Classroom activities

Stage three | Lesson two

Learning Outcomes

A student:

- **ST3–10LW** Describes how structural features and other adaptations of living things help them to survive in their environment.
- **ST3–11LW** Describes some physical conditions of the environment and how these affect the growth and survival of living things.

Cross Curriculum Links

A student:

- **ST3–4WS** Investigates by posing questions, including testable questions, making predictions and gathering data to draw evidence-based conclusions and develop explanations.

Resources and Preparation

Resources

- Access to interactive whiteboard.
- Interactive whiteboard materials – Vegetable Science S3 via www.fruitandvegmonth.com.au
- Worksheet 7 – Scientific report.

Resources and Preparation continued >

Vegetable Science

Students will learn how vegetables have features and adaptations that help them survive in various environments.

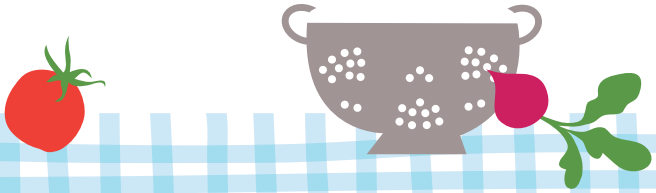
Introduction (10 mins)

- Discuss what students know about the different conditions vegetables need in which to grow well.
- Advise students that they will be looking into how different environmental conditions suit different vegetables based on their needs. They will then be investigating one vegetable and writing a scientific report on its needs.
- Each student is provided with a seed packet or a seedling label. As a class, discuss what information is provided. Why is that information provided?

Activity (35 mins – parts 1–8 only)

1. Class explores the interactive map of Australia (IWB) by clicking on different zones to learn more about that climate. Students predict what vegetables they think will grow best in the various climate zones and why.
2. Using the climate map (IWB), the class explores the best climate zones and seasons for growing a sample vegetable (pumpkin). Click on the tabs in each zone for information. Students discuss why the vegetable might grow best in various climate zones and seasons in relation to temperature and rainfall information.
3. Ask students to refer back to their seed packets and/or seedling labels. What other information is provided there that is not explained by large scale climate zones – e.g. soil type and amount of sunlight.
4. Demonstrate impact of soil type and sunlight hours using IWB.
5. Can farmers/home gardeners modify the environment to give a vegetable the best chance of success? Class provides solutions for examples on IWB. Answers written or typed into IWB.
6. Show sample scientific report (IWB). Discuss elements of the report by hovering over sections.
7. Provide students with WS 7. Students choose a vegetable and fill out the prediction part of the report.
8. Conclude IWB part of the lesson.
9. Students complete WS 7. Provide access to research materials if task is to be completed in class. Alternatively students can complete the task over a period of time and research can be linked into the library. The report can be used as an assessment task.

Vegetable Science activity continued >



Classroom activities

Stage three | Lesson two continued

Resources and Preparation

- A selection of different vegetable seed packets or seedling labels that provide growing information – 1 per student. Choose packets or labels that contain plenty of information.
- Pencils/pens for writing.
- Access to research material via the library, internet (e.g. www.abc.net.au/gardening/vegieguide/) or books on growing vegetables.

Preparation

1 month prior:

- request vegetable seed packets or seedling labels from school community or local businesses.

Prior to lesson:

- access interactive materials ready for use.
- photocopy WS 7 – 1 per student.
- organise research materials for use in class, if necessary.

Duration | 65 minutes
(not including completion of the scientific report)

Conclusion (20+ mins)

Class discusses their conclusions. Class develops a list of the vegetables that could be successfully grown in their area. Alternatively, students present their scientific reports as an assessment task. Class then develops a list of the vegetables that could be successfully grown in their area.

Note: *allow extra time for assessment option.*

Assessment

For: Students' prediction of the features and adaptations plants make in order to survive the environment.

As: Student identifies features and adaptations plants make in order to survive the environment.

Of: Quality of scientific report.

Differentiation

Extend: Students can investigate more than 1 vegetable. Students can investigate a vegetable and how it has changed/adapted over time, e.g. ancient carrots versus carrots of today.

Simplify: Students undertake research task in pairs or groups.

School/Home Link

List of suitable vegetables for the area, devised by the class, can be published in the school newsletter.

Scientific report

Vegetable name: _____

Prediction

Do I think this vegetable can be grown in my local area? Why?

_____

_____

Research

Other names for this vegetable:

_____

Vegetable description:

_____

_____

_____

_____

How does it grow (e.g. in the ground, on a vine or bush)?

_____

_____

Describe the conditions this vegetable needs to grow well. E.g. amount of water, type of soil, temperature, amount of sun, and nutrients (plant food/fertiliser).

Which climate regions can this vegetable grow in and why?

Conclusion

Can this vegetable be grown in my local area? Why?

Can I grow this vegetable at my place? Why?