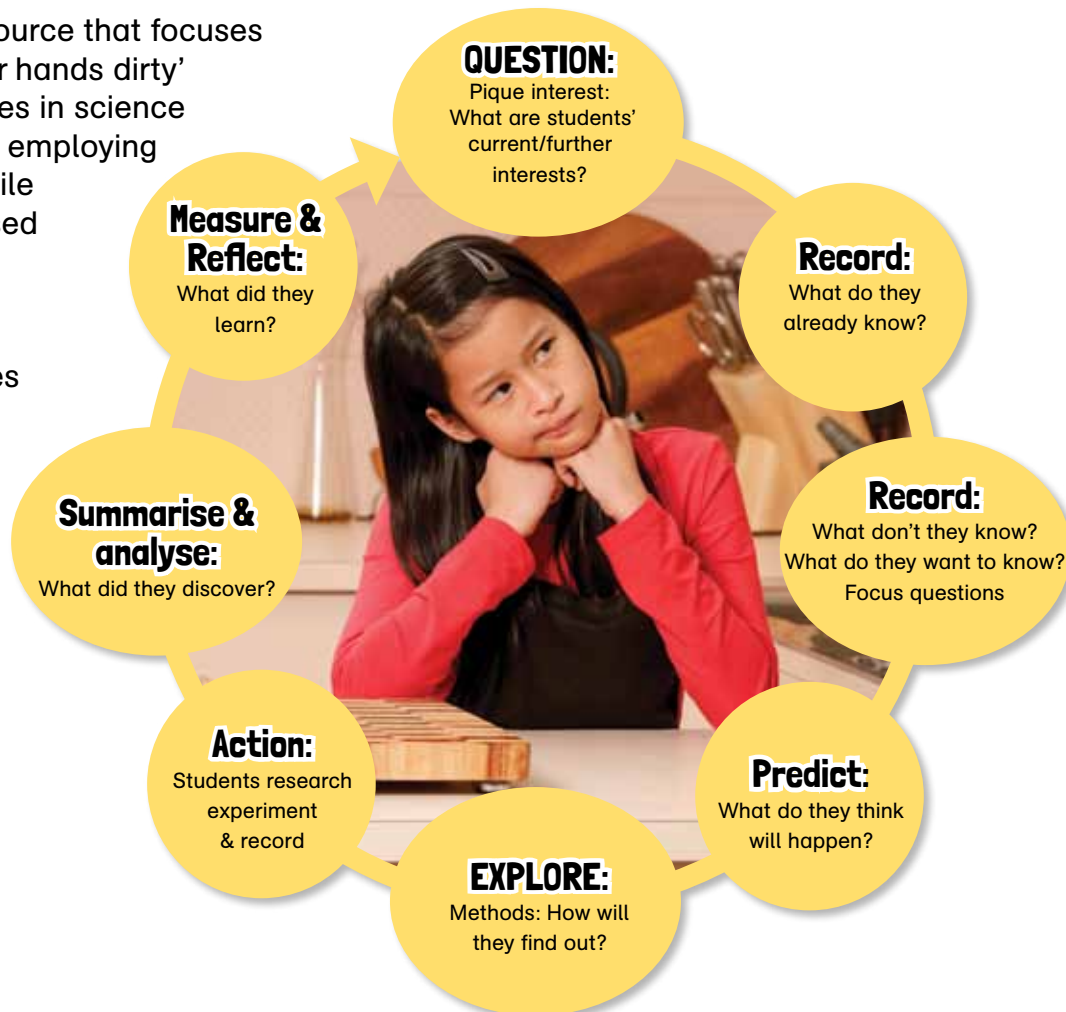


WINGS Science is a resource that focuses on students 'getting their hands dirty' with practical experiences in science through exploring ideas, employing scientific procedures while undertaking enquiry-based content and activities.

The project-based methodology encourages student to:

- Question
- Explore
- Discover and
- Reflect



Teacher & Student Recording, Reporting, Observation and Assessment

Science in the Classroom

RECORDING & REPORTING FORMATS

TYPE	MATERIALS	PURPOSES	EXAMPLES
Observation of data, images, specimens, etc.	Clipboard, pencil, paper	Record observations of phenomena used to categorize objects	Diagrams of objects, plants, fungi, insects, etc.
Recording sounds, written reports	Digital audio recorder, Project note book	For recording: • verbal observations for later analysis • notes of events for digital reports or reference • environmental notes • interviewing experts or witnesses on topics	• record of an experience • field notes (written or digital) • sketches, diagrams, word, notes, etc. • questions and answers about an experiment – what worked and what did not
Written reports	Project note book	Written record of: • science studies • data gathered over a period • field notes • portfolio record for assessment and evaluation	Diagrams and notes on daily weather records with comment on trends
Interviews	Project note book, Audio recorder, Camcorder	Audio record (written or digital) of: • evidence from experts or witnesses • capturing and storing audio and video data before report writing, for use during report writing and/or delivery of reports	Report of student questions and answers by staff or a local natural history resource or zoo
Maps, plans and site layouts	Grid paper, A3 paper sheets	To develop skills associated with: • understanding about relationships between elements within an environment • environmental applications with mathematics, language, history, geography and social systems	Recording movements (drawing, mapping, etc.) of local birds or other wildlife within the immediate local environment Plotting local weather, flows and effects during heavy rain Mapping the range of movement of small water creatures in ponds

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Science in the Classroom

INDIVIDUAL STUDENT OBSERVATION RECORD

STUDENT: _____ DATE: _____

TOPIC: _____ WORKSHEET REF: _____

Stage	Criteria and comments	Degree of success (✓)				
		A 1 Excellent	B 2 Good	C 3 Satisfactory	D 4 Fair	E 5 Minimal
Initial topic interest	Shows interest and curiosity in science.					
Prior knowledge	Has some prior knowledge on the topic, Expresses personal questions about the topic.					
Questioning	Offers logical predictions for outcomes.					
Predicting outcome	Collaborates with others to determine method.					
Method	Shows understanding of method.					
Implementation	Participates in carrying out method.					
Summary	Participates in measuring and recording.					
Analysis	Can summarise results of experiment.					
Reflection	Can express meaning of results of experiment.					
Reflection	Can express personal learning from experiment.					

SUMMARY OF LEARNING:

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Science in the Classroom

Student group/self-assessment: planning & understanding

Colour the stars to rate your science skills.

Name: _____ Date: _____

Project: _____

	Skill level 1	Skill level 2	Skill level 3	Skill level 4
Planning	 Beginner	 Getting Better	 Can-do	 Expert
Recording	Do not get it yet ☆	Got some of it ☆☆	Got all of it ☆☆☆	Got all of it & Explained to others ☆☆☆☆
Reporting	No records Did not share ☆	Some pictures ☆☆	Some notes with pictures ☆☆☆	Good notes Good pictures Shared ideas ☆☆☆☆
Planning & Reporting	Did not plan ☆☆	Talked about plans ☆☆☆	Planned steps Did the steps ☆☆☆☆	Planned steps Did all steps Talked about the next step ☆☆☆☆
Using Tools	No tools yet ☆	Some tools Some data ☆☆	Right tools Good data ☆☆☆	Right tools Good data Can show others ☆☆☆☆

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"I hear and I forget. I see and I remember. I do and I understand."
Confucius, c551-478 BC, philosopher, teacher

WINGS Science Notes

WINGS Science notes provide teachers and students with an engaging and practical look at science. Note how the student worksheets show a progressive increase in complexity for one topic and support differentiated instruction.

Earth & Space Science: change over time **3.5.0a**
Predict, observe, record and report

Change over time (see A Soil Experiment, The Pinnacles)

Setting up your experiment:
Supervision may be required for Foundation – Year 1 levels.

You will need:

- sand
- watering can
- a tray
- a sponge
- a brick or anything to prop up the tray

For higher year levels:

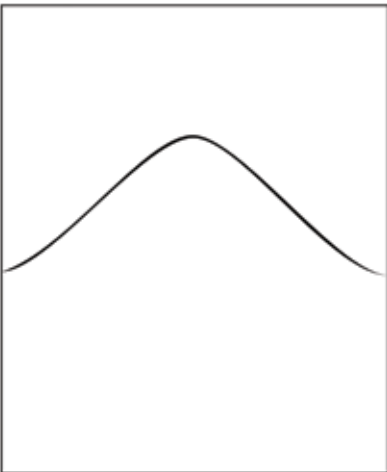
- you will need rocks/gravel
- you will need to pre-pare grown grass in a tray

Setting up your experiment:
Can be done as a whole class or small groups

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Earth & Space Science: change over time **3.5.1**

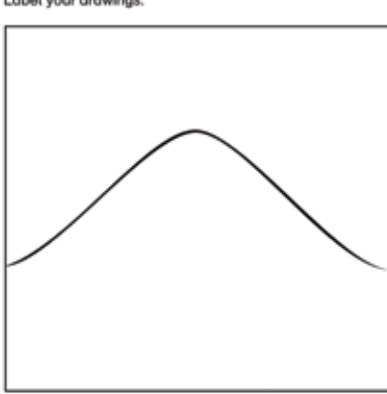
This hill needs something to stop rain from washing away the soil. Draw what you could do.



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Earth & Space Science: change over time **3.5.2**

This hill needs something to stop rain from washing away the soil. Draw what you could do to save it! Label your drawings.

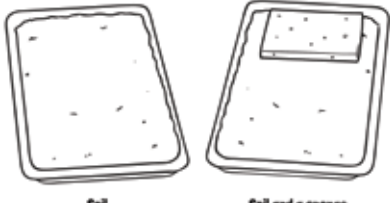


trees grass flowers
rocks bushes walls

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Earth & Space Science: change over time **3.5.3**

Set up 2 trays, 1 with a sponge, the other without. Water them gently. Which one is better at stopping the water from washing away the soil?



Soil **Soil and a sponge**

Fill in the spaces:

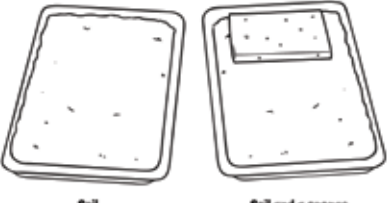
Tray ____ did a better job of saving the soil.

This is because the ____ soaked up the water.

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Earth & Space Science: change over time **3.5.4**

Set up 2 trays, 1 with a sponge, the other without. Water them gently. Which one is better at stopping the water from washing away the loose soil?



Soil **Soil and a sponge**

Fill in the spaces:

Tray ____ did a better job of saving the soil.


This is because the ____ soaked up the water.

What else could you use to stop the water washing away the soil?

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Earth & Space Science: change over time **3.5.5**

Set up 3 trays with different materials to stop the water from washing away the soil. Water them gently. Which one do you think will do best?



Soil **Rocks** **Grass**

I think tray number ____ will be best at holding onto the soil. Now test to see if you are correct by pouring equal amounts of water into each tray. How much soil is washed away? Document your results.

Which one was the worst at saving soil? _____

What do you think happened? _____

Which one was the best at saving soil? _____

What do you think happened? _____

What else could you use to save the soil? _____

Test your idea. Did it work? _____

What happened? _____

Final Question:
If a hillside is cleared due to natural or human activity, how can we make sure the soil stays where it is?

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