

# Classroom activities

## Stage one / Lesson two



### Learning Outcomes

A student:

- **ST1-11LW** Describes ways that different places in the environment provide for the needs of living things.
- **ST1-4WS** Investigates questions and predictions by collecting and recording data, sharing and reflecting on their experiences and comparing what they and others know.



### Cross Curriculum Links

A student:

- **PHS1.12** Recognises that positive health choices can promote wellbeing.



### Resources and Preparation

#### Resources

- Access to interactive whiteboard.
- Interactive whiteboard materials – Vegetable Science S1 via [www.fruitandvegmonth.com.au](http://www.fruitandvegmonth.com.au)
- Worksheet 4 – Vegetable experiment.
- Pencils for writing.

*Resources and Preparation continued >*

## Vegetable Science

Students will investigate the variables that might affect the growth of vegetable seedlings.

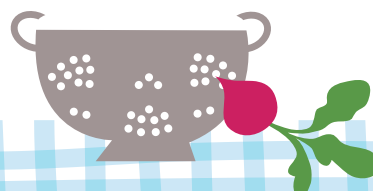
### Introduction (15 mins)

- Ask students: Do you grow vegetables at home? Or have you seen or visited a farm that was growing vegetables? What do you think vegetables need to grow healthy and strong so that you can eat them (IWB)?
- Watch video of farmer explaining the basic needs of growing vegetables (IWB).
- As a class, review the 3 basic needs of growing vegetable plants – sunlight, water, food. Explain to students that they will be conducting a virtual experiment to measure the impact on seedling growth of withdrawing 1 of these basic needs.

### Activity (35 mins)

1. Discuss how you might test the impact of withdrawing 1 of the basic needs from vegetable seedlings on their success. Brainstorm the importance of a control (IWB).
2. As a class, develop an experimental procedure (IWB). Teacher can opt to print or save the procedure as a PDF (*note: print or save before changing screens or work will be lost*). See Teachers Notes for a suggested experimental procedure.
3. As a class, students make predictions for what they think will happen for each variable (IWB). Hand out WS 4 and students fill in their predictions.
4. Undertake the virtual experiment (IWB). Students fill out the 'this is what happened' part of the WS during the activity.
5. Class discusses their findings. Which plant was the most successful? What happened with the seedlings that missed out on: water; food; sunlight? Were their predictions correct? Were there any surprises?

*Vegetable Science activity continued >*



# Classroom activities

## Stage one / Lesson two continued

### Resources and Preparation

#### Preparation

##### Prior to lesson:

- access interactive materials ready for use.
- photocopy WS 4 – 1 per student.

**Duration | 60 minutes**



### Conclusion (10 mins)

Students conclude what the vegetable plants need to survive and/or flourish (IWB). Students complete WS 4.

**Note:** The basic needs experiment could also be undertaken in real life within the class setting.

### Assessment

- For:** Students identify things that vegetables need to grow healthy and strong so that you can eat them.
- As:** Student provides useful additions to class development tasks (e.g. recall of basic needs, predictions, experimental procedure).
- Of:** Student uses WS 4 to reflect on learning and seeks assistance when needed.

### Differentiation

- Extend:** Students develop experimental procedure, predictions and conclusions individually before discussing with the rest of the class.
- Simplify:** Provide assistance with WS tasks.

### School/Home Link

Students provided with a copy of the experimental procedure to take home so they can undertake the basic needs experiment in real life with parents/carers if desired.



## Vegetable experiment

I predict: \_\_\_\_\_

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This is what happened:

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I conclude that, to grow strong and healthy,  
vegetables need:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

# TEACHERS NOTES

Vegetables  
are  
Funky!

## Vegetable Science

### Stage 1

**Suggested experimental procedure:**

**What would we need (e.g. equipment)?**

- 4 x vegetable seedlings – 1 as the control seedling, 1 to be the no water seedling, 1 to be the no sun seedling, 1 to be the no fertiliser seedling
- Water
- Fertiliser
- Sunlight (e.g. a sunny spot)

**What would we do (method)?**

1. Label pots, e.g. control, no sun, no water, no fertiliser.
2. Provide seedlings with their basic needs. Give control all 3 basic needs. Give the other 3 seedlings only 2 of the basic needs (according to their label).
3. Keep caring for seedling over time (e.g. a month). Give the basic needs according to the label.
4. Observe the changes in your seedling over time (e.g. a month). You could do this by measuring, taking photos or writing down the changes you observe.

## Vegetable Yum

### Stage 3

**What is a serve of vegetables?**

**1 serve of vegetables =**

- ½ cup of cooked green or orange vegetables (for example broccoli, spinach, carrots or pumpkin) OR
- ½ cup cooked, dried or canned beans, peas or lentils OR
- ½ cup of sweetcorn OR
- ½ medium potato or other starchy vegetables (for example sweet potato, taro or cassava) OR
- 1 medium tomato OR
- 1 cup of green leafy or raw salad vegetables

Adapted from National Health and Medical Research Council (2013).  
*Educator Guide*. Canberra: National Health and Medical Research Council.

