Preparing to teach this sequence – Year 6 – Space innovators

**Year 6**

# 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 school’s and students’ context.
* Prepare demonstration copies of Resource sheets as required.
* Collect the resources required for the sequence.

# 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 or glossary | X | X | X | X | X | X | X | X |
| Materials to create a TWLH chart. These might include sticky notes, slips of paper, a display space | X | X | X | X | X | X | X | X |
| Equipment to access the internet to view suggested video clips and websites | X | X | X | X | X | X | X | X |
| A collection of spherical objects of different sizes, such as basketballs, soccer/netballs, tennis balls, ping pong balls, marbles etc. Each group of students will select three objects to represent the Sun, Earth and Moon |  | X |  |  |  |  |  |  |
| 1 x magnifying glass *per group* |  | X |  |  |  |  |  |  |
| 1 x piece of hard, clear plastic—the lid of a take-away container works well *per group* |  | X |  |  |  |  |  |  |
| Water *per group* |  | X |  |  |  |  |  |  |
| 2 x paper plates *per student* |  | X |  |  |  |  |  |  |
| 3 x split pins *per student* |  | X |  |  |  |  |  |  |
| Scissors *per student* |  | X |  |  |  |  |  |  |
| Coloured textas or pencils *per student* |  | X |  |  |  |  |  |  |
| For the Sun/shadow stick observation (note that this is best completed on a sunny day):   * Large sheet of white paper * A stick/skewer to cast a shadow * A compass (a compass on a phone/tablet is fine) * Markers |  |  | X |  |  |  |  |  |
| 1 x strong lamp to model the Sun’s light *for the whole class* 1 x strong lamp, or a strong torch *per group* |  |  | X | X |  |  |  |  |
| A ball to represent the Earth  1 *per group* |  |  | X | X |  |  |  |  |
| Optional: A wooden skewer |  |  |  | X |  |  |  |  |
| Optional: a Styrofoam ball |  |  |  | X |  |  |  |  |
| 2 x balls, one large and one small |  |  |  |  |  | X |  |  |
| Optional *per group*: Objects to represent relative sizes of planets, for example:   * a poppy seed (Mercury) * 3 x peppercorns (Earth, Mars and Venus) * table tennis ball (Jupiter) * large marble (Saturn) * 2 x large peas (Uranus and Neptune) |  |  |  |  |  | X |  |  |
| Optional: 100m rope |  |  |  |  |  | X |  |  |
| Optional: Measurement tools to measure up to 100m |  |  |  |  |  | X |  |  |
| Various materials to design and construct a command capsule and parachute prototype for testing. For example: scissors, glue, sticky tape, blu-tac, string, cardboard, sheets of plastic, paper, foil, foam, felt etc. *per group* |  |  |  |  |  |  | X |  |
| Optional: Various materials to build prototypes of their designs. For example: scissors, glue, sticky tape, blu-tac, string, cardboard, sheets of plastic, paper, foil, foam, felt etc. *per student* |  |  |  |  |  |  |  | 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.  Instances where **demonstration** or **individual/group** copies ONLY are required are noted in the list below, as well as any resource sheets that are **optional**.  Teachers are best placed to make decisions about any modifications resource sheet may require to best suit the needs of their students. | | | | | | | | |
| In perspective Resource sheet **Demonstration only** | X |  |  |  |  |  |  |  |
| But it looks flat! Resource sheet **Demonstration only** | X |  |  |  |  |  |  |  |
| Claims about the sky Resource sheet **Demonstration only** | X |  |  |  |  |  |  |  |
| View finder Resource sheet **Demonstration only** |  | X |  |  |  |  |  |  |
| Investigating claims Resource sheet **Demonstration and per group** |  | X |  |  |  |  |  |  |
| A scientific history of the heavens Resource sheet **Demonstration**  Note: You might also have copies for each team or student. See Lesson 2. |  | X |  |  |  |  |  |  |
| Telescopes Resource sheet **Demonstration only** |  | X |  |  |  |  |  |  |
| Magnifying magic Resource sheet |  | X |  |  |  |  |  |  |
| How does a lens work? Resource sheet **Demonstration only** |  | X |  |  |  |  |  |  |
| **Map of Australia Resource sheet**.  Resize the map appropriately for the ball you have selected to represent Earth in Lesson 3. Then print and cut out the map. You will also need 1 map *per group* |  |  | X | X |  |  |  |  |
| Sunrise sunset Resource sheet |  |  | X |  |  |  |  |  |
| Optional: Earth from space Resource sheet **Demonstration only** |  |  | X |  |  |  |  |  |
| Moon gazing Resource sheet **Demonstration only** |  |  |  |  | X |  |  |  |
| Moon monitoring Resource sheet |  |  |  |  | X |  |  |  |
| What’s in a rocket? Resource sheet **Demonstration only** |  |  |  |  | X |  |  |  |
| Mission to the moon Resource sheet  Note: each group requires 1 of the 3 parts of this resource sheet. See Lesson 5. |  |  |  |  | X |  |  |  |
| Solar System information organiser Resource sheet |  |  |  |  |  | X |  |  |
| Command module landing investigation planner Resource sheet |  |  |  |  |  |  | X |  |
| Variables grid Resource sheet **Demonstration only** |  |  |  |  |  |  | X |  |
| Invention convention Resource sheet **Demonstration only** |  |  |  |  |  |  |  | X |