Preparing to teach this sequence • Foundation • Finding features

**Year F**

# Science journals

Create a class science journal, either in hard-copy or digitally. You might:

* use/create a large scrap book or flip chart.
* use poster/butchers’ paper so learning can be displayed in sequence on the wall.
* create a digital journal using your platform/ technology of choice.
* any combination of the above.

Plan for students’ creation of an individual science journal, either in hard-copy or digitally. They might:

* use an exercise book, scrap book or flip chart to record their thinking and gather resource sheets together.
* use a folder to store and collate resource sheets, diagrams, photographs etc.
* use a digital folder to store work samples, images and videos.
* any combination of the above.

See [Using a science journal throughout inquiry](https://primaryconnections.org.au/resources-and-pedagogies/strategies/using-science-journal-throughout-inquiry) for more detailed information on the importance of science journals.

# Additional preparation

* Read through the teaching sequence.
* Prepare enlarged copies of **Resource sheets** as appropriate.
* Print, cut out and laminate the **Animal cards** from the **Animal cards Resource sheet**.
* Note any adaptations you would like to make to suit your school’s and students’ context.
* Determine and plan for the audience for students’ final presentation of the plant/animal model. You might choose to present to classmates, other classes, parents, display models in an appropriate location in the school, or prepare and publish a digital gallery of video and photos to a closed/private school platform.
* Consider setting up an area in the classroom where you can build a 'nature table' over the course of the sequence. This 'table' will be a place to collect specimens of plants and animals as appropriate, or images of plants and animals. It can be used to spark conversation and curiosity about plants and animals.

# Other considerations

## Allergies

Lessons 1-4 and Lesson 6 of this sequence involve students being in close contact with plants and the school grounds. There is a risk that students may have an allergic reaction to some plants, or the insects that are often found near plants (particularly bees), including a life-threatening anaphylactic reaction.

It is essential that you are aware of any allergies your students may have. Consult your school’s Health and Safety Policy for information on how to mitigate these risks in your context.

## Food allergies

Lesson 4 of this sequence involves students touching and potentially tasting plant-based foods.

There is a risk that students may have an allergic reaction to foods, particularly peanuts, tree nuts (almonds, brazil nuts, cashew nuts, hazelnuts, macadamia nuts, pecan nuts, pine nuts, pistachio nuts, walnuts etc.) and lupin beans, including a life-threatening anaphylactic reaction.

It is essential that you are aware of any allergies your students may have. Many schools have policies about specific foods being banned from school premises. Consult and follow your schools Health and Safety Policy for information on how to remove these risks in your context.

An alternative investigation is offered in Lesson 4 if the food-based investigation is not suitable for your students or context.

## Animal ethics

Lessons 5-7 of this sequence describe investigations of invertebrate animals. Each Australian state and territory has animal ethics requirements for school investigations involving vertebrate animals (those with a backbone such as birds or guinea pigs). You would need to comply with any requirements of the relevant Animal Welfare Act if you chose to investigate vertebrate animals, including a therapy dog.

Insects and crustaceans are invertebrate animals and are not covered by the Animal Welfare Act but still require care and consideration.

Each school and state might also have policies in place addressing animal welfare in classroom settings. Consult and follow the relevant policies.

## Lungworm risk mitigation

A variety of snails, slugs and planarians are suitable intermediate hosts of the rat lungworm, Angiostrongylus cantonensis. Human infection occurs following ingestion of raw snails, slugs or planarians, something young toddlers are particularly prone to do. Another possible source of human infection is through ingestion of improperly washed vegetables such as lettuce.

It is recommended that the following safety procedures be followed during this sequence:

* Wear gloves when handling any biological material.
* Always wash hands with soap and water after handling any biological material (particularly snails, slugs or their slime, and any vegetation such as vegetables or leaf litter), even after wearing gloves.
* When handling snails or slugs, keep hands away from the mouth, and clarify with students that they should never encourage, or dare anyone to eat raw snails or slugs.

## Providing parents with information and seeking permission

Consider sending home information notes, with permission forms attached, to inform parents about the nature of this teaching sequence, seeking up-to-date information about any allergies students may have, and seeking permission for students to take part.

## Making adaptions for safety reasons

Consider any changes you may need to make to ensure that all students can participate safely in the sequence. Some adaptions may include:

* avoiding any specific plants that have been identified as allergens for any student in your class.
* having emergency anaphylaxis medications, such as the EpiPen® or AnaPen®, on hand in the classroom for any potential emergency.
* allowing parents to be present for lessons to supervise students with known or potential allergies.

using artificial plants/flowers and food samples when required.

# Gather the resources for the sequence

|  |  |
| --- | --- |
| Resource | Lesson in which this resource is required |
|  | **Lesson 1** | **Lesson 2** | **Lesson 3** | **Lesson 4** | **Lesson 5** | **Lesson 6** | **Lesson 7** | **Lesson 8** |
| Class science journal (digital or hard-copy) | X | X | X | X | X | X | X | X |
| Optional: Individual science journal (digital or hard-copy) *per student* | X | X | X | X | X | X | X | X |
| Materials to create a word wall | X | X | X | X | X | X | X | X |
| Equipment to enable the viewing of online resources including images, videos and websites |  | X |  |  | X |  |  |  |
| 1 x empty box to use as a ‘mystery box’ | X |  |  |  |  |  | X |  |
| 10 x secret plant and animal items, such as: acorn, pinecone, banksia pod, orange, banana, lettuce leaf, garden leaf, stick, bark, sea shell, stuffed animal toy etc. for the mystery box | X |  |  |  |  |  |  |  |
| 2 x opaque containers (such as margarine container) with holes in the lids to use as ‘scent tubs’ | X |  |  |  |  |  |  |  |
| Masking tape | X |  |  |  |  |  |  |  |
| 4 x cotton balls | X |  |  |  |  |  |  |  |
| 2 x different, plant based 'strong scents' to soak the cotton balls in, such as eucalyptus oil and vanilla essence | X |  |  |  |  |  |  |  |
| Water |  | X |  |  |  |  |  |  |
| A large seed (red kidney bean seed or similar), pre-soaked overnight *per student* |  | X |  |  |  |  |  |  |
| Piece of paper towel *per student* |  | X |  |  |  |  |  |  |
| Resealable plastic bag *per student* |  | X |  |  |  |  |  |  |
| Glue, stapler or push pins to attach resealable plastic bags to wall for display |  | X |  |  |  |  |  |  |
| Permanent marker |  | X |  |  |  |  |  |  |
| Leaf samples collected outside the school grounds |  | X |  |  |  |  |  |  |
| Crayons |  | X |  |  |  |  |  |  |
| A4 paper *per student* |  | X (x2) | X |  |  |  |  |  |
| Optional: Tongs/tweezers/tea bag squeezers  |  | X | X |  |  |  |  |  |
| Optional: A pre-collected sample of a flower, if you do not believe students will be able to collect one from the school grounds |  |  | X |  |  |  |  |  |
| Sticky tape |  |  | X |  |  |  |  |  |
| Optional: If completing ‘Sorting salad’ investigation* A variety of edible pant parts for students to taste and sort into categories, including:
	+ leaves: spinach, lettuce, parsley etc.
	+ fruit: apple, tomato, orange, capsicum etc.
	+ stems: celery, spring onion, chives etc.
	+ roots: carrots, radish, turnip, beetroot. Note potatoes are not a root, but a tuber.
* Plates/bowls for sorting plant parts
* Large labels: leaves, fruit, stem, roots
* Access to water, soap and/or hand sanitiser for hygiene purposes
 |  |  |  | X |  |  |  |  |
| Optional: If completing ‘Investigating roots’ investigation* Plants with roots attached, for example, hydroponic lettuce, bunch of carrots/radish/beetroot with the leaves still attached, weeds carefully pulled from the garden *per group*
* a viewing device *per group*
	+ No tech option: Magnifying glasses (several to share)
	+ Low tech option: iPads or digital cameras (several to share)
	+ High tech option: Microscope
 |  |  |  | X |  |  |  |  |
| Images of art created by Aboriginal and Torres Strait Islander Peoples\*See materials list in lesson for suggested sources |  |  |  |  | X |  |  |  |
| Australian coins which depict native animals  |  |  |  |  | X |  |  |  |
| Optional: glass if undertaking the no-tech critter expedition |  |  |  |  |  | X |  |  |
| Videos of Aboriginal and Torres Strait Islander Peoples traditional dances depicting animal movement & features\*See materials list in lesson for suggested sources |  |  |  |  |  | X |  |  |
| Videos showing animal movement\*See materials list in lesson for suggested sources |  |  |  |  |  | X |  |  |
| Digital devices for taking videos/photographs |  |  |  |  |  | X |  |  |
| Parent/older student helpers for the critter expedition |  |  |  |  |  | X |  |  |
| Optional: If completing ‘Animal body coverings’ investigation* At least two samples to simulate animal body coverings, such as artificial fur and a ball of wool
 |  |  |  |  |  |  | X |  |
| Optional: An earthworm |  |  |  |  |  |  | X |  |
| Optional: Organise a therapy dog to visit the class if appropriate |  |  |  |  |  |  | X |  |
| Optional: If completing ‘How animals eat’ investigation* Videos depicting birds eating

\*See materials list in lesson for suggested sourcesCraft feather *per student** [Top 40 Bird Songs](https://www.birdsinbackyards.net/birds/featured/Top-40-Bird-Songs)
 |  |  |  |  |  |  | X |  |
| Model making materials required for *each student** No Tech option: items to make a physical model, such as:
	+ boxes
	+ craft supplies
	+ playdough, air dry clay etc.
	+ Lego etc.
* Low Tech option: technology, such as iPads or laptops, with required programs installed such as drawing apps to make a digital/virtual model.
 |  |  |  |  |  |  |  | X |
| Student resource sheets**Demonstration copies** for whole class discussion and representation are required for each resource sheet in this sequence. **Individual copies for each student/group** are also used where appropriate. These instances are indicated in the materials list for each individual lesson and are marked with an \* below.Teachers are best placed to make decisions about any modifications resource sheet may require to best suit the needs of their students. |
|  | **Lesson 1** | **Lesson 2** | **Lesson 3** | **Lesson 4** | **Lesson 5** | **Lesson 6** | **Lesson 7** | **Lesson 8** |
| My five senses Resource sheet  | X |  |  |  |  |  |  |  |
| An unusual creature Resource sheet | X |  |  |  |  |  |  |  |
| Museum models Resource sheet | X |  |  |  |  |  |  |  |
| Sunflower Resource sheet |  | X |  |  |  |  |  |  |
| What parts of a plant can I eat? Resource sheet |  |  |  | X |  |  |  |  |
| Parts of a plant Resource sheet\* |  |  |  | X |  |  |  |  |
| Who am I? Resource sheet\* |  |  |  |  | X |  |  |  |
| Animal cards Resource sheet, with individual cards cut out and laminated to support reuse |  |  |  |  | X | X | X | X |
| Animal movement Resource sheet |  |  |  |  |  | X |  |  |
| Code for caring and hygiene Resource sheet |  |  |  |  |  | X |  |  |
| Optional: If completing ‘How animals eat’ investigationBird beaks Resource sheet |  |  |  |  |  |  | X |  |
| My scientific model Resource sheet\* |  |  |  |  |  |  |  | X |