

Pre-excursion resource

Adaptations in Action

Level 3 – Level 6



Year

Grade 3 – Grade 6



Level

Level 3 – Level 6



Activity description

Students learn about living, once living and non-living things through a guided investigation of a natural environment. They draw, label and discuss characteristics that promote plant survival in the natural environment. Using the 3-2-1 Bridge thinking routine template, students explore plant adaptations. Students discover the differences between behavioural, physiological and structural adaptations in different environments.



Key Topics

- Living/once living/non-living
- Adaptations



Materials required

- Worksheet: Living, Once Living and Non-living (1 per student)
- Worksheet: Adaptations (1 per student)
- Template: 3-2-1 Bridge thinking routine (1 per student)
- Access to a whiteboard
- Whiteboard markers

- Pencils/pens
- A rock
- A stick
- A live insect in a jar (release in natural habitat after activity is completed)
- Access to the school grounds (wetland or treed area)



Instructions

1. Living, Once living and Non-living activity.

Show students a rock, a stick and an insect. Ask the students which one is living, non-living, and once living. Ask students what it means to be alive. Have them come up with the five characteristics for each and write them on the white board.

2. Distribute the Living, Non-living and Once living worksheet, to each student. Read through the worksheet instructions with the students, answering any questions as you go.

Remind students to think about:

- Does it breathe?
- Does it eat?
- Does it respond?
- Does it reproduce?
- Does it grow?

Items such as an apple or seed are great to discuss. There is often controversy over where to place them. Let the students discuss and come up with their own answer.

3. Guide students outside into the school grounds and allow enough time for the class to complete the worksheet. Share worksheet findings in a group discussion.

Adaptations Activity

1. Use the 3-2-1 Bridge thinking routine template as a tool to scaffold student learning.

As a whole class or individual task, record initial student responses in the Bridge.

Question: What do you know about plants and how they survive?

- 3 things you think you know about how plants survive
- 2 questions you have
- 1 labelled diagram

This tool can then be used in a range of learning experiences.

2. Once the 3-2-1 Bridge thinking routine has been completed, take a dive into Adaptations.

Ask why some plants have thorns? As part of the discussion, connect the structural feature of thorns (an adaptation) that helps protect the plant from predators feeding on its leaves.

Using the background information provided discuss the following questions to ensure students have a thorough understanding of behavioural, physiological and structural adaptations:

- What is an adaptation?
- What is the difference between behavioural, physiological and structural adaptations?

3. Distribute the Adaptations of Plants worksheet. Students chose one of the following environments: Woodland, Ocean or Desert. They examine the type of plants that live in the environment and draw a detailed picture of the environment.

4. Students then focus on a specific plant. They draw and label at least one physiological structural and behavioural features of the plant that supports its survival. Students share their learnings in a paired discussion with a member of the class.



Suggestions for assessment

Successful completion of the following: 3-2-1 Bridge thinking routine template, Living, Once Living and Non-living worksheet and the Adaptations of Plants worksheet.



Curriculum links

The Victorian Curriculum

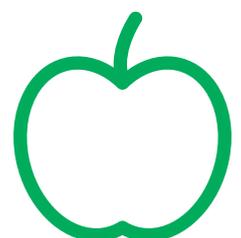
Science

Level 3–4

Living things can be grouped on the basis of observable features and can be distinguished from non-living things (VCSSU057).

Level 5–6

The growth and survival of living things are affected by the physical conditions of their environment (VCSSU075).



Worksheet: Living, Non-living or Once Living

Look around the orchard, your school yard or your own backyard. List and draw things that you can find that are living, non-living or once living.

Tick which category your item belongs in and the reasons why you decided it was living, non-living or once living.

ITEM	LIVING	NON-LIVING	ONCE LIVING	WHY

In your own words, what are the differences between living and non-living things?

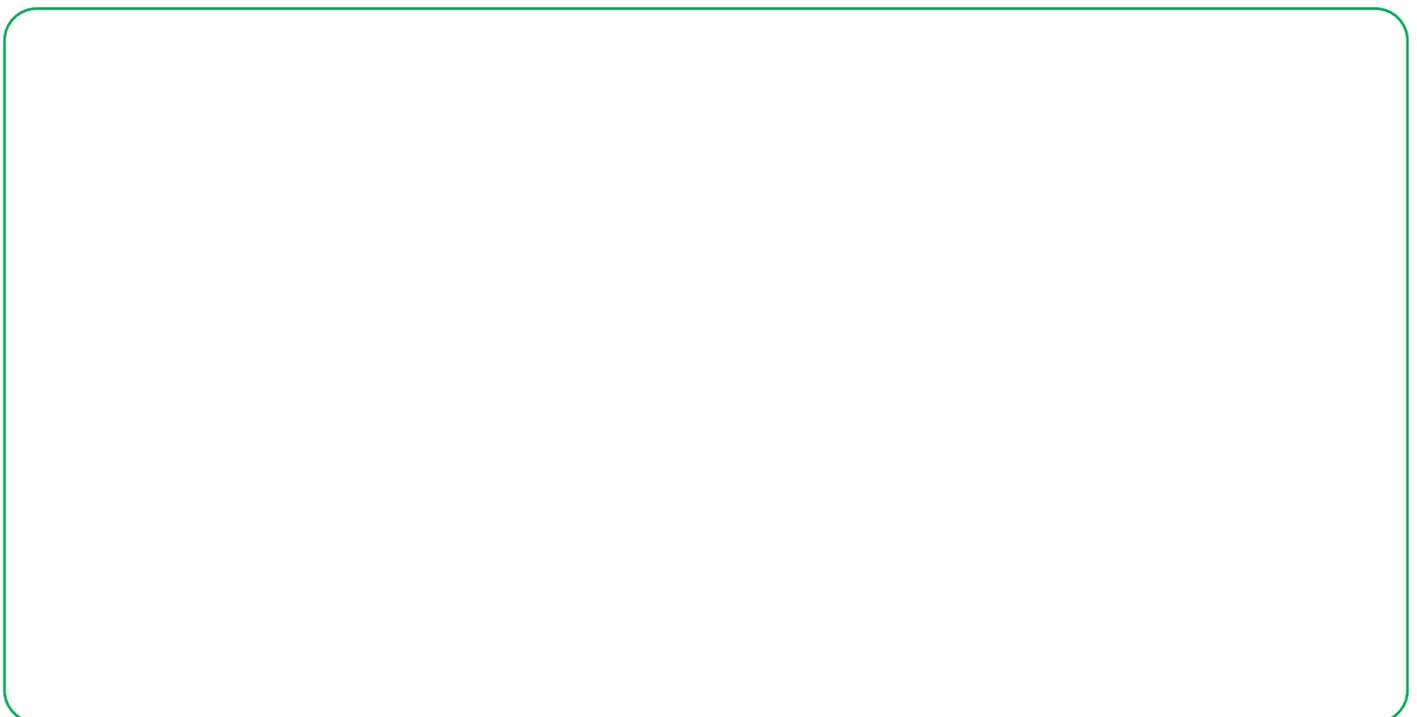
Worksheet: Adaptations of Plants

Choose at least one of the following environments. Woodland, Ocean or Desert. Examine the type of plants that live in the environment.

Draw a detailed picture of the environment.



Choose a specific plant that lives in the environment you chose. Draw and label at least one physiological, structural and behavioural feature of the plant that support its survival.



Would your plant survival in a different environment? Why/Why not?

Extension question: What human impacts to the natural environment could affect a plant's ability to survive?

