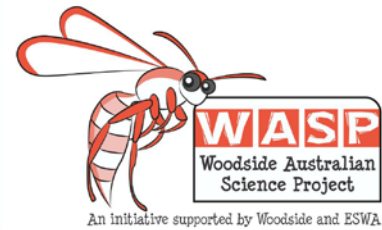


At Home Learning – Year 8



The following is a sequence of tasks and activities that could be carried out by students from home, in support of their Earth and Space Science learning.

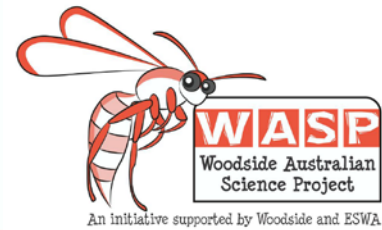
Objectives:

At the completion of this unit of work students will:

- Understand why rocks are relevant to their everyday lives
- Understand that rocks contain minerals and are classified as sedimentary, igneous or metamorphic
- Be able to outline and discuss the major processes of the rock cycle
- Understand that rocks form over a variety of timescales

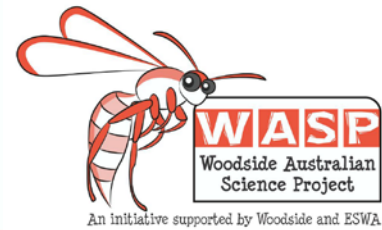
Focus	Activity/ies	WASP Support Resources
Why rocks?	<ul style="list-style-type: none"> • Consider why you might be studying rocks. Why are they important? • Think about how rocks relate to your everyday life and what you already know about them 	<p>Why study rocks? - https://www.wasp.edu.au/mod/resource/view.php?id=113</p> <p>We need rocks for breakfast - https://www.wasp.edu.au/mod/resource/view.php?id=111</p> <p>Rock cycle relevance - https://www.wasp.edu.au/mod/resource/view.php?id=117</p>
The rock cycle, an overview	<ul style="list-style-type: none"> • Watch our rock cycle animation and draw your own summary of the rock cycle • Explore the rock cycle in more detail through our app for iPad • Use this information to complete the rock cycle activity 	<p>Rock cycle animation - https://www.youtube.com/watch?v=WYtF-ZdTr7s</p> <p>App with interactive rock cycle - https://www.wasp.edu.au/mod/page/view.php?id=85</p> <p>The rock cycle - https://www.wasp.edu.au/mod/resource/view.php?id=566</p>
Weathering	<ul style="list-style-type: none"> • Carry out a series of simple investigations to find out more about frost weathering • Followed by a series to investigate chemical weathering 	<p>Freezing (plaster) - https://www.wasp.edu.au/mod/resource/view.php?id=120 (can usually be sourced from a hardware store, follow safety directions)</p> <p>Frost heave - https://www.wasp.edu.au/mod/resource/view.php?id=122</p> <p>Freezing - https://www.wasp.edu.au/mod/resource/view.php?id=124</p> <p>Oxidation - https://www.wasp.edu.au/mod/resource/view.php?id=129</p> <p>Weathering (salt & water) - https://www.wasp.edu.au/mod/resource/view.php?id=131 (use the lids of <u>old</u> containers instead of Petri dishes)</p>

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Focus	Activity/ies	WASP Support Resources
Weathering cont.	<ul style="list-style-type: none"> Explore your local environment for examples of biological weathering and consider the ones we share with you 	Biological weathering - https://www.wasp.edu.au/mod/resource/view.php?id=142
Erosion	<ul style="list-style-type: none"> Carry out a series of simple investigations to find out more about erosion Consider how people can prepare for disasters related to erosion 	Knocking off the rough edges - https://www.wasp.edu.au/mod/resource/view.php?id=150 (if you are adding marbles use a tough plastic container NOT a glass container) Soil creep - https://www.wasp.edu.au/mod/resource/view.php?id=152 (use a foil oven tray instead of a laboratory tray) Glaciation (ice erosion) - https://www.wasp.edu.au/mod/resource/view.php?id=156 Landslide preparation - https://www.wasp.edu.au/mod/resource/view.php?id=154
Deposition	<ul style="list-style-type: none"> What is deposition and what does it tells us about an environment? Carry out a series of simple investigations to find out more about deposition 	Deposition data - https://www.wasp.edu.au/mod/resource/view.php?id=160 Graded bedding - https://www.wasp.edu.au/mod/resource/view.php?id=162 Sedimentary sandwiches - https://www.wasp.edu.au/mod/resource/view.php?id=166
Compaction and cementation	<ul style="list-style-type: none"> Investigate what happens when sediments are compacted and cemented 	De-watering of sediments - https://www.wasp.edu.au/mod/resource/view.php?id=168 Sedimentary pile - https://www.wasp.edu.au/mod/resource/view.php?id=170
Crystallisation	<ul style="list-style-type: none"> What impacts the size of crystals in igneous rocks? Conduct a simple investigation to find out more 	Crystal growth rate - https://www.youtube.com/watch?v=f5bBSGlj-xM

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Focus	Activity/ies	WASP Support Resources
Rock collection	<ul style="list-style-type: none"> • If you or someone in your family has a rock collection, see if you can classify them as igneous, sedimentary or metamorphic – perhaps the WASP app will assist • OR create your own replica rocks 	<p>App with rock ID tool - https://www.wasp.edu.au/mod/page/view.php?id=85</p> <p>Replica rocks https://www.wasp.edu.au/mod/resource/view.php?id=181 (follow the safety directions on the materials you use for this! Use kitchen scales instead of a triple beam balance)</p>
What can rocks tell us?	<ul style="list-style-type: none"> • Consider what we can tell from looking at rocks 	<p>Examine the evidence - https://www.wasp.edu.au/mod/resource/view.php?id=568</p>
Minerals	<ul style="list-style-type: none"> • Find out what minerals are. What makes them similar? What makes them unique? • Research the major minerals that make up the Earth' crust • Explore your home and garden to find out where rocks and minerals are used, then consider the ones we share with you 	<p>What are minerals? - https://www.wasp.edu.au/mod/resource/view.php?id=576</p> <p>Mineral composition - https://www.wasp.edu.au/mod/resource/view.php?id=203</p> <p>Rocks and minerals at home - https://www.wasp.edu.au/mod/resource/view.php?id=574</p>
Perspectives on rocks	<ul style="list-style-type: none"> • Research two unique landforms • Find out more about how water, rocks and vegetation interact in the Australian bush 	<p>Uluru and Kata Tjuta - https://www.wasp.edu.au/mod/resource/view.php?id=578</p> <p>Water in the desert - https://www.wasp.edu.au/mod/resource/view.php?id=580</p>
Quizzes	<ul style="list-style-type: none"> • Test your knowledge 	<p>Quizzes - https://www.wasp.edu.au/mod/page/view.php?id=108</p>
Why rocks?	<ul style="list-style-type: none"> • Consider why you might have studied rocks. Why are they important? Have your thoughts on this changed? 	<p>Why Study Rocks? - https://www.wasp.edu.au/mod/resource/view.php?id=113</p>