





Stage 2

Beneath Our Feet – Soil Study



**Updated 2018 to reflect new K-6 Science and Technology Syllabus outcomes

<p>EN2-8B identifies and compares different kinds of texts when reading and viewing and shows an understanding of purpose, audience and subject matter</p> <ul style="list-style-type: none"> • <i>identify the audience and purpose of imaginative, informative and persuasive texts</i>  • <i>understand how texts vary in complexity and technicality depending on the approach to the topic, the purpose and the intended audience</i> • <i>identify & interpret the different forms of visual information, including maps, tables, charts, diagrams, animations, images</i> 	✓	✓	✓	✓	✓	✓	✓	✓
<p>EN2-9B uses effective and accurate sentence structure, grammatical features, punctuation conventions and vocabulary relevant to the type of text when responding to and composing texts</p> <ul style="list-style-type: none"> • <i>incorporate new vocabulary from a range of sources into students' own texts including vocabulary encountered research</i> 	✓	✓	✓	✓	✓	✓	✓	✓
<p>EN2-10C thinks imaginatively, creatively and interpretively about information, ideas and texts when responding to and composing texts</p> <ul style="list-style-type: none"> • <i>respond to texts by identifying and discussing aspects of texts that relate to their own experience</i> • <i>use visual representations, including those digitally produced, to represent ideas, experience and information for different purposes and audiences</i>  	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
<p>EN2-11D responds to and composes a range of texts that express viewpoints of the world similar to and different from their own</p> <ul style="list-style-type: none"> • <i>respond to short films, documentaries and multimedia texts that express familiar and new aspects of the broader world</i>  	✓	✓				✓		
<p>EN2-12E recognises and uses an increasing range of strategies to reflect on their own and others' learning</p> <ul style="list-style-type: none"> • <i>discuss the roles and responsibilities when working as a member of a group and understand the benefits of working collaboratively with peers to achieve a goal</i>  		✓		✓	✓	✓		





Beneath Our Feet – Stage 2

BIG IDEAS:

- Landscapes have changed over time
- Landscape changes such as weathering and erosion, can be attributed to natural causes and man-made influences
- Geologists look at the processes that form landscapes and processes which destroy terrain
- Soil is made up of an extensive variety of substances, minerals and rocks.
- There are three main types of rocks. Each of these types of rocks formed in different ways

Cross Curricular Outcomes – MATHEMATICS

MA2-2WM selects and uses appropriate mental or written strategies, or technology, to solve problems
 MA2-3WM checks the accuracy of a statement and explains the reasoning used
 MA2-18SP selects appropriate methods to collect data, and constructs, compares, interprets and evaluates data displays, including tables, picture graphs and column graphs

- Identify questions or issues for categorical variables; identify data sources and plan methods of data collection and recording
- recognise that data can be collected either by the user or by others
- identify possible sources of data collected by others, eg newspapers, government data-collection agencies, sporting agencies, environmental groups 
- pose questions about a matter of interest to obtain information that can be recorded in categories
- describe and interpret information presented in simple tables, column graphs and picture graphs 
- make conclusions about data presented in different data displays, eg 'Football is the most popular sport for students in Year 3 at our school' (Communicating, Reasoning) 
- identify and discuss misleading representations of data (Communicating, Reasoning) 

8. Traditional Indigenous use of rocks and soil							
7. Rock Identification and description						✓	✓
6. Erosion experiments						✓	✓
5. Soil testing						✓	✓
4. Soil horizons						✓	✓
3. Historical soil test sites /grass trials						✓	✓
2. Who wants to be a Millionaire?							
1. Introduction – Soil conservation at the Wagga Research Station	✓	✓					

ST-2-10ES-S investigates regular changes caused by interactions between the Earth and the Sun, and changes to the Earth's surface

- *investigate why the Earth's surface changes over time as a result of natural processes and human activity, for example:*
 - *characteristics of soils*
 - *identify evidence of natural changes in landforms, rocks or fossils*
- *identify that scientific knowledge helps people understand the effect of their actions, for example:*
 - *investigate how erosion is caused by human activity, eg walking on bush trails*
 - *investigate how erosion can be minimised, eg constructing boardwalks*

✓			✓			✓		
✓			✓			✓		
✓			✓			✓		
✓			✓			✓		





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Cross-Curricular Outcomes – Geography

GE 2-1 examines features and characteristics of places and environments
 GE2-2 describes the ways people, places and environments interact
 GE2-3 examines differing perceptions about the management of places and environments
 GE2-4 acquires and communicates geographical information using geographical tools for inquiry

- investigate Australia's major natural and human features for example:
 - description of natural features of Australia eg deserts, rivers, mountains **STVR**
 - identification of Countries/Places of Aboriginal and Torres Strait Islander Peoples **M** 
- investigate how the protection of places is influenced by people's perception of places, for example:
 - description of how and why people perceive places differently 
 - discussion of how people's perceptions influence the protection of places in Australia eg sacred sites, national parks, world heritage sites 
- investigate the importance of natural vegetation and natural resources to the environment, animals and people, for example:
 - explanation of the importance of natural vegetation to animals and the functioning of the environment eg provision of habitats, production of oxygen **F** 
- discussion of the importance of natural vegetation and natural resources to people eg provision of food, medicine, fuel, timbers, fibres, metals **F** 
- investigate the ways people, including Aboriginal and Torres Strait Islander Peoples, value environments, for example:
 - discussion of why people value environments differently eg cultural, agricultural, commercial, recreational values
 - description of how custodial responsibility for Country/Place influences Aboriginal and Torres Strait Islander Peoples' views of the environment  
- investigate sustainable practices that protect environments, including those of Aboriginal and Torres Strait Islander Peoples, for example:

8. Traditional Indigenous use of rocks and soil	7. Rock identification and description	6. Erosion experiments	5. Soil testing	4. Soil horizons	3. Historical soil test sites /grass trials	2. Who wants to be a Millionaire?	1. Introduction – Soil conservation at the Wagga Research Station
✓ ✓	✓ ✓	✓	✓	✓	✓	✓	✓

<p>-examination of how environments can be used sustainably eg sustainable agricultural, commercial and recreational practices ✦</p> <p>-examination of how the practices of Aboriginal and Torres Strait Islander Peoples support the sustainable use of environments eg use of resources ✦✦✦</p>	✓							✓
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Beneath Our Feet – Stage 2								
<p>BIG IDEAS:</p> <ul style="list-style-type: none"> • Landscapes have changed over time • Landscape changes such as weathering and erosion, can be attributed to natural causes and man-made influences • Geologists look at the processes that form landscapes and processes which destroy terrain • Soil is made up of an extensive variety of substances, minerals and rocks. • There are three main types of rocks. Each of these types of rocks formed in different ways. 	1. Introduction – Soil conservation at the Wagga Research Station	2. Who wants to be a Millionaire?	3. Historical soil test sites /grass trials	4. Soil horizons	5. Soil testing	6. Erosion experiments	7. Rock identification and description	8. Traditional Indigenous use of rocks and soil
Cross Curricular Outcomes – History								
<p>HT2-2 describes and explains how significant individuals, groups and events contributed to changes in the local community over time</p> <ul style="list-style-type: none"> • identify the special relationship that Aboriginal and/or Torres Strait Islander peoples have to Country and Place ✦✦ 								✓
<p>HT2-3 describes people, events and actions related to world exploration and its effects</p> <ul style="list-style-type: none"> • investigate, drawing on Aboriginal and Torres Strait Islander community representatives (where possible) and other sources, the traditional Aboriginal way of life, focusing on people, their beliefs, food, shelter, tools and weapons, customs and ceremonies, art works, dance, music, and relationship to Country ✦✦✦ 								✓

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Cross Curricular Outcomes – Creative and Practical Art

VAS2.3 Acknowledges that artists make artworks for different reasons and that various interpretations are possible

- *discusses reasons why artists make artworks focusing on who, where, when, why and how*
- *recognises that people have different views about artworks and their meanings that are informed by their understanding of such things as the circumstances of the work, the artist's intentions and skill, and what the work is about*

VAS2.4 Identifies connections between subject matter in artworks and what they refer to, and appreciates the use of particular techniques

- *identifies resemblances between subject matter in artworks and the features of things as they exist in the world, recognising similarities and differences in how things are represented in the artworks*

8. Traditional Indigenous use of rocks and soil	✓ ✓	✓
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Study Risk Management Form: Beneath Our Feet

Note: Risk management for the excursion is the responsibility of the visiting teachers and school. This form is just for the activities and site.

Description: Located at REEC. Students explore the grounds of the Centre. The major activities are: scientific soil testing, ochre artworks.



Risk Assessment Matrix	How likely is it to be serious			
How serious could the injury be?	Very likely	Likely	Unlikely	Very unlikely
Death or permanent disability	1	1	2	3
Long term illness or serious injury	1	2	3	4
Medical attention and several days	2	3	4	5
First aid needed	3	4	5	6


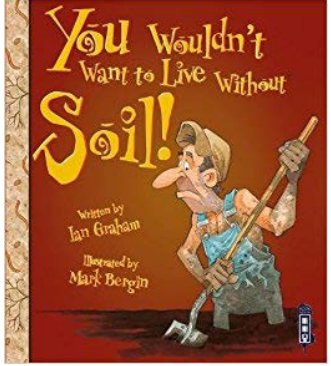
Task/Activity	Hazard	Risk Assess	Elimination or Control Measure
General	General		Senior First Aid qualifications are held by REEC Staff and a First Aid Kit with EpiPen, water and mobile phone is carried with REEC Staff.
Environment	Possible cold weather Sun Walking over rough ground Possible snake presence Insect bites/stings Bushfire	5 3 3 1 1 1	Students must wear appropriate clothing. If weather judged too severe an alternative activity will be done or the Study postponed. Students must wear hat and apply sun screen. Water available. Teacher at front and back of group. Teacher ratio <1:15 (guideline). Students wear enclosed footwear. Students warned of possible snake presence. Students made aware of areas where bees, ants may be found. Teacher informed of students who may suffer anaphylactic reactions from bites/stings. REEC staff to carry first aid kit, EpiPen and mobile phone. REEC closed during catastrophic fire rating period. Student induction in regards to evacuation procedures at the beginning of the program.
People	Allergic reactions (anaphylaxis) – Insect stings or environmental triggers, asthma, diabetes ochre – skin contact	1 5	Schools give prior advice to REEC staff of student and staff medical conditions. REEC staff to carry First Aid kit with Ventolin/spacer, EpiPen and mobile phone. Student and/or teachers carry personal medication. Students with anaphylactic reactions to bring EpiPen and Personal Health Care Plan. Naturally occurring substance – spraying onto hand to make artwork. Students with poor behaviour do not participate.
iOrienteering course (if applicable)	Falls on rough ground	3	Students with poor behaviour do not participate. Students given induction relating to course and observe safe passageways to take between checkpoints.

SUGGESTED ACTIVITIES TO EXPLORE PRIOR TO YOUR VISIT:

Beneath Our Feet

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Suggested Learning Experiences	Suggested Website Links for Learning	Language Focus	Suggested Teacher Resources
<p>1. Soil has GLOBAL importance! The APPLE demonstration</p> <p>Explain to the class that this activity demonstrates how we as a society use land. The amount of land on Earth stays the same, so as the world's population gets larger, it becomes even more important that we make wise decisions about how it is used. Call attention to the apple and the knife. Explain that the apple represents the Earth. Ask, "How much of the Earth's surface do you think is devoted to growing the food we eat every day?" Students' responses will vary. Some will remember that about 70 percent of the surface is water.</p> <p>Use the knife to cut the apple into four equal parts. Set three parts aside and hold up one part. Explain that the surface of the world is about 70 percent water, so this one piece represents that part of the surface that is land. Explain that land is used for many different reasons. Ask, "What are some of the most important uses for land?" Write students' responses on the board. Students' responses may include the following:</p> <ul style="list-style-type: none"> -Farming -Homes -Industries or businesses -Pastures or land for livestock -Parks -Recreation and sports 	<p>A Slice of SOIL downloadable poster to accompany the apple demonstration lesson</p> <p>http://www.growingthenextgeneration.com/a-slice-of-soil-grades-2-to-4-poster/</p> <p>http://www.fieldmuseum.org</p> <p>Where in the Soil World Are You – Interactive Game</p> <p>http://forces.si.edu/soils/swf/whereintheworld.html</p> <p>Soil Stories: The Whole Story</p> <p>https://vimeo.com/26081356</p> <p>This is an American documentary, but still holds great information for students. This is approx. 30 mins long, but could be stopped for discussion as each new soil issue is discussed.</p> <p>Do You Know the Story of Soil?</p> <p>http://www.agronext.iastate.edu/soilfertility/info/SSSA%20USB_AD.pdf</p> <p>3 short videos, highlighting the importance of soil in human health, food quality and water quality.</p> <p>Hidden Horizons</p> <p>http://forces.si.edu/soils/swf/hiddenhorizons.html</p>	<p>Soil, landforms, geology, geologists, erosion, weathering, topsoil, soil horizon, soil profile, soil biodiversity, decomposition, organic matter, fertile, porous, nutrients, plant roots, subsoil, compact, minerals, weathered rock, bedrock, layers, sediment, deposits, sedimentation, sedimentary, aggregate, slaking, texture, clay, loam, sand, silt, friability, management, clumps, ploughing, fertiliser, acid, alkaline, rocks, igneous rocks, sedimentary rocks, metamorphic rocks, magma, ochre, worm, humus, organic matter, salinity, nitrogen, phosphorus, potassium, fertilizer, tillage, cropping, silting, turbidity</p> <p>Wiradjuri translations</p> <p>Soil, alluvial; rubbish = durri Soil, dirt, ashes, land, earth = dhaagun Soil, red = magadala Soil, swampy black = muwin Soiled, muddy = mundhaymundhay Erosion = darrubarra Roots of trees or plants = yarrangany Rock = marradir Ochre (coloured clay paint)= mirrway</p>	 <p><i>'The Magic School Bus Meets the Rot Squad – A Book about Decomposition' – Joanna Cole</i></p>  <p><i>'You Wouldn't Want to Live Without Soil!' - Ian Graham</i></p>

-Mining
-Habitat (mountains, jungles, deserts, beaches and tundra)

Explain that the earth is covered in topsoil that contains all the living and non-living things that plants need to grow. Once this is scraped off or depleted of life, it will no longer be able to grow food. The topsoil is like the skin of the apple and proportionately about as thick. Peel off a little slice of one of the other apple wedges to demonstrate this point. Topsoil is scraped off to build roads and buildings to reveal the more compact layer of subsoil underneath.

Of the 4 quarters of the apple, explain that 3 parts represent the oceans of the world. The fourth part represents the land area. Cut the land section in half lengthwise. Now you have two 1/8 pieces (Integrate fraction concepts into lesson if necessary!) One section represents land such as deserts, swamps, Antarctic, Arctic and mountain regions. The other 1/8 section represents land where we all live and play. Slice this 1/8 section crosswise into four equal parts. Three of these 1/32 sections represent the areas of the world that are too rocky, too wet, too hot, or where soils are too poor to grow food. Ask students if they know of regions where the soils might be too drained to grow food. Also, we can't grow food on some land because cities and other human built structures are on it.

Interactive game to identify the soil horizons according to their properties.

Seed Survivor Game

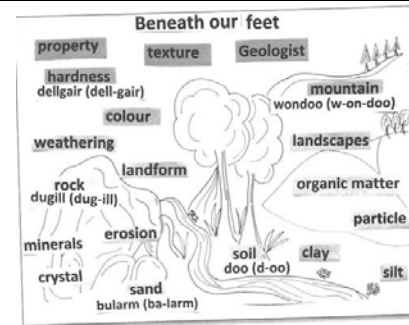
<http://seedsurvivor.com/agrium-games/SoilTris/index.htm>

Like Tetris, this is a game where you have building blocks of sand, clay, silt and organic matter to compose a soil suitable for growing either wheat or potatoes. Build it right and you will receive an earthworm bonus!

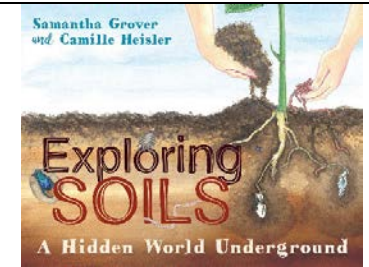
A-Maze-ing Underground

<http://seedsurvivor.com/agrium-games/A-Maze-ing-Underground/index.htm>

Interactive Game. You are a soil scientist (pedologist) and you need to create the right balance of water and nutrients in the soil to win.



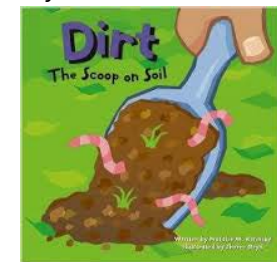
Beneath our feet word wall



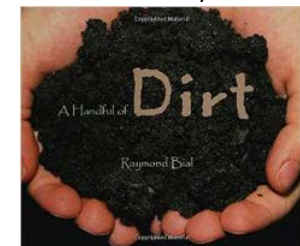
'Exploring Soils', Samantha Grover



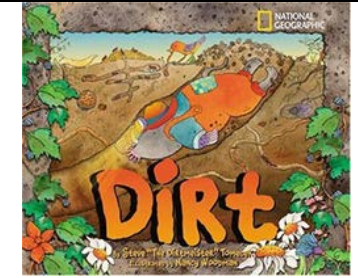
'Leaf Litter' - Rachel Tonkin



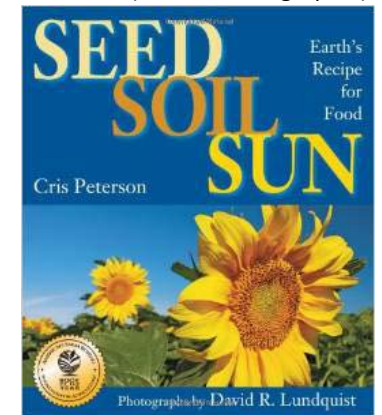
'Dirt - The Scoop on Soil' - Natalie Rosinsky



'A Handful of Dirt'- Raymond Bial



'Jump Into Science – Dirt' – Steve Tomacek (National Geographic)



'Seed, Sun, Soil – Earth's Recipe for Food' – Cris Peterson



Stage Two– Beneath Our Feet Riverina Environmental Education Centre

Introduction – Soil Conservation at the Wagga Wagga Research Station



- Students will be given an induction to the Centre.
- Gauging previous learning – what do students already know about soil? What do they want to find out about soil?
- Preview the day's activities
- Look at the historical photos of REEC from the 1940s-1950s when the area was a failed farm due to poor soil, gully and sheet erosion. Look at following pictures that show improvements made when the Soil Conservation Station took over the farm.
- Compare old photos with current satellite image of same place from Google Earth. What has changed? How can soil be regenerated to support vegetation?

Who Wants to be a Millionaire?



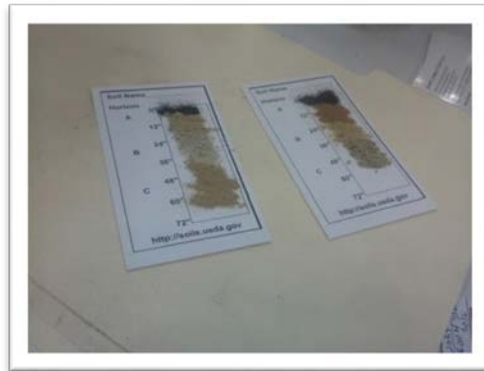
- View a short video presentation outlining how soil is made, the importance of soil in living ecosystems
- Play 'Who Wants to be a Millionaire' Interactive Game to reinforce what was discussed in the video. ➤ Review the concepts learned in the video.

Soil test sites at the Wagga Wagga Research Station



- Visit run-down test sites for experimental grasses (tests ceased in 1980s).
- Look at names of experimental grasses grown in this zone. Explain that the soil scientists (pedologists) responsible for overseeing plots had responsibilities to record data showing the runoff of soil, water, grass seed, and groundwater into containers. They were experimenting with different grasses grown in plots (still clearly named on signage) to see which of the grasses grew well in poor soil and assisted it in recovering its stability to slow erosion.

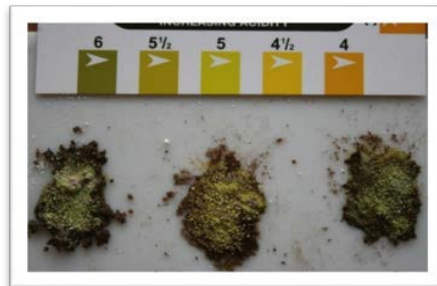
Soil Horizons



- Students will observe the different soil 'horizons' in a sample dug onsite. Observations of the changes in soil colour and texture as it moves from shallower topsoils to deeper subsoils are recorded. The arrangement of these horizons in a soil is known as a soil profile. Soil scientists, observe and describe soil profiles and soil horizons to classify and interpret the soil for various uses.
- Correct naming of soils will be introduced as follows:
 - O – (humus or organic) Mostly organic matter such as decomposing leaves. The O horizon is thin in some soils, thick in others, and not present at all in others.
 - A – (topsoil) Mostly minerals from parent material with organic matter incorporated. A good material for plants and other organisms to live.
 - B – (subsoil) Rich in minerals that leached (moved down) from the A or E horizons and accumulated here.
 - C – (parent material) The deposit at Earth's surface from which the soil developed.

Students will measure and record the width of each soil horizon and note the soil colour and texture changes.

Soil testing



- Different soil tests and their results are explained /modelled. Students will participate in tests of the topsoil that show:

-**Soil pH** – discussion on acidic and basic soils

-**Soil salinity** – Testing a soil sample is a reliable way to assess how salts are affecting plant growth.

-**Soil texture** – Using a soil ribbon test to see whether soils are sandy, loam or clay based.

-**Colour sampling** – soil colour is directly related to some of the general properties of a soil, as well as some of the chemical processes that are occurring beneath the surface. -**Soil Slaking** – to test whether soil is 'stable'

Erosion Experiments



Erosion Experiment 1:

- Students will observe water poured into two separate 'gutters'. These are of exact length and width. One is angled down a slope, the other is completely horizontal. Pour one litre into the top of the horizontal gutter and using a timer, record the duration of time it takes for the water to spill into the trough below. Repeat the experiment with the angled gutter. What is the time difference taken for the water to travel to the end of the gutter? What relevance does slope play in the fall of water over 'flat' land or hilly slopes? How does this in turn affect erosion?

Erosion Experiment 2:

- Using bare soil and grassed soil 'pits', students will observe and measure water erosion of both, making judgement as to the more effective soil to combat erosion in the natural and managed environment.
- Students will observe which soil pit is the most effective as physical filtering systems of water, by measuring the turbidity of water as it flows over the surface of the soil and also via the groundwater flow.
- Discussion – observation relating to farm design to minimise erosion, eg grassed waterways. ➤ NB Students will discuss control variables and how these ensure a 'fair test'.

Results will be tabled as follows: (Students to record results)


Water	Bare Soil	Grassed Soil
Surface Flow (ml)		
Groundwater Flow (ml)		

Questions to aid analysis of results:

- Which of the two pits (grassed/ bare soil) encountered the highest volume of water running over the top of the soil? Why do you think you got this result?
- Which of the two pits recorded the highest volume of 'groundwater' running through the soil and out of the bottom hose? Why do you think you got this result?
- Note the clarity of the water that was collected from the surface flow and groundwater flow of each pit. Compare the results for both pits. Why is one much clearer than the other? What does this tell you?
- What part does the grass play in helping the soil circumvent erosion (in surface water runoff)?

Rock Identification and Description

Properties of Rock



Rock	Color		Texture smooth, rough, both	Luster shiny/dull, both	Pattern stripes, spots, swirls
	outside color	inside color			
1					
2					
3					

- View a video about how rocks are made. Review the 3 types of rocks (sedimentary, igneous and metamorphic rocks) and view the differences from our collection of each type of rock.
- Students observe different 'special rocks' from our collection at REEC. They are asked to find three interesting rocks that are qualitatively different to each other. Colour, texture, lustre and pattern are words that should be used in context when describing the different properties of rocks.
- Students name the different rocks (from descriptions on rock label) and write a description of these 3 rocks according to their properties as discussed:
 - colour** – What colours are observed through the rock? Are there many colours or is it a solid colour?
 - texture** – eg, smooth, rough, porous, etc
 - lustre** – shiny or dull or both
 - pattern** – eg, swirls, spots, lines

Traditional Indigenous uses of soil and rocks



- Students will view REEC's traditional Aboriginal weapons and ochres. They will predict the use of each item before explanation given.

Exposure given to – stone axes, sharp cutting stones

- coolamons, shields, didgeridoos, clap sticks, boondi, spears, boomerangs – products made from stone use - ochres and grinding stones

SUGGESTED POST - VISIT ACTIVITIES and RESOURCES

To further explore activities relating to landscape changes over time

Teaching/learning guiding inquiry questions

- *What are the effects of weathering rocks to produce (alluvial) soils?*

- *How has the landscape changed over time?*

Lesson Sequence

Resources

1. Weathering Rocks –(refer to Lesson 4 ‘Rollin’ Rock’, Primary Connections, p36 and copy - *Weathering Investigation Planner – Resource sheet 3*)

Students will investigate a model of the physical (mechanical) weathering of rocks, via ice cracking and mechanical weathering. A dried clay-sand ball is used as a model of soft rock for the investigation, and shaking it in a bottle of water will be used to simulate water flowing over the rock, as though it was being tumbled in a river or stream.

Students will suggest which things might affect the clay-sand ball if it is shaken with water
Eg,

- the size of the ball
- What the ball is made of – (more sand than clay?)
- The hardness of the ball
- The amount of water used
- The size of the jar
- How hard it is shaken
- How long it is shaken

List these modifiable changes that might affect results and term these as the ‘variables’. Discuss that in the investigation, things can be changed and the results measured will be different. – Introduce the term ‘fair test’, and be sure to decide on all set variables so that the experiment is ‘controlled’. To record results of this experiment, students need *Resource sheet 3 – ‘Recording Results’*.

- **Primary Connections – “Beneath Our Feet”**
- **Bottles, clay-sand, water, recording templates.**

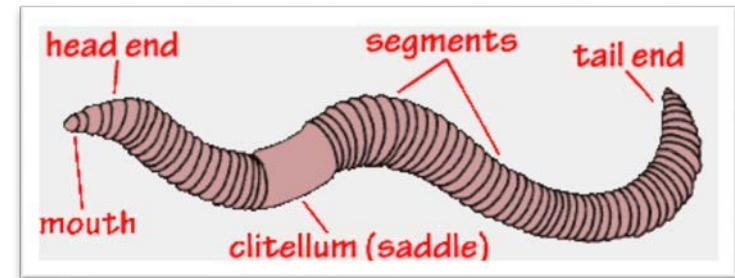
2. Soil Fauna

Who lives in the soil? Students could observe ant nests on the school grounds. Watch one ant for one minute to investigate the speed and direction it is going. Discussion of ant chambers and systems used underground.

Investigating worm farms. Extraction of several worms from school worm farms to investigate under microscopes (which can be loaned from REEC by request). Identification of body parts. Scientific drawing and labelling of worm.

Ant Chambers

<https://kids.britannica.com/students/assembly/view/144467>



3. A Varied Landscape

Australia is composed of a variety of differing landscapes. Research differences *between mountain, coastal, riverine, desert, karst and tropical* landscapes by definition. Find areas of Australia that fall under each of these different landscape types. Construct a table, where each of the landscapes are described in detail and Australian regional examples are given; including photographic representations to aid understanding of these differences.

The Riverina – What changes in landform have been witnessed over time in the Riverina region? Visit the Office of Environment and Heritage website to find out more.

About Australia Website <http://www.about->

[australia.com/geographic-features/](http://www.about-) [\[australia.com/australia-geography/\]\(http://www.about-\) **Oxford University Press**](http://www.about-</p></div><div data-bbox=)

Sample

https://www.oup.com.au/__data/assets/pdf_file/0020/58025/OxfordBig-Ideas-Geography-8-ch1-Landforms-and-landscapes.pdf **The Riverina -**

Landform

<http://www.environment.nsw.gov.au/bioregions/Riverina-Landform.htm>

4. Landscapes Shaped by erosion – In depth studies:

Find out how erosion has contributed to some of Australia's most famous landforms:

The Twelve Apostles

Wave Rock

Uluru

The Three Sisters

Devil's Marbles

Kata Tjuta (The Olgas)

Australian Landforms <http://www.kidcyber.com.au/australian-landforms/>

<http://science.uniserve.edu.au/school/quests/ozlandforms.html>

<http://scienceweb.asta.edu.au/years-3-4/unit3/lesson-one/yr34-unit3lesson-one.html>

Individual or group projects can be instigated at this point in the study. Inquiry Questions for research might be:

- *Did the landscape always look like that?*
- *How was it formed?*
- *How long ago was it formed?*
- *What might have caused the changes in this landscape? How do you know?*
- *Will it always look like this?*
- *What might it look like millions of years into the future?*

Evaluation:

Pre – Visit Activities

REEC Program – Beneath Our Feet

Post-Visit Activities