



STATE LIBRARY⁷
QUEENSLAND

Year 7

Physical Sciences

Student research guide

Cover: [Group of children on a large seesaw, possibly at Nanango](#), n.d, unidentified, [GS-23 Tarong Station Photograph Albums](#), State Library of Queensland. Negative number: 159657.

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Copyright information for teachers

This research guide is designed for individual use by students.

Please note, due to licensing arrangements, State Library of Queensland's subscription databases and ebooks are for private research and study purposes only. They may not be used as teaching resources in classroom environments in schools or other educational institutions and students must not be required to access specific databases or ebooks as part of the curriculum.

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.

Teachers are most welcome to advise students what is available via State Library, and to encourage students to make use of ebooks and databases to help with their studies. It is permissible for a teacher to demonstrate the use of State Library's catalogue, and to point out how various online material can be accessed.

It is also permissible for students to access State Library's online resources at school – but this must not be during class time. An example of permitted use might be where students have a spare period when they work on assignments or homework, and they are accessing databases as private members of State Library. Information about joining State Library is [here](#).

Please also note that State Library has digitised a range of material such as diaries, and out of copyright publications held in our collections. There are no restrictions on the use of this material as part of a teaching program – and no requirement to be a member of the library to use this material. This type of material can easily be found, [searching State Library's One Search catalogue](#) using the "SLQ digitised collections" option in the dropdown menu.

For more information about the use of copyright materials visit [Understanding copyright](#).

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.
- Complete the [Student research with State Library](#) module for a guide to navigating State Library's resources. Or visit the [One Search help page](#) for tips & tricks for searching One Search.
- You can search our [OneSearch catalogue](#) or begin exploring by clicking on some of the featured items contained in this research guide.

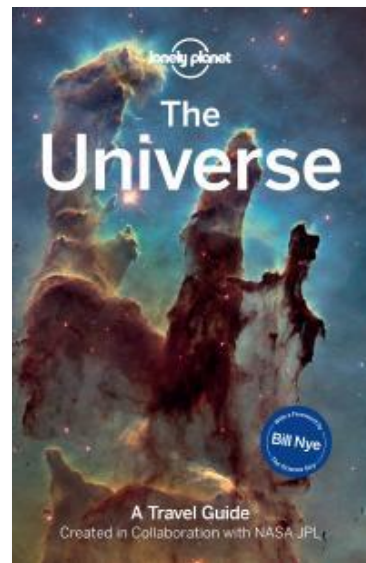
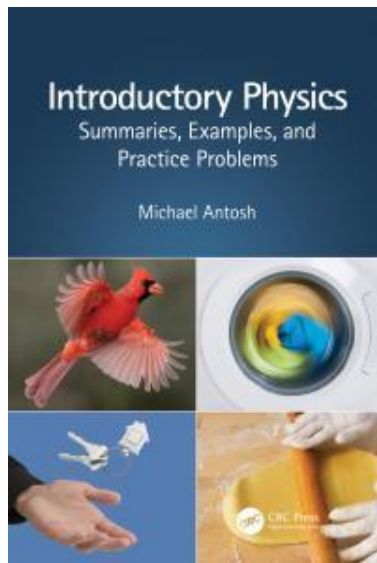
Student research with State Library

Feel more confident navigating State Library's resources to find high quality information sources for your assessments.

[Start module](#) 



Featured ebooks



Forces

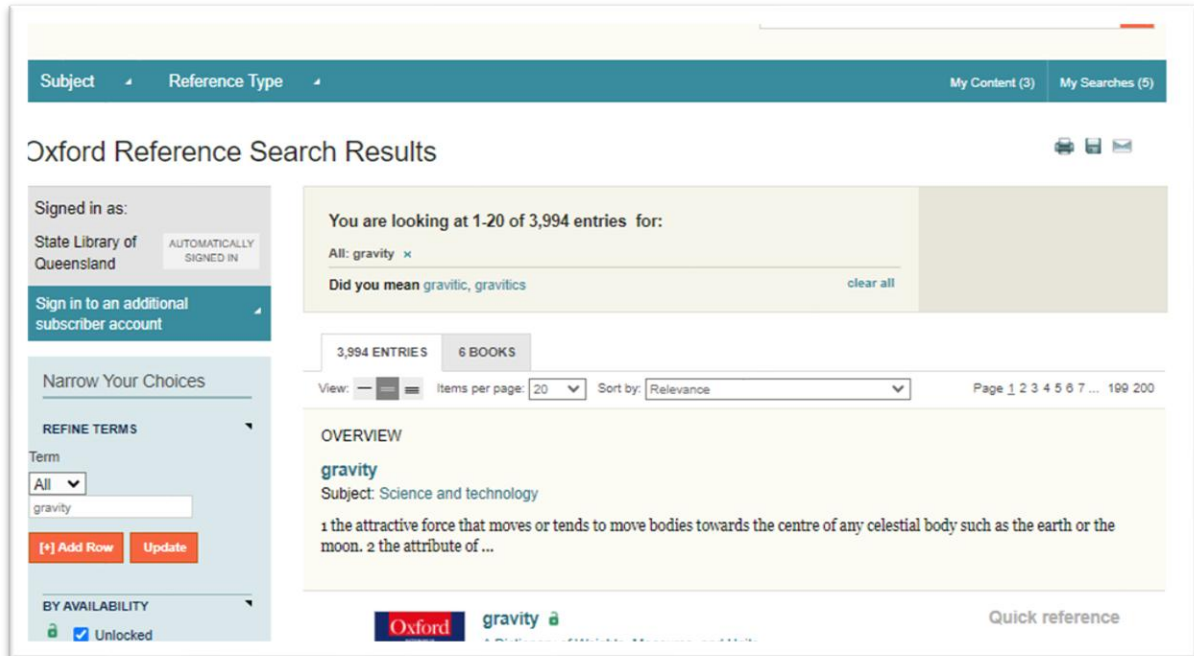
Investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it.

- Investigating the effects of applying different forces to familiar objects of the same and different mass.
- Analysing the effect of balanced and unbalanced forces on an object's motion, such as starting, stopping and changing direction.
- Measuring the magnitude of a force using a force meter and representing the magnitude and direction of forces acting on an object using force arrow diagrams.
- Investigating how Earth's gravitational force is the attractive force which pulls objects to the centre of Earth and its magnitude is related to the mass of an object.
- Investigating how simple machines such as levers and pulleys are used to change the magnitude of force needed to perform a task.
- Examining how gravity affects objects in space, including moons, planets, stars, galaxies and black holes.
- Analysing the forces acting on boomerangs and how early First Peoples of Australia designed an air foil profile which allowed for multiple variations and applications.
- Investigating the effect of forces through the application of simple machines, such as the bow and arrows used by Torres Strait Islander Peoples or the spearthrowers used by First Peoples of Australia.

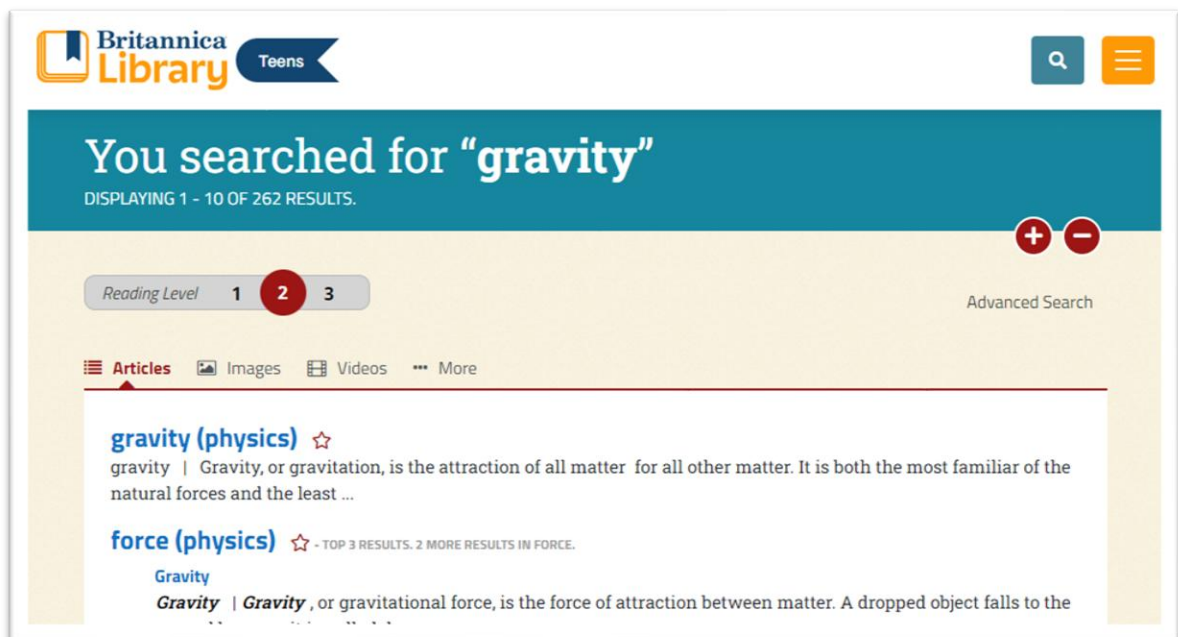
Featured databases

For easy reference

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

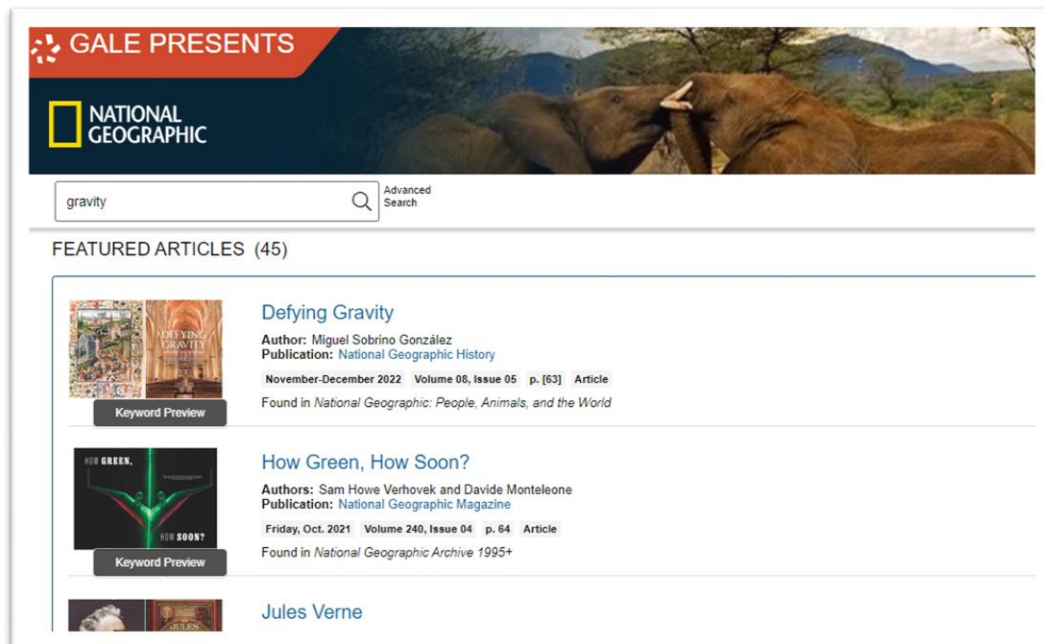


The [Britannica Library](#) has articles, images and more, with a selection of resources especially for teenagers.



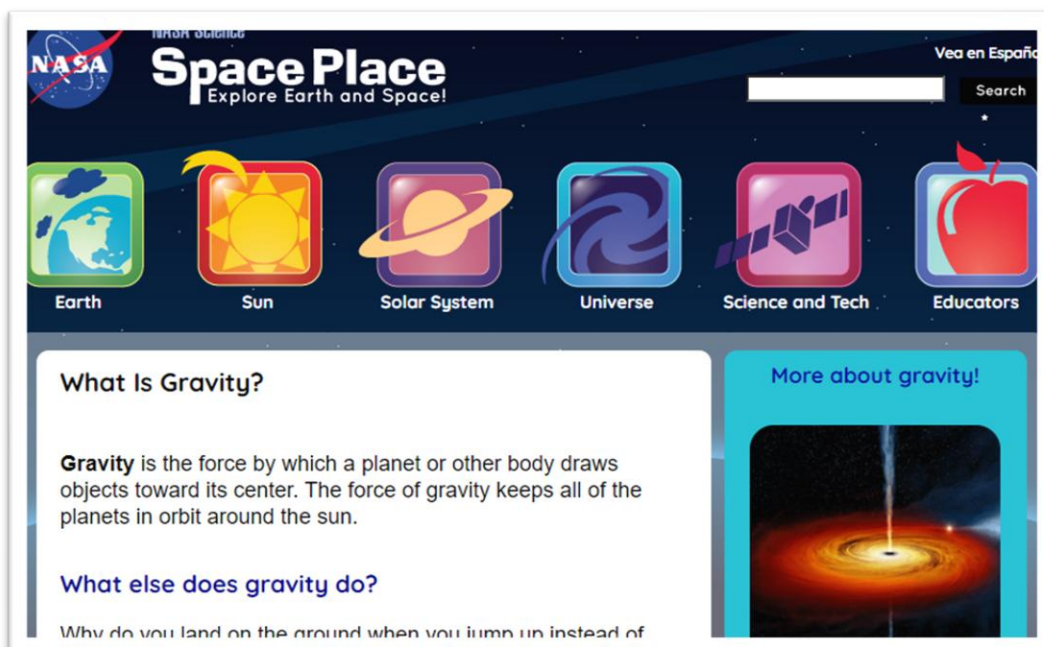
For engaging reading

[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.

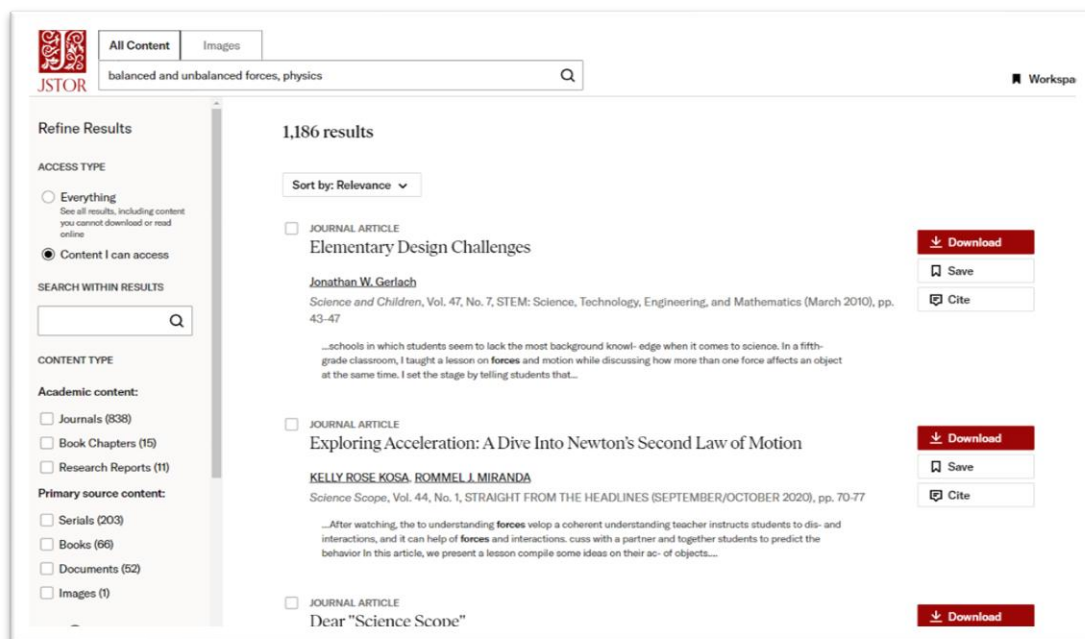


NASA

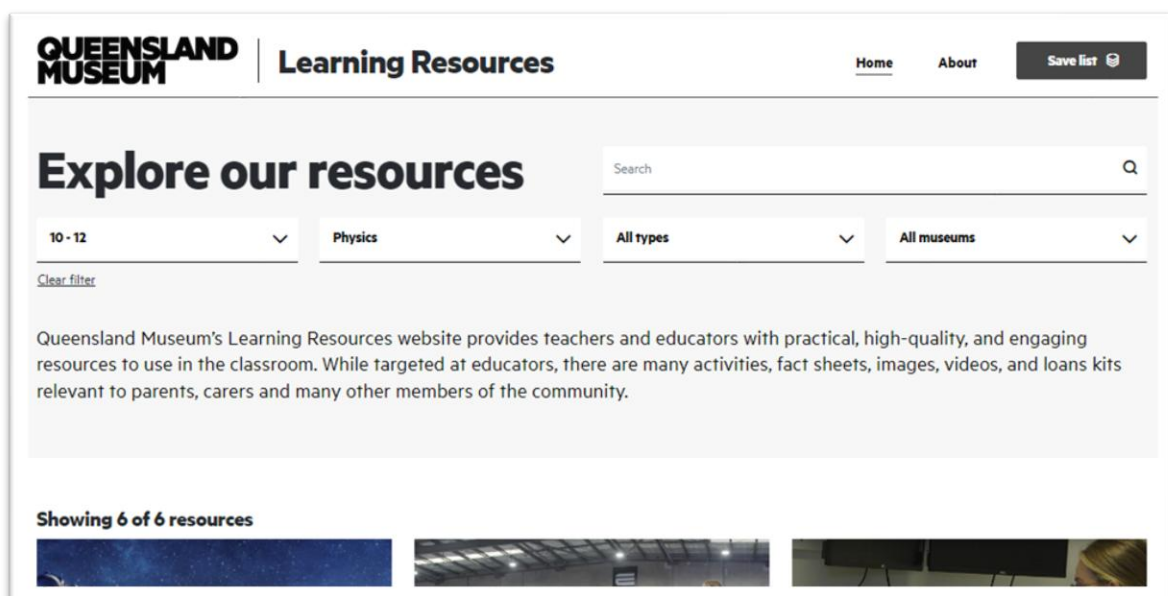
NASA's online educational portal contains simulations, videos, activities, and games that help build understanding of gravity and its effects on celestial and earthly objects.



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



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



More research

Borrow items

Order items online through State Library's One Search catalogue and [borrow items from State Library's collections](#) when you visit us onsite.

Ask a librarian

[State Library staff](#) are available to advise on keywords and search strategies and suggest databases to help you carry out independent research.

Please note that librarians can guide and support your research process, but they cannot complete your assessment, select sources for you or provide answers to assessment questions.