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**Number of lessons:** Three

**Year level(s):** Year 1 & 3

**Australian Curriculum content descriptions:**

- Year 1. Living things have a variety of external features ACSSU017. Science involves observing, asking questions about, and describing changes in, objects and events ACSHE021. People use science in their daily lives, including when caring for their environment and living things ACSHE022. Participate in guided investigations to explore and answer questions ACSIS025. Use informal measurements to collect and record observations, using digital technologies as appropriate ACSIS026. Compare observations with those of others (ACIS213).
- Year 3. Living things can be grouped on the basis of observable features and can be distinguished from non-living things ACSSU044. Science involves observing, asking questions about, and describing changes in, objects and events ACSHE021. People use science in their daily lives, including when caring for their environment and living things ACSHE022. Participate in guided investigations to explore and answer questions ACSIS025. Use informal measurements to collect and record observations, using digital technologies as appropriate ACSIS026. Compare observations with those of others (ACIS213).

**Achievement standard:**

By the end of Year 1, students describe objects and events that they encounter in their everyday lives, and the effects of interacting with materials and objects. They describe changes in their local environment and how different places meet the needs of living things.

Students respond to questions, make predictions, and participate in guided investigations of everyday phenomena. They follow instructions to record and sort their observations and share them with others.

By the end of Year 3, students use their understanding of the movement of Earth, materials and the behaviour of heat to suggest explanations for everyday observations. They group living things based on observable features and distinguish them from non-living things. They describe how they can use science investigations to respond to questions.

Students use their experiences to identify questions and make predictions about scientific investigations. They follow procedures to collect and record observations and suggest possible reasons for their findings, based on patterns in their data. They describe how safety and fairness were considered and they use diagrams and other representations to communicate their ideas.

# Lesson 1 – Living or non-living?

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## Context

We are checking in to see that students understand if things are living or non-living. The idea of “product of a living thing” or “once living” could be mentioned but not necessary. We would explore the school yard for living and non-living things.

## Materials and equipment

- Device.
- pencil and paper,
- leaves, sticks, rocks, photos of animals, feather, etc.

## Safety Advice

Nil

## Objectives

How do we know something is living?

## Introduction

Check for prior understanding and ensure students understand what a **living/non-living thing** is.

## Core

1. Check students prior knowledge on terminology living and non-living. Students could use devices to provide a “prior knowledge” understanding of what a living/non-living thing is. Students could record their voice explaining their understanding or type their response.
2. Brainstorm with students and get them to come up with examples.

## Conclusion

Students are encouraged to look for living and non-living around the school yard.

## Resources

Digital: <https://www.youtube.com/watch?v=X9qGI4Ju8ak>

<https://australian.museum/learn/species-identification/>

## Lesson 2: Looking for differences

### Context

Collecting plant samples from around the school to preserve and group.

### Materials and equipment

- Labels for samples,
- device for photos and ID,
- pen and paper for recording.

### Safety Advice

nil

### Objectives

Select different **species of plants** from various locations around the school to **sample and ID**

### Introduction

Why is it important for botanist to collect plant samples? Explain the role of a botanist and how they classify and name plant species.

### Core

1. Students work in pairs or small teams to sample 4 different trees/bushes/shrubs/plants from around the school.
2. Students find a plant of interest. They photograph it and either ID with app (Picture This Plant Identifier) or ID at a later date. Students cut a small clipping of plant including a bit of stem, leaf and any fruit or flower available. Students record the ID number and some information on location, could even take GPS point. Store in plastic bag, label.
3. Repeat with three more plants.
4. Students return to the classroom with four samples, photographs of the whole plant and attempt to classify using Plant ID App or species charts available from your local council. Record the names of the plants in science books. Store these samples for next lesson.

### Conclusion

Students are encouraged to look for differences in their plants, e.g. different shaped leaves

### Resources

PictureThis app

<https://www.picturethisai.com/>



#### PictureThis - Plant Identifier

Identify Flower Leaf Tree Herb  
Clarity Global Group Ltd.

#23 in Education  
★★★★☆ 4.8 + 125.9M Ratings

Free - Offers In-App Purchases



# Lesson 3: Pressing samples

## Context

Pressing the plant samples

## Materials and equipment

- Newspaper,
- cardboard,
- hard MDF or similar (see image),
- dichotomous key example.



## Safety Advice

nil

## Objectives

Press and **preserve plant samples** from last week and to group plants based on observable features.

## Introduction

Introduce the students to the purpose of pressing plants, i.e. to flatten and evenly dry the plant specimen, maintain a record of flora of an area.

## Core

1. Students collect samples from plastic from last lesson.
2. Collect one leaf from each sample.
3. Students create own flower press from cardboard and newspaper. Ensure the plant is labelled and place one sample in-between one sheet of newspaper. Press it together with cardboard and flatten. Continue with other samples. Leave this for 3 weeks to dry. (See images)
4. Use leaves collected to group leaves based on observable features. Re-group with any other features noticed.
5. Use leaves to create a dichotomous key as an extension task
6. Sketch leaves or do leaf rubbings

## Conclusion

Students are encouraged to look for differences in their plants. Look at observable features. What does that mean? How can things be grouped? Can you re-group with another factor in mind?

## Resources

Leaf dichotomous key - <https://www.youtube.com/watch?v=peMiaDhw9sc>

Collect, Prepare and Preserve Plant Specimens [https://www.greeningaustralia.org.au/wp-content/uploads/2017/11/ALEP4\\_Collect\\_Plants\\_Web.pdf](https://www.greeningaustralia.org.au/wp-content/uploads/2017/11/ALEP4_Collect_Plants_Web.pdf)