Preparing to teach this sequence – Year 5 – Communication matters

**Year 5**

# 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/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 schools’ and students’ context.
* Consider the audience you select for students to communicate with.
  + - * It may not be appropriate to select a younger year level, as developmentally the concepts covered are not appropriate. It also diminishes the repeatability of the sequence, as students in younger year levels will have already ‘learned’ (albeit in a non-experiential way) about the concepts.
      * Presenting to an older audience, for example, Year 6, will allow the Year 5 students to not only receive feedback on their science communication skills, but also on the accuracy of their information given that the Year 6 students would have learnt about the concepts the previous year.
      * You might also consider asking students to communicate with a parent audience as part of an ‘open-day’ or ‘science-fair’ type experience.
* Consider if you might integrate the sequence with learning in English regarding composing texts.
* Prepare samples of solids and liquids that students will examine throughout the sequence. You might present these to students in small transparent containers, including using an ‘empty’, sealed container to represent gas (air).  
  Some suggestions of samples you might like to prepare are:
  + - * solids that are easily identifiable: rocks/stones, wood, plastic, and metal etc.
      * solids that are not as easily identifiable: playdough (a soft solid), paper (a flexible solid), elastic bands (a stretchy solid), or a sponge (a solid interspersed with pockets of gas/air).
      * pourable solids: washing powder, sugar, salt, flour etc.
      * liquids: water, oil, honey, soft-drink etc.

# Materials required for this teaching 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 |
| 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 |
| *Optional:*  A large clear container/ tray containing cornflour and water mixed at a ratio of approximately 2:1 (twice as much cornflour to water) | X |  |  |  |  |  | X |  |
| Various texts that explore science concepts, at a level suitable for your students. See:  [Curious](https://www.science.org.au/curious/videos) by the Australian Academy of Science  [Behind The News](https://www.abc.net.au/btn) by the ABC  [Science](https://www.abc.net.au/education/subjects-and-topics/science)by ABC Education | X |  |  |  |  |  |  | X |
| 1 x 40 g cornflour *per group* | X |  |  |  |  |  |  |  |
| 1 x 20mls water *per group* | X |  |  |  |  |  |  |  |
| 1 x small bowl *per group* | X |  |  |  |  |  |  |  |
| 1 x spoon for mixing *per group* | X |  |  |  |  |  |  |  |
| 8 x samples of solids, liquids and a gas, stored in small, transparent containers *per group* (See the final dot point in [*Additional preparation*](#_Additional_preparation) above for more details about appropriate materials.) | X |  |  |  |  |  | X |  |
| Large quantity of a pourable solid (washing powder, flour, sugar etc.) |  | X |  |  |  |  |  |  |
| A volume of water large enough that all students can observe its behaviour when poured between containers during a demonstration |  | X |  |  |  |  |  |  |
| 4 x large clear plastic containers of the same size, preferably marked with standard measurements |  | X |  |  |  |  |  |  |
| Minimum 4 x samples of liquids stored in small, transparent containers *per group* (See the final dot point in [*Additional preparation*](#_Additional_preparation) above for more details about appropriate materials.) |  | X | X (1 x sample required only) |  |  |  | X |  |
| Minimum 2 x samples of pourable solids stored in small, transparent containers *per group* (See the final dot point in [*Additional preparation*](#_Additional_preparation) above for more details about appropriate materials.) |  | X (1 sample required only) | X |  |  |  | X |  |
| Clear containers to pour samples between (one container is sufficient, provided it is rinsed and dried between uses) |  | X |  |  |  |  |  |  |
| Minimum 4 x samples of solids *per group*  (See the final dot point in [*Additional preparation*](#_Additional_preparation) above for more details about appropriate materials.) |  |  | X |  |  |  | X |  |
| Minimum 1 x balloon |  |  |  | x |  |  |  |  |
| 1 x small glass |  |  |  | X |  |  |  |  |
| 1 x long match or lighter |  |  |  | X |  |  |  |  |
| 1 x small jug |  |  |  | X |  |  |  |  |
| 1 x tsp bicarbonate of soda |  |  |  | X |  |  |  |  |
| 50 ml vinegar |  |  |  | X |  |  |  |  |
| 1 x deep container *per group* |  |  |  | X |  |  |  |  |
| Minimum 2 x tissues *per group* |  |  |  | X |  |  |  |  |
| A quantity of water to fill the deep container *per group* |  |  |  | X |  |  |  |  |
| 1 x transparent plastic cup |  |  |  | X |  |  |  |  |
| 2 x transparent plastic bottles the same size |  |  |  |  | X |  |  |  |
| 2 x balloons the same size/thickness, to be fitted over the opening of the bottles |  |  |  |  | X |  |  |  |
| 2 x containers deep enough to submerge the bottles |  |  |  |  | X |  |  |  |
| Warm water to fill one of these container\* |  |  |  |  | X |  |  |  |
| Ice and tap water to fill the other container\* |  |  |  |  | X |  |  |  |
| \*Alternatively, you might have communal containers filled with hot and iced water for multiple groups to use. | | | | | | | | |
| A long rope or similar, used to simulate the shape of a container to hold liquids and gases |  |  |  |  |  | X |  |  |
| A variety of materials to support the creation of multi-modal texts including access to a range of digital tools |  |  |  |  |  |  |  | X |
| Student resource sheets Both **demonstration copies** for whole class reference, and **individual copies for each student/group** are required.  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. | | | | | | | | |
| Solid, liquid or gas? Resource sheet | X |  |  |  |  |  |  |  |
| Liquid observations Resource sheet |  | X |  |  |  |  |  |  |
| Solid science Resource sheet |  |  | X |  |  |  |  |  |
| Tissues in a cup Resource sheet |  |  |  | X |  |  |  |  |
| Air temperature investigation planner Resource sheet |  |  |  |  | X |  |  |  |
| Optional: Saved or printed images from the Particle arrangement in solids, liquids and gases Resource sheet, to use for student prompting if required |  |  |  |  |  | X |  |  |