



Recognise plants

AHCPCM201

By the end of this topic, you should be able to:

- Prepare for plant recognition
- Recognise specified plants
- Update the reference collection

- In preparation for plant recognition, you should familiarise yourself with the following:
 - Task requirements
 - Clarify any unclear instructions with your supervisor
 - Identify desirable and non-desirable plants requiring recognition
 - Weeds are a non-desirable plant
 - Identify processes for plant recognition
 - Prepare resources and equipment
 - Work area
 - Identify any WHS hazards (e.g. heat stroke, manual lifting injuries)
 - Rectify and/or report hazards or abnormalities to your supervisor within a timely fashion – especially emergency situations

Identify range of plants requiring recognition

- Through your horticultural practice, you will be required to work with a range of plants, from native plants to large non-native trees.
- Plants play a vital role in the environment. They:
 - Provide food and other natural products
 - Provide shelter for animals and birds
 - Protect soil from erosion and salinity problems, replacing nutrients
 - Improve air quality

The most important groups of plants that you will need to recognise are those relevant to your own workplace or industry.

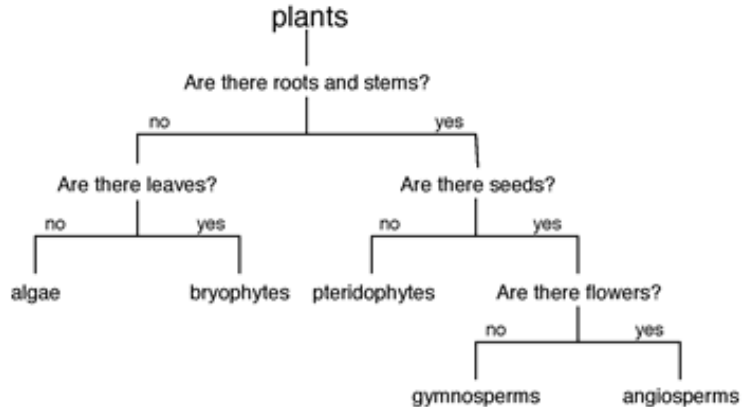
Resources and equipment for plant recognition

- When preparing for plant recognition, you should collate, prepare, and use a range of resources and equipment, such as:

Resources	Equipment
• Guides • Internet • Picture books • Plant key • Supervisors • Work colleagues	• Secateurs • Plastic bags • Envelopes • Tags • Notebook • Magnifying glass • Pencil/pen • GPS • Plant press

Example plant key

- A plant key consists of a series of statements of the plants involved.
 - The statements are grouped and require a choice to be made.
 - This leads to another set of statements where another choice is made.
 - You proceed from one choice to another until you arrive at the answer.



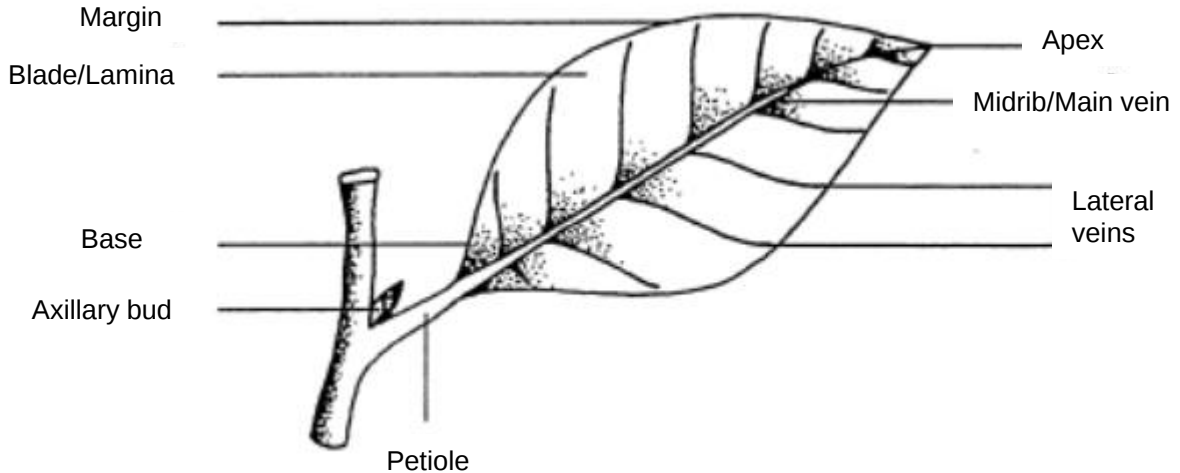
Plant organs and functions

- Plants have a number of organs. You should be aware of their functions, as they will aid with plant recognition:

Organ	Description
Flowers	Provide aesthetic value and produce seed as a result of pollination.
Fruit	Provides protection to seeds and also assists in the seed dispersion.
Leaves	Manufacture food for the plant through photosynthesis. They may be either simple or compound in nature.
Roots	Anchor plants and absorb water and nutrients from the soil.
Stems	Support flowers, fruits and leaves.

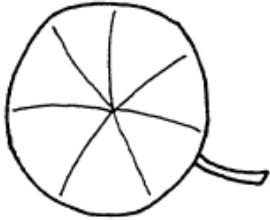
Plant organs: Simple leaf

- The parts of a simple leaf are shown below:

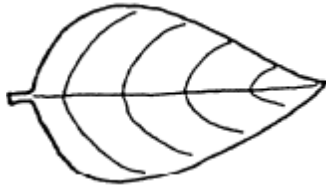


Plant organs: Simple leaf shapes

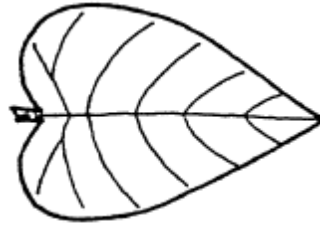
- There are a range of simple leaf shapes, including:



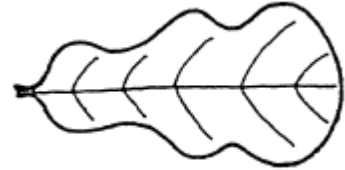
Orbicular



Ovate



Cordate



Lyrate



Spatulate



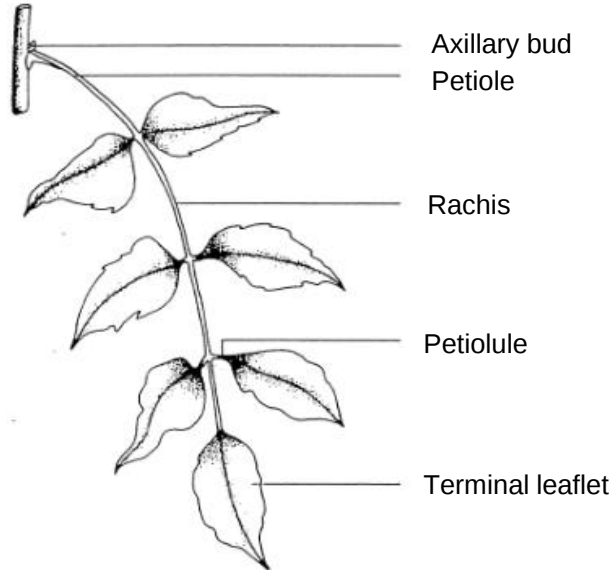
Falcate



Acicular

Plant organs: Compound leaf

- The parts of a compound leaf are shown below:

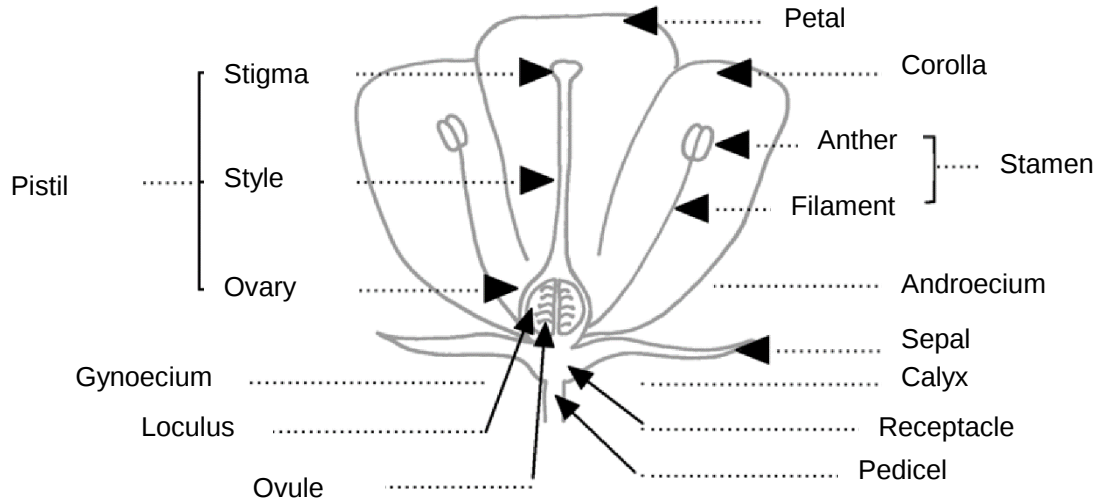


- There are a range of compound leaf types, including:

Type	Description
Palmate	Leaves with several leaflets emanating from one point
Pinnate	A compound leaf which has a row of leaflets on each side of the rachis
Trifoliolate	Leaves with three leaflets

Plant organs: Flowers

- The parts of a flower are shown below:



- There are a number of available processes for plant recognition. For example:
 - Classifications (e.g. according to their life span)
 - Environments (e.g. habitat)
 - Habit and form types
 - Flowering plants groupings

These processes are outlined in further detail on the following slides

- There are a range of plant classifications:

Classification	Description
Annual	Plants which grow, flower, seed and die in one year or part of a year.
Biennial	Plants which require 2 years to grow, flower, seed and die.
Climber	Plants with stems too weak to support them in an erect position.
Deciduous	Trees and shrubs which are leafless during a portion of the year.
Evergreen	Plants that have leaves all year round.
Groundcover	Plants other than grasses that are used to satisfactorily cover the ground.
Perennial	Plants which live more than 2 years.
Shrub	Wood plants that remain low and produce shoots from the base. Does not have a single or distinct trunk.
Soft-wooded perennial	Plants which have persistent tops and roots. Tops do not become woody.
Trees	Woody plant that has a single main trunk with a distinct and elevated head.

- Plants can be recognised by their environments:

Environment	Description
Alpine	Mountain areas covered with snow. Plants are usually low growing.
Mallee	Areas of small multi-stemmed eucalypts.
Mulga	Low rainfall with hot summers.
Rocky outcrops	Areas of rock where plant roots have to search for moisture in the cracks.
Tropical	High rainfall and heavy vegetation.
Wetlands	Permanently or periodically under water.

Habit and form types

- There are a range of tree/shrub habit and form types, including:

Columnar



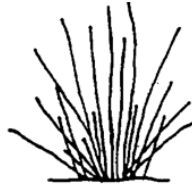
Fastigiate



Narrow dome



Upright, cane-like



Vase



Weeping or pendulous



Flowering plants

- Flowering plants are separated into two groups:

	Monocot	Dicot
Seed	Have only one seed leaf inside the seed coat	Have two seed leaves inside the seed coat
Germination and leaves	Produces a single leaf, which looks long and narrow, like the adult leaf	Produces two seed leaves which come in different shapes and sizes
Root pattern	Fibrous roots	Tap-root system
Flower	The parts are in threes	The parts are usually in fours or fives

- You should collect the following information about a plant to be able to identify/name it:

Site description	Plant description
• Location • Soil type • Drainage • Climate	• Height • Colours • Textures • Stem type • Seed type • Fruit • Growth form

Naming plants

- The rules or system of naming plants is known as nomenclature.
 - A number of plants may have the same common name, however each plant has a unique scientific name
- The scientific name of a plant consists of the following parts:

FAMILY NAME

Family name is written in capital letters.

The modern FAMILY NAME always ends in ACEAE

Genus name

Genus: A group of related plants.

Latin word written in italics, starts with capital letter.

species name

Species: One kind of plant within the genus

Latin word written in lower case and italics.

- Your ability to recognise plants will improve as you gain more experience.
 - However, there will be many occasions when you need to seek advice from your supervisor.
- You should seek help from your supervisor when:
 - You do not recognise the plant at all
 - You do not have information to help you recognise the plant
 - You are unable to find all the information you need
 - You want to clarify something about the plant

- The aim of collecting plant information is to store it in a plant reference collection.
- You should follow the sequenced steps below when creating a plant collection:
 1. Get approval
 2. Select equipment
 3. Collect specimen
 4. Press specimen
 5. Mount specimen
 6. Store specimen

When collecting plant samples, make sure you include leaves, flowers and fruits/seeds.

Try to get as much information about a plant as you can without harming it.

- After identifying a plant, you would record relevant information in the plant reference collection.
- Information to be recorded may include:
 - Family
 - Genus
 - Species
 - Common name
 - Growth habits and requirements
 - Dimensions
 - Foliage
 - Flower
 - Fruit
 - Handling requirements
 - Natural distribution
 - Soils
 - Natural vegetation
 - Landcare use
 - Propagation
 - Pests and diseases