



Year 4 - Teacher Introduction

Teacher Introduction

The Primary Australian Literacy Mathematics & Science (PALMS) Program aims to enrich and support the teaching of earth science from Kindergarten to Year 6 across Australia. This is achieved by providing, within the mandated Earth and Space Science curriculum, hands-on activities integrating aspects of Chemical Sciences, Physical Sciences and Biological Sciences as well as relevant components of English, Mathematics and other subjects into teaching packages.

These teaching packages are available at www.palms.edu.au.

Earth's surface changes over time as a result of natural processes and human activities.

Activities marked **PPP** (PALMS Parent Power) have the option to be sent home with students to do with their parents or by themselves. They replay the concepts recently covered in Science. Studies demonstrate if a student describes what they have learned to another, they deepen their own understanding and retain knowledge longer.

Topic No.	Topic	Activities	Student Worksheet	Subjects	Page No.
1	Evidence of Change	Fossil Clues	X	Science + English + Critical Thinking	1 + 6
		All This Was Grass	X	Science + English	12 + 14
		Landscape Changes - PPP	X	Science + HASS + English	17
		Evidence of Change from Local Landforms	X	Science + HASS + English	18 + 25





Year 4 - Teacher Introduction

Topic No	Topic	Activities	Student Worksheet	Subjects	Page No
1	Evidence of Change	Petroglyphs	X	Science + HASS	35 + 41
		Timeline	X	Science + HASS + Maths	45 + 46
2	Weathering	Physical weathering (possible PPP)	X	Science + English + Critical Thinking	47 + 51
		Chemical Weathering	X	Science + English	55 + 58
		Oxidation	X	Science + HASS	61 + 65
		Biological Weathering		Science + HASS + Art	69
3	Erosion	Erosion by Wind and Water	X	Science + English + HASS	71 + 74
		Rainwater at Home	X	Science	77 + 82
		Dirt Roads	X	Science + Technology	86 + 88
		City lanes	X	Science + Technology	91 + 93
		Erosion by Humans		Science + HASS	95
4	Investigation of Local Area	Investigation Report	X	Science + HASS	96 + 99





Year 4 - Teacher Introduction

Topic No	Topic	Activities	Student Worksheet	Subjects	Page No
5	Soils	Soil, Dirt & Dust	X	Science + Health + Maths	102 + 106
		Soil Profiles	X	Science	110 + 114
		Soil & Parent Rock	X	Science + Critical thinking	116 + 121
		Soil Components	X	Science + Maths	123 + 130
		Living things in Soil	X	Science	134 + 139
		Soil Compaction	X	Science + HASS	142 + 145
6	STEAM	Rain Chain	X	Science + Technology + Art	148 + 154



Santos & ESWA supporting earth science education



Year 4 - Teacher Introduction

Australian Curriculum (WA)

Earth & Space Science

Earth's surface changes over time as a result of natural processes and human activity.

Elaborations

- Collecting information of change from local landforms, rocks or fossils.
- Exploring a local area that has changed as a result of natural processes, such as an eroded river gully or riverbanks.
- Investigating the characteristics of soils.
- Considering how different human activities can cause erosion of the Earth's surface.

English

Speaking, writing & creating.

Creating procedures, reports and poetry.

Learning in a familiar context.

How social interaction influences the way people engage with ideas.

Summarising and reporting own view.

Use of tone, pace and pitch.

Word play.

Maths

Problem solving & reasoning.

Using scaled instruments to measure accurately.

Collecting and recording data.

Comparing time durations.

Construct suitable data displays (tables & column graphs).

Make connections between fractions and decimal places.



Santos & ESWA supporting earth science education



Year 4 - Teacher Introduction

HASS

Place, space & environment.

Place information in chronological order.

Identify different points of view in information.

Change data into a graph or table.

Present findings and conclusions in a range of communication forms.

Art

Experiment with a selection of appropriate materials to create artworks.

Respond to artworks.

Experiment with shape and colour.

Technology (Design Technology)

Create a design solution.

Forces and the properties of materials affect the behavior of a product.

Identify and choose appropriate resources.

Develop and communicate design ideas using annotated drawings.

Select and safely use equipment.



Santos & ESWA supporting earth science education