CLASSROOM ACTIVITIES

STAGE 2 LESSON ONE

The science behind growing fruit & vegies

Students explore how fruits and vegetables grow and what they need. They do calculations with their fruits and vegetables brought in for Crunch & Sip and pick the most popular one to be used for the poster. They investigate their poster fruit/vegetable in more detail.

Learning Outcomes

- **ST2-4WT** compares features and characteristics of living and non-living things
- **MA2-AR-01** selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers

Resources and Preparation

Resources

Video (V)

- Video 9 – How do plants grow for kids

Worksheets (WS) and Powerpoints (PTT)

- PowerPoint 4 - How do fruits and vegetables grow?
- Worksheet 9 - Counting with your Crunch & Sip
- Teacher Information Document (TID)

Materials

- Student's Crunch & Sip fruit and veg
- Classroom poster
- Blank paper or interactive whiteboard
- (Colouring) pencils

Preparation

Prior to lesson:

- This lesson could be done during or immediately before Crunch & Sip
- Print 1x WS9 per student

Introduction (5 mins)

Discuss with students: What are fruits and vegetables and where do they come from? How/where do they grow and what do they need? Brainstorm onto blank display posters or interactive whiteboard.

Activity (35 mins)

1. Ask the students to get their Crunch & Sip fruit or vegetables.
2. Together with the whole class, use WS9 to do some calculations with your student's Crunch & Sip fruits and vegetables (question 1-5).
3. Individually, the students complete the fruit and veg calculations on the worksheet (questions 7&8).
4. Explain what the classroom poster will be used for and choose which fruit/vegetable the class will use for the poster.
5. Watch V9 and/or use PPT4 to learn about how plants grow. Alternatively, find a video about your selected fruit/vegetable for the poster (see TID for some videos about common fruits and vegetables).
6. Complete Week 1 on the classroom poster.
7. The class can complete WS9 (questions 9-12).

Conclusion (15 mins)

Start a further discussion or brainstorm using the questions in the last slide of PPT4. For example, discuss why plants are so important to humans. Why are some locations more suited for the growth of certain fruit and vegetables than others? For example; can bananas grow anywhere? Why not? Can students think of any way that would allow bananas to grow in a colder climate? How about methods to grow bananas faster, keep them safe from pests, or produce higher quantities?

Assessment

For: Students understand how fruits and vegetables grow.

As: Students use what they have learned and apply to their own favourite fruit or vegetable.

Of: Students correctly solve the fruit and vegetable math problems.

Differentiation

Extend: Dive deeper into the science of fruits and vegetables: e.g. 'what is the difference between fruits and vegetables', what is photosynthesis' or 'what nutrients do plants need to grow?' (see TID).
Or use lesson 1 for Stage 3 to discuss technologies used in agriculture.

Simplify: Visit the school garden together and watch growing plants in action (if no school garden, watch clips of growing plants on YouTube)

School/Home Link

Students can use what they learned to explore fruits and vegetables in their own environment, together with their parents/carers.

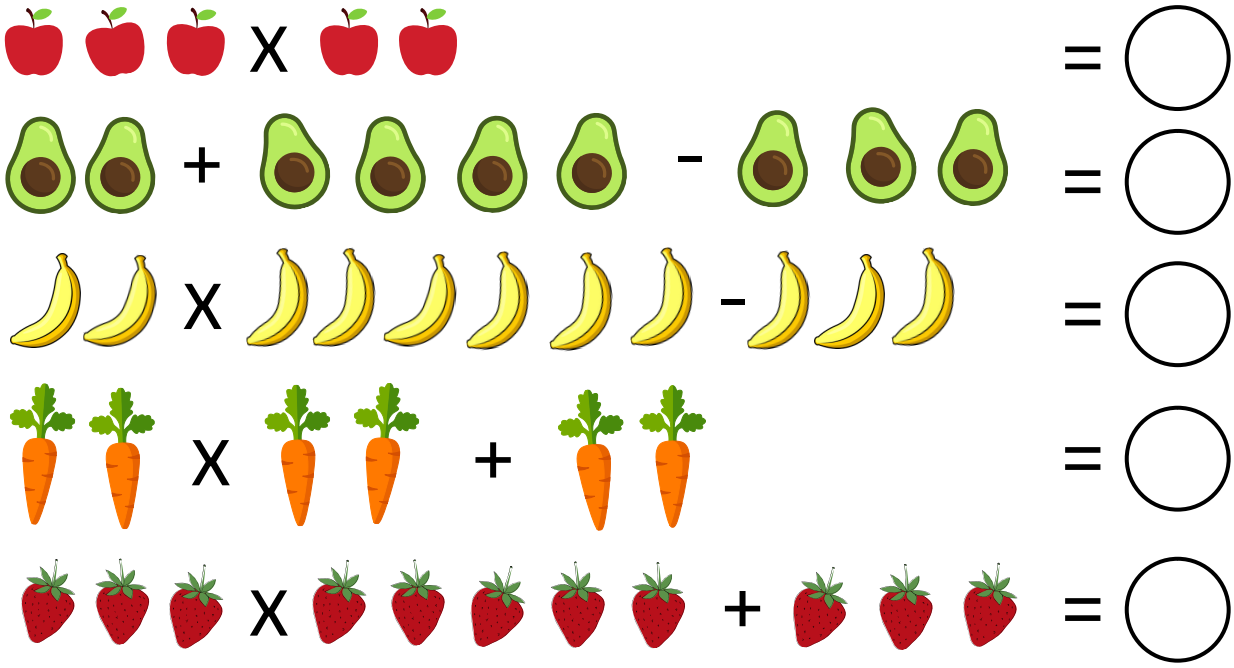
Duration | 55 minutes

Counting with your Crunch & Sip

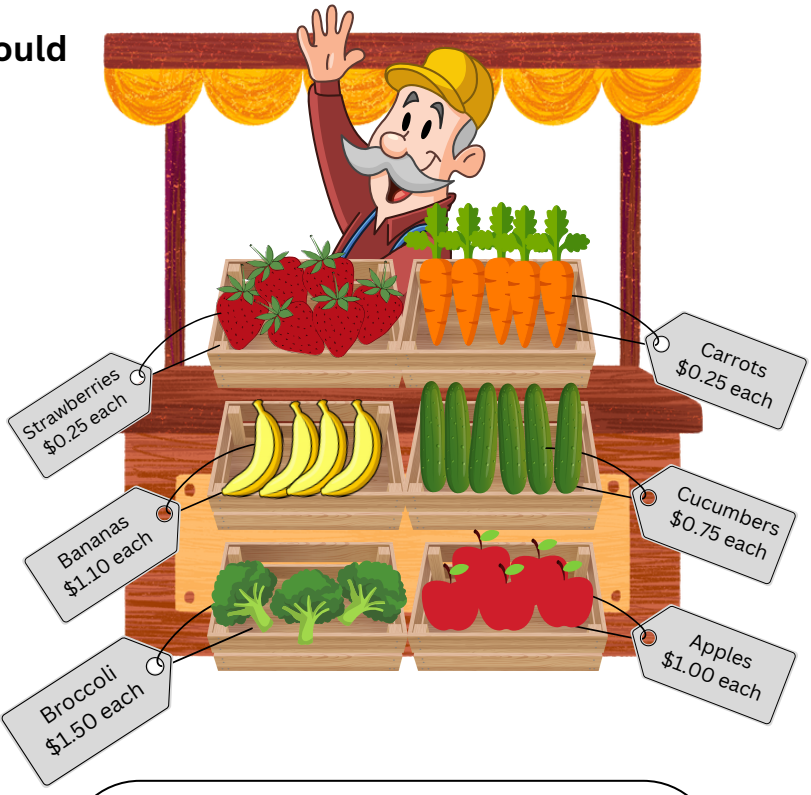
1. **Count the total number of fruits in your class:** ……..
2. **Count the total number of vegetables in your class:** ……..
3. **Are there more fruits or vegetables?** ……
4. **How many more?** ……
5. **Sort them by colour.**
   How many orange + red are there? ……
   How many green x red? …..

6. **Draw below:**
   - A triangle with 3 x 2 bananas
   - A circle with 12 + 15 - 20 carrots
   - A square with 5 x 10 - 45 apples
   - A hexagon with 1/2 avocado and 3 x 6 peas

7. Solve the fruit & veg math problems below and write the answers in the circles:



8. Jake is at the farmers market and would like to buy some fruit and vegetables. Can you help him calculate his totals?



List 1:
- 2 carrots
- 2 apples
- 3 strawberries

Total: $.....

List 2:
- 3 broccoli
- 1 cucumber
- 6 strawberries

Total: $.....

List 3:
- 4 apples
- 2 bananas
- 4 carrots
- 1 cucumber

Total: $.....

List 4:
- 2 broccoli
- 3 carrots
- 5 apples
- 3 cucumbers

Total: .$.....

All about growing fruit & veg plants

9. What are the 4 things that plants need to grow? Match them to the explanation of why plants need it.

1. .....

2. .....

3. .....

4. .....

Many of the nutrients plants need to grow are found in here

Plants use the energy from this to make their own food (photosynthesis)

Plants need this for their photosynthesis (making food)

This helps the nutrients from the soil, go up into the plant

10. What are two other things that influence the growth of a plant?

1. ..... (hint: some plants can't grow in places where this is really high or really low)

2. ..... (hint: a seed only needs a little of this, but as the plants grows it will need more and more)

11. Write the name of your favourite fruit or vegetable.
Draw it in the square:

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12. Draw how your favourite fruit or vegetable grows from seed to plant: