Preparing to teach this sequence • Year 2 •

**Year 2**

Take, shape and create

# 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.
* Note any adaptations you would like to make to suit your school’s and students’ context.
* Begin collecting a variety of objects made from materials such as:
	+ paper and cardboard
		- boxes and packaging etc.
	+ wood
		- pop-sticks
		- MAB
		- skewers
	+ glass
		- bottles
		- kitchenware
	+ metal
		- cans
		- scissors
		- paper-clips
		- metal spoons
	+ fibres/fabric
		- cleaning cloths
		- clothing items
		- wool
		- cotton balls
	+ rubber
		- rubber bands
		- rubber gloves
		- hi-bounce balls
		- balloons
	+ plastic
		- plastic spoons
		- containers
		- packaging
	+ rock
		- marbles
		- some pavers etc.
* You might ask students to bring in recyclable materials from home. These materials will be used for examining and testing, and for making sculptures at the end of the sequence.
* Decide if you are going to use labelled buckets to store different materials during the sequence, and organise these if you will be doing so. Labelled buckets/containers can be used to collect and store resources used during the unit that are made of different materials, for example wood, plastic, fabric/fibres, metal etc. At the end of each investigation, students return the items they have used to its container. This reinforces the ideas that, although the items might have been physically changed, materially it is still the same.
* Decide which ‘Experience and empathise’ task you will undertake in Lesson 1, or you might like to complete both tasks.
* Consider if you will give directions on the subject matter for the sculptures/models students will design/create in the Act phase, such as ‘modes of transport’, or ‘our local community’, etc.
* It may be more appropriate for your students to design a different artefact as part of the Act phase. You might consider the time of year, any upcoming school or local events, the needs of your students, their interests, and availability of resources. If appropriate, you might like to involve your students in the decision-making process. For example the class could make Mother’s/Father’s Day gifts, decorations for religious or cultural events, a vessel to carry a specific item, or a shelter for an animal or person. If making these changes, consider what changes you might make to the Launch and Act phases to link the content (physical changes to materials) to this new context, and if you will need to add or modify the investigations that appear in the Inquire phase.
* Consider if the gallery of sculptures provided in Lesson 1 is appropriate for the artefact your students will design in the Act phase. If not, source new images that are more appropriate.
* Decide how your students will share their sculptures/models. Will you host a class or community art show, share them in digital form via the school newsletter or via a digital platform etc.
* Consider if you would prefer to make homemade playdough for lesson 6. Determine the timescale you will use for the investigation, and ensure balls of playdough are left exposed to air for the appropriate timeframe prior to the lesson.

## Recipe for homemade playdough

2 tbs cooking oil
4 tbs cream of tartar
2 cups plain flour
Food colouring
2 cups cold water
**(Stove top)** Mix all ingredients in a saucepan and stir continuously over medium heat for 3-5 minutes, until the mixture is combined and not sticky. Allow to cool. Knead until smooth.
**(Microwave)** Mix all ingredients in a large microwave-safe bowl. Microwave for 2 minutes. Stir well. Microwave for 1 minute 30 seconds. Stir well. Microwave for 30 seconds. The mixture should be combined and not sticky. Allow to cool. Knead until smooth.
**Note:** Consider if you would like students to make their own playdough. Take care to ensure it has cooled down sufficiently before allowing students to knead it.

# 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** |
| Class science journal (digital or hard-copy) | X | X | X | X | X | X | X |
| Optional: Individual science journal (digital or hard-copy) *per student* | X | X | X | X | X | X | X |
| Materials to create a word wall | X | X | X | X | X | X | X |
| A4 paper  | X |  |  |  | X |  |  |
| Selection of everyday items made of different materials such as plastic, fabric/fibres, metal, wood, etc. (See notes below) | X | X | X |  |  |  |  |
| A variety of plastic items such as cling wrap, sandwich bags/wrappers, drink and takeaway containers and carry tubs and baskets |  |  | X |  |  |  |  |
| 3 x pieces of wood *per group* 1 x thin, flexible wood such as a think stick or skewer1 x medium thick wood such as a thicker stick or pop-stick1 x thick piece of wood such as a branch or ruler |  |  |  | X |  |  |  |
| 1 x pair of standard classroom scissors *per group*  |  |  |  | X | X |  |  |
| 1 x piece of sandpaper *per group*  |  |  |  | X |  |  |  |
| Corrugated cardboard |  |  |  |  | X |  |  |
| Small objects to act as weights *per group* such as paper clips, pencils, MAB cubes etc |  |  |  |  | X |  |  |
| 2 x stacks of items that are the same height *per group* such as books, tissue boxes, MAB flats etc. |  |  |  |  | X |  |  |
| Playdough, enough to make 9 x small balls *per group*3 x balls fresh from container3 x balls left in air for 3 hours or days3 x balls left in air for 3 days or weeks |  |  |  |  |  | X |  |
| Various classroom art and craft supplies |  |  |  |  |  |  | X |
| Student resource sheets**Demonstration copies** for whole class discussion and representation, as well as **Individual copies for each student/group** are required for each resource sheet in this sequence. Whilst students often work collaboratively in teams to plan and carry out investigations, you might prefer for each student to create their own record to assist in the assessment of their Science understanding and Science inquiry. Teachers are best placed to make this decision based on the needs of their students, as well as any decisions about any potential modifications a resource sheet may require. |
| Gallery of sculptures resource sheet | X |  |  |  |  |  | X |
| What changes? resource sheet “” |  | X |  |  |  |  |  |
| Playing with plastic resource sheet “” |  |  | X |  |  |  |  |
| Changing wood resource sheet “” |  |  |  | X |  |  |  |
| Powerful paper resource sheet “” |  |  |  |  | X |  |  |
| Easy or hard? resource sheet “” |  |  |  |  |  | X |  |