Australian Curriculum

YEAR 1

AGES 6–7

RIC PUBLICATIONS

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SCIENCE: A STEM APPROACH

AC

Biological sciences

Chemical sciences

Earth and space sciences

Physical sciences

SCIENCE TECHNOLOGY ENGINEERING MATHEMATICS

SAMPLE - NOT FOR SALE

RIC-6171 8.6/1256

Teacher notes

Science inquiry focus:

What are the parts of a plant and what does each part do?

Science Inquiry Skills:

- Questioning and predicting QP
- Planning and conducting PC
- Processing and analysing data and information PA
- Communicating C

Science as a Human Endeavour:

- Students observe the parts of a plant.
- Students care for a seedling plant and ensure its needs are met.

Technology/Engineering/Mathematics links:

- participating in an interactive plant game to explore information about features of a plant
- using on QR code scanner to access websites and information

Assessment focus:

- Use page 37 or the diagram created in the ShowMe app as a formative assessment of the student's ability to label a diagram, and observe and describe the parts of a plant and their functions.
- Use page 38 as an ongoing assessment of the student's ability to record observations.

Background information

- The main parts of a plant include the roots, stem, leaves, seeds, flowers and fruit.
- The roots anchor the plant in the ground so it does not fall over. Roots have tiny hairs that help plants absorb moisture. They take in water and food (minerals) from the soil and can also store extra food for later use.
- The stems act like straws. They carry water and food from the roots to the other parts of the plant. Stems hold up the leaves and flowers. There is usually one main stem and smaller side stems. Trees have a large stem called a trunk, with side stems called branches.
- The leaves make food for the plant by capturing sunlight and using it to make food through a process called *photosynthesis*. Different plants have different leaf shapes, but most leaves are green.
- Different plants have different flowers. The flowers are the reproductive part of plants where the seeds are made. The petals and flower scent attract bees and other insects that pollinate the flower. Flowers contain ovules. After the ovule is fertilised, they develop into fruit.
- The fruit provides a covering for the seeds. They can be fleshy like an orange or hard like a nut.
- The seeds contain the new plants. They form inside the fruit. Seeds contain food which new plants use until the leaves grow and they can make their own food. Seeds can be spread by wind, animals and water.

Resources

- Punnet of six seedlings, already flowering
- Six plastic trays or large plastic plates
- Six large jars, 2-L plastic bottles with the top cut off, to use as a planter pot
- Soil
- 'Parts of a plant' video linked to QR code <https://tinyurl.com/ooeoy52>

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Lesson plan

Introduction:

1. Display the simple interactive plant labelling game from <https://tinyurl.com/39kn3s7> and monitor students' level of prior knowledge by conducting the activity as a whole class. **QP**

Development:

2. Play the opening part of the 'Plant scan' game from <https://tinyurl.com/huc9l9l> to reveal the students' next mission. They are an alien in charge of testing living things and need to examine the parts of a plant to report back to their planet. Click through to read the information as a class. The plant diagram presented is more detailed than the one in the introduction but can be done with some guidance as a class. At this level students do not need to know about food tubes and water tubes, only that the stem assists to transport water and food. Leave the labelled plant on screen for students to refer to. **QP** **PA**
3. In small groups, students then examine their own seedling (one seedling per group, maximum of six groups). They will need to carefully take it out of the punnet and place it on the plate or tray so they can reveal the roots and other parts. They should be careful, as they will later plant the seedling and look after it for the rest of the term/year. **PC**
4. Students use the resource sheet on page 37 to record their observations. Alternatively, students may use an application like ShowMe to take a photograph of their plant, label it and explain the function of each part. **PC** **PA**
5. Students plant their seedling in a jar or another clear recycled container and look after it as a group for the rest of the term. *What things does your plant need? Where in the classroom will you place it?* Reinforce the needs of a plant such as water, sunlight and air. Students check to observe any changes to the roots, stem, leaves, flower and seeds throughout the term. Students may use the resource sheet on page 38 to record observations. **PC**

   Differentiation:
   - Less capable students can work in pairs to assist each other or record their answers using a voice recorder.
   - More capable students research what role the seeds of a plant play and write a sentence. Compare the answer to the predicted answer on page 37.

Reflection:

6. In pairs, students take turns to give each other a clue about a part of a plant and what it does, without saying the part name. The other student has to guess, and then they swap roles. **C**

SAMPLE - NOT FOR SALE

978-1-925431-94-0

Plant experiment

Alien plant report

Prepared by _____

1. Draw the plant and label its features.

2. Scan this to watch a video about plants.

Describe what each part does.

(a) Roots _____

(b) Stem _____

(c) Flower _____

(d) Leaves _____

(e) Fruit _____

3. What do you think the seeds of a plant do?

_____

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Plant observation

Date:	**Stem:** What does it look like?	**Leaves:** What do they look like?	**Flower:** What does it look like?	**Roots:** What do they look like?	**Seeds:** What do they look like?

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