEARNING?
- Applying strategies for solving problems involving small numbers to those involving large numbers.
- Undertaking planning to identify the key stages and resources required to develop an outcome.
- Understanding how the nutritional makeup of a recipe can be altered and modified.

TRY THIS WITH
- Year 4-7
- Students who love being competitive.
- Students who dislike vegetables.

find  apply  produce

Recognise  Select  Make use of
Identify  Classify  Practice
Label  Give examples  Experiment

Ask each student what colour the last vegetable or piece of fruit they ate was.
Graph the results to see which colour is the most popular.
Using Instagram, give students 10 minutes to find different coloured foods.
Classify the foods as either natural or artificial, and find out how they get their colour.
Discuss the nutritional value of an orange vs Vitamin C pill.
Ask: Does the Vitamin C in a pill come from oranges or something else?
Search Instagram for #vegetable and attempt to label all the vegetables that appear.
Research the health benefits of each colour and vegetable.
Use the Quick App text tool to label each photograph, e.g. zucchini, VitaminC, healthy bones.
Repost to Instagram.
Talk about the impact of too much sugar in our diets.
Research sugar content in vegetables.

Make and send an invite to another class saying you’ll shout them morning tea.
Explain to students they must create a cake that contains hidden vegetables.
Taste possible vegetable preparations for cake recipes, e.g. pureed, grated etc.
Identify which vegetables and which preparations you wish to test.
Use this recipe as the control cake for experimentation.
Use Easy Diet Diary to calculate the nutritional makeup of your control cake.
Make the base cake batter and divide into five equal parts.
Add different combinations of vegetable preparations to each part in line with your hypothesis.
Spoon into cupcake cases and bake according to instructions.
Use brightly coloured vegetables to make natural food colours for icing.
Predict what has happened to the nutritional value of your cake.
Taste and make flavour adjustments, (lemon juice, honey or vanilla).

Innovate  Award
Create  Influence
Judge  Recommend

Ask: How can we fairly test our normal version against our vegetable version?
Create a fair test for the traditional and modified versions of the recipe.
Remind students that the morning tea needs a control cake to test the others against.
Co-create a simple rating system (such as stickers) based on looks and taste.
Support students to create their cakes for judging using knowledge gained from the testing phase.
Use Easy Diet Diary to calculate the approximate nutritional value of each cake.
Host the invited class for the morning tea shout.
Ask students from the visiting class to write the vegetables they think are in the cake on a card.
Explain the rating system to the visiting students so the other class can score each cake.
Reveal the secret vegetable ingredients of each cake and establish an overall winner.
Ask: What did vegetables actually do to the cake? Did they make the cake healthier?

Students can check they have successfully completed the task by:
- Creating a Quickapp Text overlay that accurately identifies the health benefits of a vegetable.
- Creating a prototype cake and identifying an element of the prototype that requires modification.
- Create a cake for the final morning tea shout that makes an honest attempt to hide vegetables.

GENERAL CAPABILITIES  LEARNING AREAS  WORD BANK  KEY CONCEPTS
Numeracy  Critical and creative thinking  Health and physical activity  Nutrition
Critical and creative thinking  Food technology  Prototype
Personal and Social Capability  Nutrition
Food technology  Pure
Hauora  Nutritional Makeup
Substitution
Design process
Fair Test

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MY VEGGIES ATE MY HOMEWORK

HOME LEARNING ACTIVITIES TO TRY FOR TERMS 1, 2, 3 AND 4.

Register to help with Community Fruit Harvesting.

The Hidden Orchard coordinates the picking of unwanted fruit from gardens and sharing it with those in need. Volunteer your services for the next pick at hiddenorchard.org.

LEARNING: ACIDS, BACTERIA
LEARNING: VOLUNTEERING, PROJECT SKILLS
LEARNING: COMMUNITY NEED, PRODUCT DESIGN
LEARNING: SOCIAL ACTION, CONTRIBUTING
LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION
LEARNING: ENVIRONMENTAL IMPACT, ETHICAL DECISIONS
LEARNING: SOCIAL CHANGE, RESEARCH SKILLS
LEARNING: VOLUNTEERING, PROJECT SKILLS
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

Soup is easy and cheap to make. Use vegetables and herbs you have grown or buy cheap from your local vegie shop. Make enough to share. Freeze the extras. Plan how to share your soup with an elderly neighbour, with a family in need or organise a food bank donation in advance.

SOUP

Try in Winter

Share the love with vegetable soup.

LEARNING: ACIDS, BACTERIA
LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

LEARNING: ENVIRONMENTAL IMPACT, ETHICAL DECISIONS

Eat your greens like they did in 1959.

In Australia, the vegetables we eat and the way we eat them has changed a lot. Find a recipe book or a person that can help you taste what it was like to “eat your greens” 60 years ago.

LEARNING: CONSTELLATIONS, CULTURAL TRADITIONS
LEARNING: VOLUNTEERING, PROJECT SKILLS
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

TERM 1

Regrow new vegetables from your old ones.

Garlic, Lettuce, Carrot and Basil are all vegetables that can magically and easily regrow themselves from scraps. The ultimate green thumbed reuse and recycle approach.

LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

TERM 2

Try in Spring

Find someone who can show you how to pickle vegetables. Pickling uses the qualities of salt and acid to reduce bacteria and extend the life of food.

LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

TERM 3

Try in Autumn

Use vegetable or herb seeds to make seed bombs. Identify an unused space that you think would make a great site for your seed bomb. Leave a seed bomb at the space you found. It will germinate when the right conditions occur.

LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

TERM 4

Try in Winter

Convince your family to try meatless Mondays for a month.

Become a Flexitarian family and reduce your carbon footprint, improve your family health and save money all at the same time.

LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

TERM 3

Try in Summer

Hide as many vegetables as you can in a cake.

Transform traditional recipes by substituting core ingredients for vegetables. Beetroot, Carrot, Zucchini, Spinach, Avocado, Sweet Potatoe and Pumpkin make great vegetable substitutions. See if you can fool your friends.

LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

TERM 3

Try in Summer

The sky as a calendar.

Aboriginal people have a very practical reason for their interest in astronomy: the sky is a calendar that indicates when the seasons are shifting and when certain foods are available. Find someone who can talk to you about making planting, harvesting and gathering decisions according to the stars.

LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

TERM 4

Try in Winter

Find your local community garden and get your hands dirty for an afternoon.

Many communities now have a garden on a spare plot of land. All gardens rely on volunteers to weed, water dig, plant and tend. The best bit? Helping with the work means you can also help with the eating.

LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

TERM 3

Try in Autumn

Go undercover and add some guerilla to a garden.

LEARNING: INSTRUCTIONAL WRITING, SUBSTITUTION
LEARNING: SUSTAINABILITY, LIFE CYCLES
LEARNING: CRITICAL AND CREATIVE THINKING, GERMINATION

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