

STATE LIBRARY<sup>1</sup>  
QUEENSLAND

# Year 8 Earth Sciences

Unit 1 – Plate Tectonics

Unit 2 – The Rock Cycle.

Cover: Selection of databases available through State Library, 2023.

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This research guide is designed for individual use by students.

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Teachers can advise students on State Library's resources and encourage their use to help with their studies and research. Students are encouraged to access State Library's resources at school, but not during class time.

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## Overview

As Queensland's leading research library, State Library is a great place to find information to complete your research-based assessments.

State Library's One Search catalogue is the gateway to an extensive suite of national and international journals, databases, eBooks, encyclopedias, newspaper archives, and collections of thousands of historical images, letters, artworks, diaries, and artefacts to interrogate as sources.

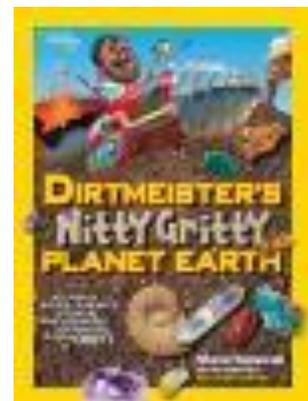
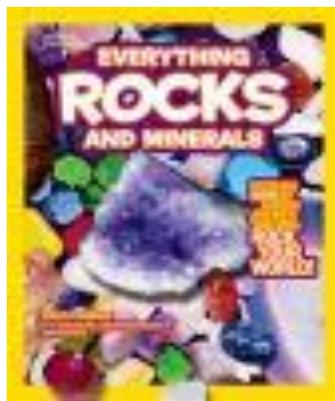
## Before you get started

[Become a member](#) of State Library of Queensland (it's free!).

Once you have joined State Library, [log in](#) to your account in One Search so you can use the links in this research guide to access the featured collection items.

You can search our [OneSearch catalogue](#) or begin exploring by clicking on some of the featured items contained in this research guide.

## E-Books



[Queensland Museum](#) provide Learning Resources website students with many activities, fact sheets, images, and videos.

**QUEENSLAND MUSEUM** | Learning Resources Home About Save list

## Explore our resources

Search

10 - 12 Physics All types All museums

[Clear filter](#)

Queensland Museum's Learning Resources website provides teachers and educators with practical, high-quality, and engaging resources to use in the classroom. While targeted at educators, there are many activities, fact sheets, images, videos, and loans kits relevant to parents, carers and many other members of the community.

Showing 6 of 6 resources

The [Australian Institute Aboriginal and Torres Strait Islander Studies](#) is a powerful tool for First Nations reading and research. Their online database and research projects can provide incredible insight into science from the First Nations perspective.

**AIATSIS** Explore Family history Collection Research Education What's new About Shop Search

## Ngurrara 2 way learning project

Share

Publication date  
Wednesday, 1 June 2016

Type  
Presentation

Event  
2016 National Native Title Conference

Brendan Fox , Peter Murray

Attachment/s  
[presentation.pdf \(PDF, 15.64 MB\) >](#)

# Plate Tectonics

Investigate tectonic activity including the formation of geological features at divergent, convergent and transform plate boundaries and describe the scientific evidence for the theory of plate tectonics

- Examining patterns of earthquake and volcanic activity over time and proposing explanations.
- Evaluating the impact of tectonic events on human populations and examining engineering solutions designed to reduce the impact.
- Modelling interactions at plate boundaries.
- Investigating the relative significance of different forces involved in tectonic plate movement including slab pull, ridge push and convection.
- Relating the extreme age and stability of a large part of the Australian continent to its plate tectonic history.
- Constructing a timeline of evidence to show the development of the theory of plate tectonics.
- Exploring how geologist and oceanographic cartographer Marie Tharp's topographic maps of the Atlantic ocean floor provided support for the acceptance of the theory of plate tectonics.
- Researching First Nations Australians' cultural accounts that provide evidence of earthquakes and volcanoes.

[Oxford Reference](#) spans 25 different subject areas, bringing together 2 million digitised entries across Oxford University Press’s dictionaries, companions, and encyclopedias.

The screenshot shows the Oxford Reference search results page. At the top, the 'Oxford Reference' logo is on the left, and a search bar is on the right. Below the logo, there are navigation tabs for 'Subject' and 'Reference Type', and user account links for 'My Content (0)' and 'My Searches (10)'. The main heading is 'Oxford Reference Search Results'. On the left, there is a sidebar with 'Signed in as: State Library of Queensland' and a 'Narrow Your Choices' section with 'REFINE TERMS' and a search box containing 'plate tectonics'. The main content area shows 'You are looking at 1-20 of 571 entries for: All: plate tectonics'. It includes a 'Did you mean' suggestion for 'tectonic plates' and a 'clear all' link. Below this, there are filters for '571 ENTRIES' and '2 BOOKS', and a 'View' section with 'Items per page: 20' and 'Sort by: Relevance'. The 'OVERVIEW' section for 'plate tectonics' is visible, with the subject 'Science and technology, Earth Sciences and Geography' and a brief definition: 'The concept that the Earth's lithosphere consists of a number of distinct oceanic and continental plates, whose relative positions alter over the course of geological time, driven by ...'.

The [Britannica Library](#) has articles, images and more, with a selection of resources especially for teenagers.

The screenshot shows the Britannica Library search results page. At the top, the 'Britannica Library' logo is on the left, and a search bar is on the right. Below the logo, there are navigation tabs for 'Your Britannica Resources', 'Research Tools and Materials', 'Help', and 'My Britannica'. The main heading is 'You searched for "plate tectonics"'. Below this, it says 'DISPLAYING 1 - 10 OF 41 RESULTS.'. There is a 'Reading Level' filter with options 1, 2, and 3, where 2 is selected. There is also an 'Advanced Search' link. Below the filter, there are tabs for 'Articles', 'Images', 'Videos', and 'More'. The first result is 'plate tectonics (geology)' with a star icon. The description reads: 'plate tectonics | The modern theory of the motions of Earth's outer layers is called plate tectonics. It provides a framework for understanding many of ...'. Below this, there is a result for 'Earth (planet, third from the Sun)' with the sub-heading 'Plate Tectonics'. The description reads: 'Plate Tectonics | A number of distinctive features on Earth beg for an explanation. Earthquakes and volcanoes are concentrated in certain regions of the world ...'. Below this, there is a result for 'Water cycle' with the description: 'As the various plates of the lithosphere move, the seafloor on one plate is sometimes pushed against the edge of a continent on another. The denser oceanic crust is forced under ...'.

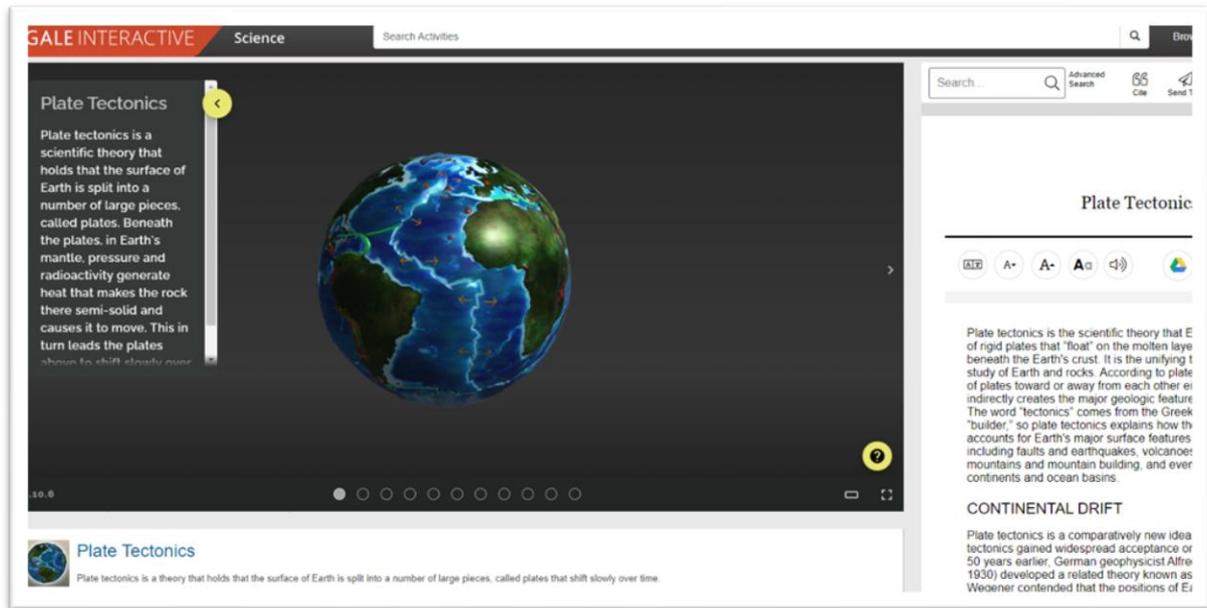
[National Geographic Virtual Library](#) is a powerful tool for research offering access to over 100+ years of magazines and hundreds of books, maps, videos, and images.

The screenshot shows the National Geographic Virtual Library search interface. At the top, there is a banner with the text 'PRESENTS' and 'NATIONAL GEOGRAPHIC' over a background image of elephants. Below the banner is a search bar with the text 'Advanced Search' and a magnifying glass icon. To the right of the search bar are navigation links: 'Browse Magazines', 'About', 'Explore Topics', and 'Search History'. Below the search bar, the results are categorized by type: 'Types', 'Featured Images (1)', 'Featured Articles (40)', 'Books (11)', 'Brief Articles (20)', 'Videos (2)', 'Maps (5)', and 'Map Supplements (20)'. The 'Featured Articles (40)' category is highlighted. Below the categories, there is a section for 'FEATURED ARTICLES' with a 'Sort by: Newest' dropdown menu. A keyword search for 'tectonics' is shown, with a 'Revise Search' link. A 'Trailblazers' article is featured, with a thumbnail image and the text: 'Publication: National Geographic Magazine, Sunday, Mar. 2020, Volume 237, Issue 03, p. [115] Article, Found in National Geographic Archive 1995+'. To the right of the featured article, there is a 'FILTER YOUR RESULTS' section with buttons for 'Subjects', 'Publication Title', 'Document Type', and 'Search Within'. Below this is a 'TOPIC FINDER' section with the text 'Discover topics and results related to you' and a 'Start the Topic Finder' button. At the bottom right, there is a 'TERM FREQUENCY' section with a 'Ruby' button.

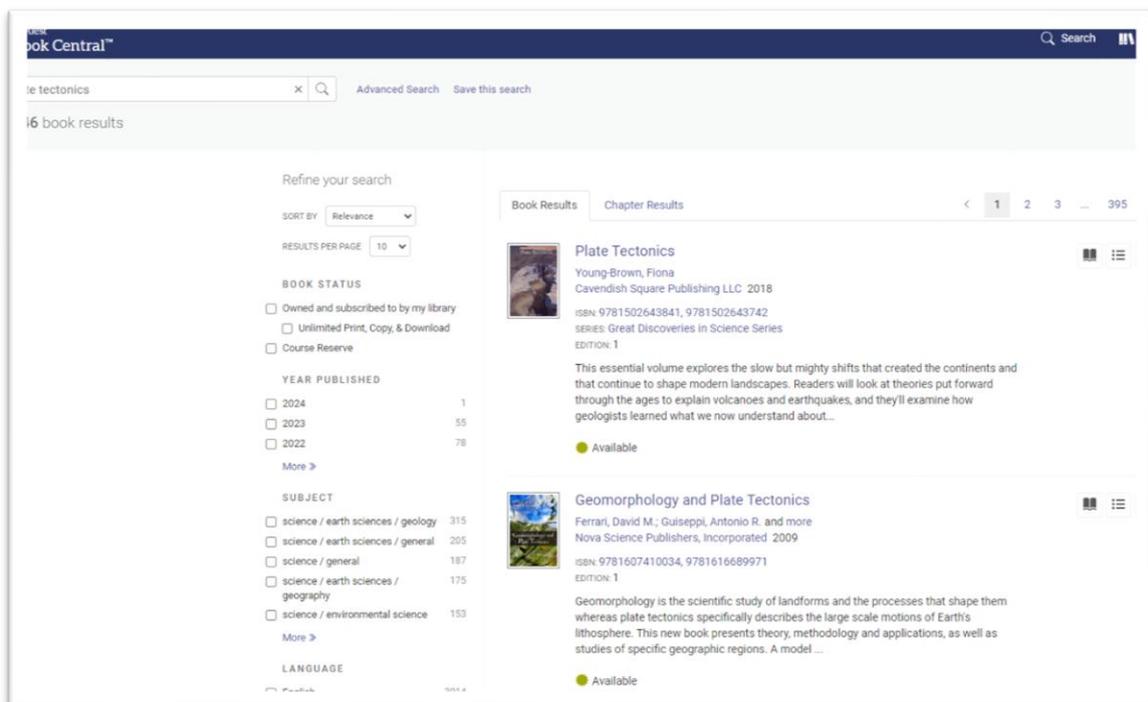
[JSTOR](#) provides access to more than 12 million scholarly journal articles and eBooks, and is especially good for primary sources.

The screenshot shows the JSTOR search results page for the query 'plate tectonics'. The search bar at the top left contains the text 'plate tectonics' and a magnifying glass icon. The JSTOR logo is visible in the top left corner. The search results are displayed in a list format. The first result is a 'JOURNAL ARTICLE' titled 'PLATE TECTONICS' by John F. Dewey, published in 'Scientific American, Vol. 226, No. 5 (May 1972), pp. 56-72'. The abstract for this article is visible: '...suitably selected axis of rotation (bottom illustration at left). Plate A is designated as fixed while plate B is rotated anticlockwise, EXTINCT TRANSFORM as viewed down the axis of rotation. As plate SURFACE AREA B rotates through angle omega (w), new GREAT CIRCLE OF PLATE A DESTROYED surface area is added symmetrically to both (EQUATOR)...'. To the right of the article title and author name are three buttons: 'Download', 'Save', and 'Cite'. The second result is a 'JOURNAL ARTICLE' titled 'plate tectonics' by Alvin Greenberg, published in 'The Georgia Review, Vol. 44, No. 3 (Fall 1990), p. 409'. The abstract for this article is visible: '...Greenberg plate tectonics in the tectonics of memory the heavy plates of the past slide up over the present like a'. To the right of the article title and author name are three buttons: 'Download', 'Save', and 'Cite'. On the left side of the page, there is a 'Refine Results' sidebar with sections for 'ACCESS TYPE', 'SEARCH WITHIN RESULTS', and 'CONTENT TYPE'. The 'ACCESS TYPE' section has two options: 'Everything' (radio button) and 'Content I can access' (radio button, selected). The 'SEARCH WITHIN RESULTS' section has a search bar with a magnifying glass icon. The 'CONTENT TYPE' section has two sub-sections: 'Academic content:' with options for 'Journals (11,890)', 'Book Chapters (112)', and 'Research Reports (15)'; and 'Primary source content:' with an option for 'Documents (202)'. The total number of results is '12,334 results'.

[Gale Interactive: Science](#) provides a comprehensive view of the most-studied science subjects. Authoritative, high-quality digital content is paired with interactive 3D models.



[ProQuest Ebook Central](#) Compiles a library of topic specific ebooks for you to access free through your SLQ membership.



ProQuest Central brings together 47 databases across 175 subject areas, providing easy intuitive access to an incredibly broad and comprehensive range of content.

The screenshot shows the ProQuest Central search interface. At the top, it says "Access provided by STATE LIBRARY OF QUEENSLAND". The search term "plate tectonics" is entered in the search bar. Below the search bar, it displays "524 results". On the left side, there are filters for "Sorted by" (set to Relevance), "Limit to" (Full text, Peer reviewed), "Source type" (Scholarly Journals (46,711), Books (7), Audio & Video Works (1), Dissertations & Theses (1,160), Newspapers (8,470)), and "Publication date" (53 - 2024 (decades) with a bar chart). The main results area shows three items:

- OUR PATCHWORK PLANET: The Story of Plate Tectonics**  
Kirkus Reviews; *Austin* Iss. 8, (Apr 15, 1995).  
... A comprehensive introduction to **plate tectonics**, written in a...  
...of tectonic **plates**, of continents and mountains, and the various ways of dealing...  
Abstract/Details Full text
- PLATE TECTONICS: The Insiders' History of the Modern Theory of the Earth**  
Kirkus Reviews; *Austin* Iss. 23, (Dec 1, 2001).  
... Firsthand reports of the birth of modern **plate tectonics**, the once...  
...**tectonics**," would join the revolution only much later.) Though many of the...  
...theory of the existence of the Juan de Fuca **plate**), Neil Opdyke (who studied...  
Abstract/Details Full text
- Plate tectonics in the twenty-first century**  
Zheng, Yong-Fei. *Science China. Earth Sciences*; Dordrecht Vol. 66, Iss. 1, (Jan 2023): 1-40.  
...**tectonics** through lithospheric subduction...  
...remote effect. Thus, **plate tectonics** is recognizable in rock records produced by...  
...**tectonics** are associated with a series of **plate** divergent-convergent coupling...  
Abstract/Details Full text - PDF (3 MB) Times cited 14 on Web of Science 297 References

At the bottom, a partial result is visible: "It changed how we understand the world: A revolutionary theory of **plate tectonics** came out of Newfoundland - but that isn't all".

# The Rock Cycle

Describe the key processes of the rock cycle, including the timescales over which they occur, and examine how the properties of sedimentary, igneous and metamorphic rocks reflect their formation and influence their use.

- Comparing the observable properties of different types of rocks and identifying them using a provided dichotomous key.
- Exploring the major processes of the rock cycle including weathering, erosion, deposition, melting, crystallisation, uplift, heat and pressure in the formation of different types of rocks.
- Analysing the role of forces and heat energy in the formation of different types of rocks and comparing how quickly or slowly different processes can occur.
- Examining fossil evidence, such as body, trace or opalised fossils, to predict how and when a rock was formed.
- Explaining the uses of different types of rocks with reference to their properties and formation.
- Exploring the traditional geological knowledges of first nations australians that are used in the selection of different rock types for different purposes.
- Investigating how first nations australians have used quarrying to access rocks for use as or production of everyday objects such as grindstones, hammerstones, anvils and cutting tools.
- Exploring how the mining of ores and minerals impacts on local environments and examining environmental rehabilitation initiatives.

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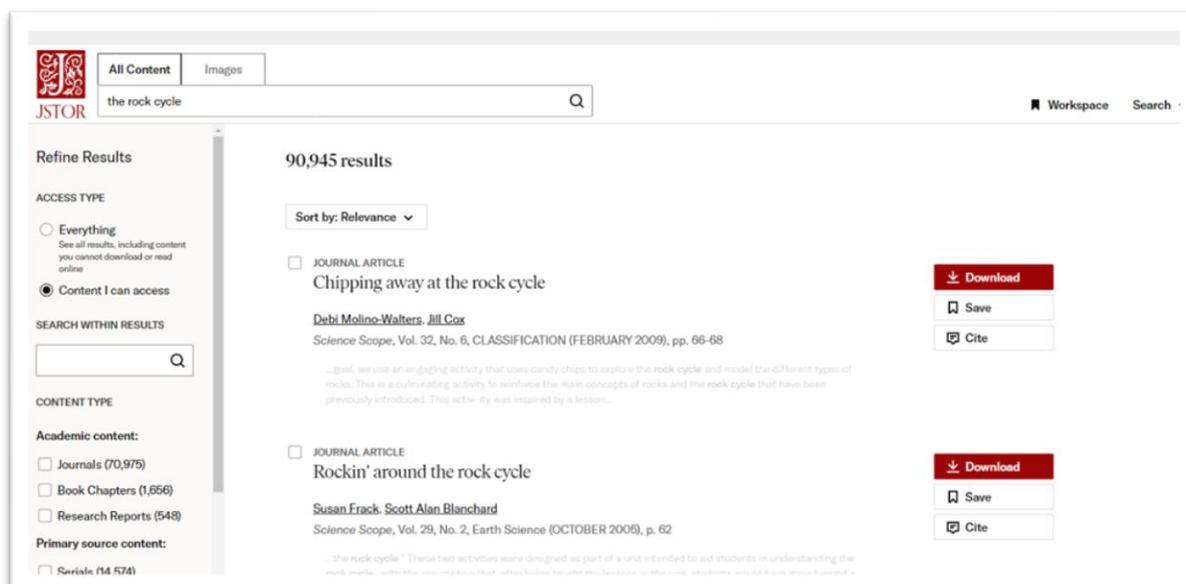
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The screenshot shows the National Geographic Virtual Library search interface. At the top, it says "GALE PRESENTS NATIONAL GEOGRAPHIC". Below this is a search bar containing the text "Rock Cycle, rock" and an "Advanced Search" button. The results section is titled "SHOWING RESULTS FOR" and lists "Books (1)". The search results are sorted by "Relevance". The first result is "Planetology: Unlocking the Secrets of the Solar System" by Tom Jones and Ellen Stofan, published by the National Geographic Society in 2008. The book cover features a globe and the word "PLANETOLOGY".

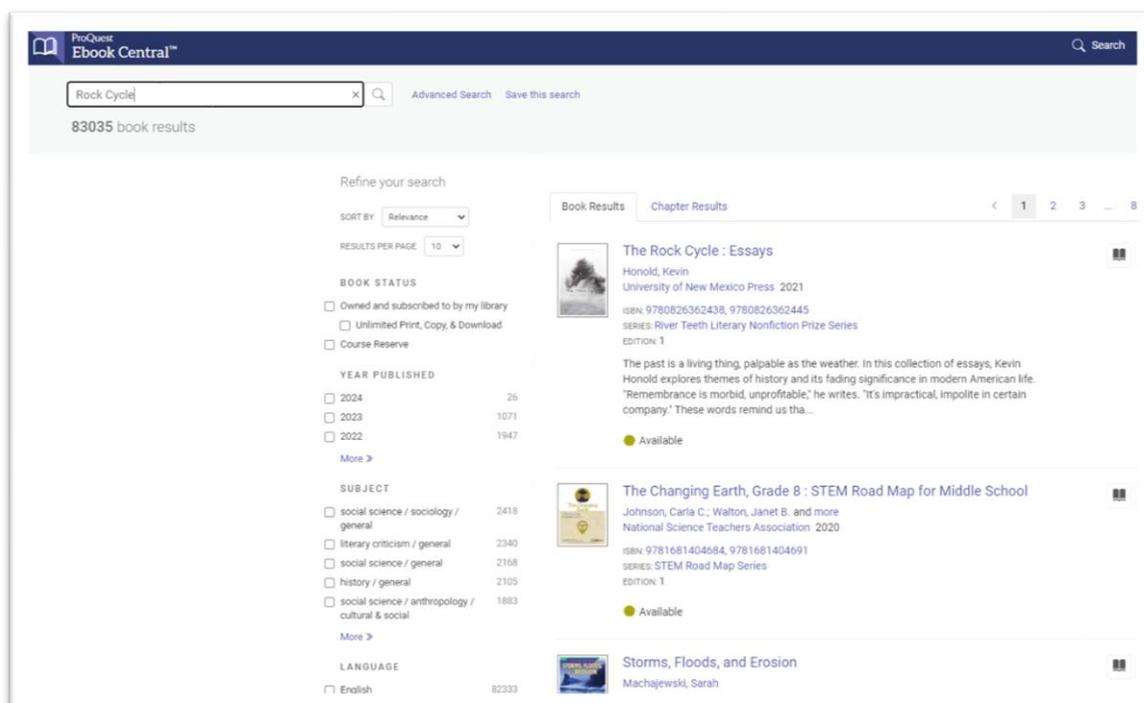
[Gale Interactive: Science](#) provides a comprehensive view of the most-studied science subjects. Authoritative, high-quality digital content is paired with interactive 3D models.

The screenshot displays the Gale Interactive Science interface. The main content area features a 3D model of the rock cycle with a text overlay that reads: "Rock Cycle. The rock cycle is the process through which rocks appear on Earth's surface and transform into other types of rock. The rock cycle is the result of natural phenomena including weathering, uplift". Below the model is a navigation bar with a play button and a question mark icon. To the right, there is a search bar and a "Rocks" section with a detailed definition: "Rock is solid Earth material formed by inorganic processes. However, this definition is not as simple or straightforward as it seems. For example, some solid organic substances may become rock. Seashells and wood are solid materials, but are not considered rocks because they are produced by living organisms. However, such materials can become rocks or parts of rocks if".

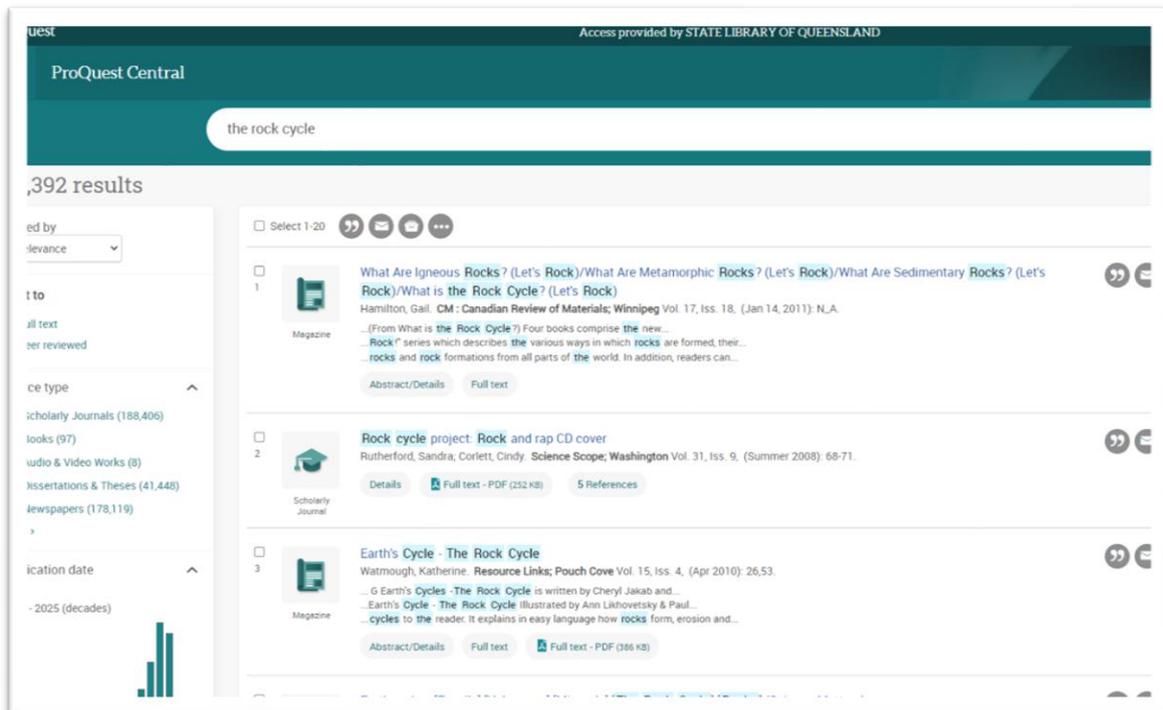
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