



Suitable for	Stage 6 Earth and Environmental Science
Focus	Role of Core Library, how we interpret geological information, resource exploration and uses
To be provided by school/group	Printed handouts (supplied via email), pens/pencils (different colours are helpful)
To be provided on site	Maps, activity equipment, disposable face masks if this is current health advice
Time required	4-5 hours
Site requirements	Enclosed shoes and sleeved shirts must be worn. A complete list of all visitors to be supplied to site manager on arrival. All groups complete a brief safety induction before entering the facility.
Site facilities	Toilets, outdoor space for eating

Description

Stage 6 Earth and Environmental Science students will tour the Core Library, learning about the role of this facility in resource exploration. Year 11 students complete activities that include a simulation of geophysical sensing, mapping drill core to determine what is underground and using index fossils to determine the age of rock layers. Year 12 students examine fossils and learn how past life is reconstructed, use index fossil to determine the age of rock layers and use data to propose a mine that meets projected needs for our clean energy future.

Activities and talks from Core Library staff help students to understand the role of geological exploration and the Geological Survey of NSW. They learn about the different scientific specialties involved in collecting and interpreting information, as well as the uses of a library containing representative geological samples from across the state.



Activity Risk Assessment

Hazard Identification		Control	Residual Risk Assessment
Activity	Potential Hazards	Risk Control Measures	Risk Score
Safety induction	None	Visitors informed of emergency procedures. Group signed in with list provided.	4
Walking through Core Library facilities	Heavy machinery may cause injury (forklift, rock saws)	Forklift not used during school visits. School groups kept away from rock saws. Appropriate attire must be worn.	3
	Slips, trips and falls	Tour guide looks for potential hazards and warns group. First Aid kits available and staff trained in use.	4
Make plasticine fossil mould	Allergic reaction to plasticine	Check with teacher prior to lesson regarding any allergies.	4
Class in small rooms (HyLogger, Petrography, Conference Room)	Increased risk of COVID transmission	Symptomatic individuals not to attend. Follow NSW Health guidelines about number of people per square meter. Wear disposable masks (provided) if advisable.	3

Curriculum links

Year 11 EES	<p>M1 Geological Timescale:</p> <ul style="list-style-type: none"> use data to determine the age of geological materials <p>M1 Geological Resources:</p> <ul style="list-style-type: none"> relate a range of non-renewable resources to their location economic importance of Australia's non-renewable resources assess the appropriateness of direct sampling and remote sensing in discovering non-renewable resources
Year 12 EES	<p>M5 Fossil Formation and Stratigraphy:</p> <ul style="list-style-type: none"> investigate processes of fossil formation discuss the significance of index fossils extrapolate how principles can be used to date events of geological significance <p>M1 Geological Resources:</p> <ul style="list-style-type: none"> case study of an important Australian non-renewable resource



The risk analysis is based on the following matrix. Activities with a residual risk score of 2 or less will not be carried out.

Impacts	Likelihood				
	Rare	Unlikely	Possible	Likely	Almost certain
Critical (fatality)	2	2	1	1	1
Major (disability)	3	2	2	1	1
Moderate (serious injury or illness)	4	3	2	2	1
Minor (requires medical treatment)	4	4	3	3	2
Insignificant (minor first aid)	4	4	4	3	3

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