



YEAR 6 - 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 will be 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 will be made available at www.palms.edu.au.

*Activities marked **PPP** (PALMS PARENT POWER) are ones you may wish to send home with the students to do with their parents or by themselves. They replay the concepts recently covered in Science. Studies demonstrate that if a student describes what they have learned to another, they deepen their own understanding and retain it longer.*

Topic No.	Topic	Activities	Student worksheet	Subjects	Page No.
1	Our Changing Surface	How Did That Get There?	X	Science & HASS	4 & 15
		Making Craters	X	Science & Maths	18 & 22
		PPP - Splash Down	X	Science	25
		Having a Blast		Science	26
		All the Rivers Run	X (extension)	Science	31 & 35
		Sculpting Sand Dunes	X	Science	39 & 41





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2	Shifts and Changes	Salt Lake Puddles	X	Science & Maths	44 & 48
		Change Caused By Humans	X	HASS	52 & 53
		Eco-Tourism Poster	X	HASS & English	54 & 55
3	It's a Disaster!	Literature Landscapes		English	57
		Community Meeting	X	Science, HASS & English	58 & 62
		Water in Soils		Science	64
		Flooded Landscape Model	X	Science & Design & Technology	66 & 69
		Measure a Quake Shake		Science	72
		PET Bottle Cyclone		Science & Design & Technology	75
		Blow a Cyclone		Science	78
		PPP - Air Pressure and Cyclones	X	Science & HASS	80





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4	Be Prepared	Disaster Response		Science, HASS, Maths & English	81
		International Space Farm		Science, HASS, Maths, English & Design and Technology	86
		How Would Your Area be Impacted?		Science & HASS	92

A WORD ON VARIABLES:

Throughout the PALMS resources for younger year groups, the acronym Cows Moo Softly has been used to introduce the scientific method of change one thing, measure one thing and everything else stays the same. In Year 6, it is a good idea for students to start to use the more scientific terminology of independent, dependent and controlled variables in their experimental work as these are the terms they will be expected to use as they move in to high school. As such, these terms will be introduced and used throughout this resource.

INDEPENDENT VARIABLE - This is the variable that we change.

DEPENDENT VARIABLE - This is the variable that we are testing and therefore the one we measure.

CONTROLLED VARIABLES - These are the factors that we keep the same to ensure a fair test is carried out. Students should always be encouraged to list more than one of these.





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Australian Curriculum (WA)

Earth and Space Sciences

Sudden geological changes and extreme weather events can affect Earth's surface (ACSSU096)

Other Sciences

The growth and survival of living things are affected by physical conditions of their environment (ACSSU094)

Changes to materials can be reversible or irreversible (ACSSU095)

Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE100)

Mathematics

Convert between common metric units of length, mass and capacity (ACMMG136)

Compare observed frequencies across experiments with expected frequencies (ACMSP146)

Interpret secondary data presented in digital media and elsewhere (ACMSP148)

English

Identify and explain how analytical images like figures, tables, diagrams, maps and graphs contribute to our understanding of verbal information in factual and persuasive texts (ACELA1524)

Make connections between students' own experiences and those of characters and events represented in texts drawn from different historical, social and cultural contexts (ACELT1613)

Participate in and contribute to discussions, clarifying and interrogating ideas, developing and supporting arguments, sharing and evaluating information, experiences and opinions (ACELY1709)

Use comprehension strategies to interpret and analyse information and ideas, comparing content from a variety of textual sources including media and digital texts (ACELY1713)



Santos & ESWA supporting earth science education



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HASS

Choices about the use of resources result from the imbalance of limited resources and unlimited wants (i.e. the concept of scarcity)

(ACHASSK149)

Decisions about the alternative use of resources result in the need to consider trade-offs (e.g. using the land to grow crops or to graze cattle) (ACHASSK149)

Locate and collect information and/or data from a range of appropriate primary sources and secondary sources (e.g. museums, media, library catalogues, interviews, internet) (WAHASS52)

Record selected information and/or data using a variety of methods (e.g. use graphic organisers, paraphrase, summarise) (WAHASS53)

Interpret information and/or data collected (e.g. sequence events in chronological order, identify cause and effect, make connections with prior knowledge) (WAHASS56)

Design and Technology

How people address competing considerations, including sustainability when designing products, services and environments for current and future use (ACTDEK019)

Characteristics, properties and safe practice of a range of materials, systems, tools and equipment; and evaluate the suitability of their use (ACTDEK023)

