



STATE LIBRARY⁷
QUEENSLAND

Year 10

Biological Sciences

Student research guide

Unit 1 – Meiosis, Mitosis, Chromosomes and DNA

Unit 2 – Evolution and Natural Selection

Cover: [Fossil skull of Kronosaurus, Telemon Station near Hughenden, 1935](#), James Edgar Young, [James Edgar Young lantern slide and glass plate negative collection](#), State Library of Queensland. Image number: 7956-0001-0092.

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Date prepared: 24 November 2023

Date revised: 07 April 2026

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For other information 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.

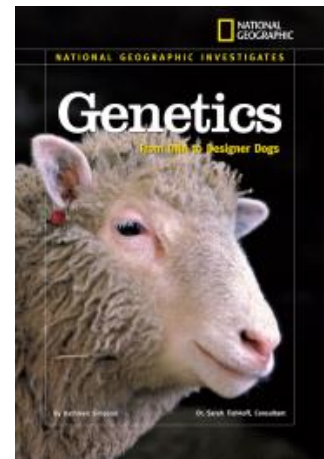
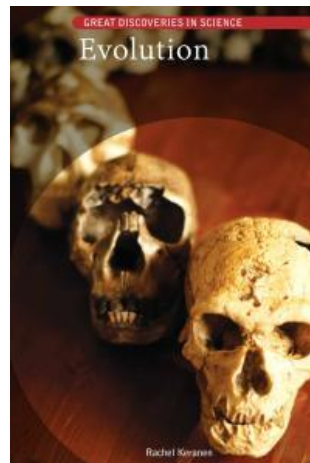
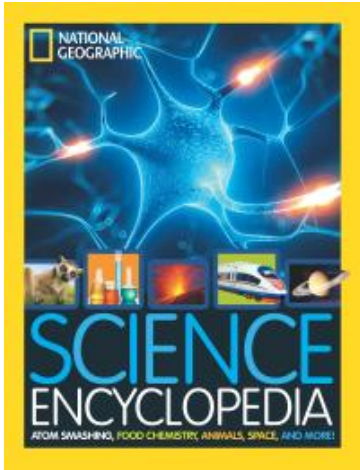
Student research with State Library

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

[Start module](#) 

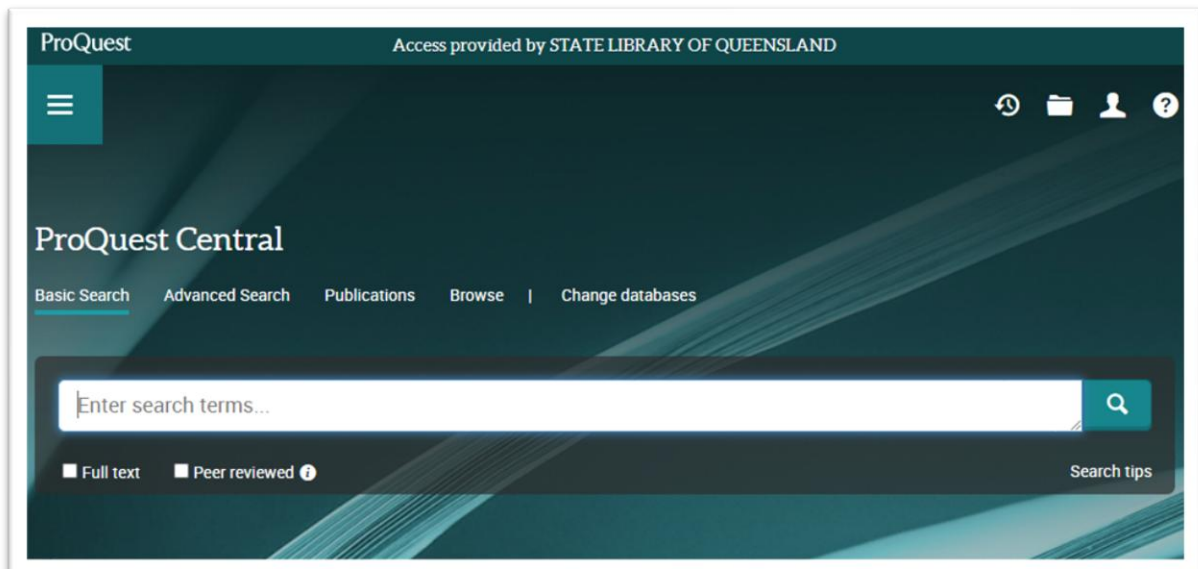


Featured ebooks

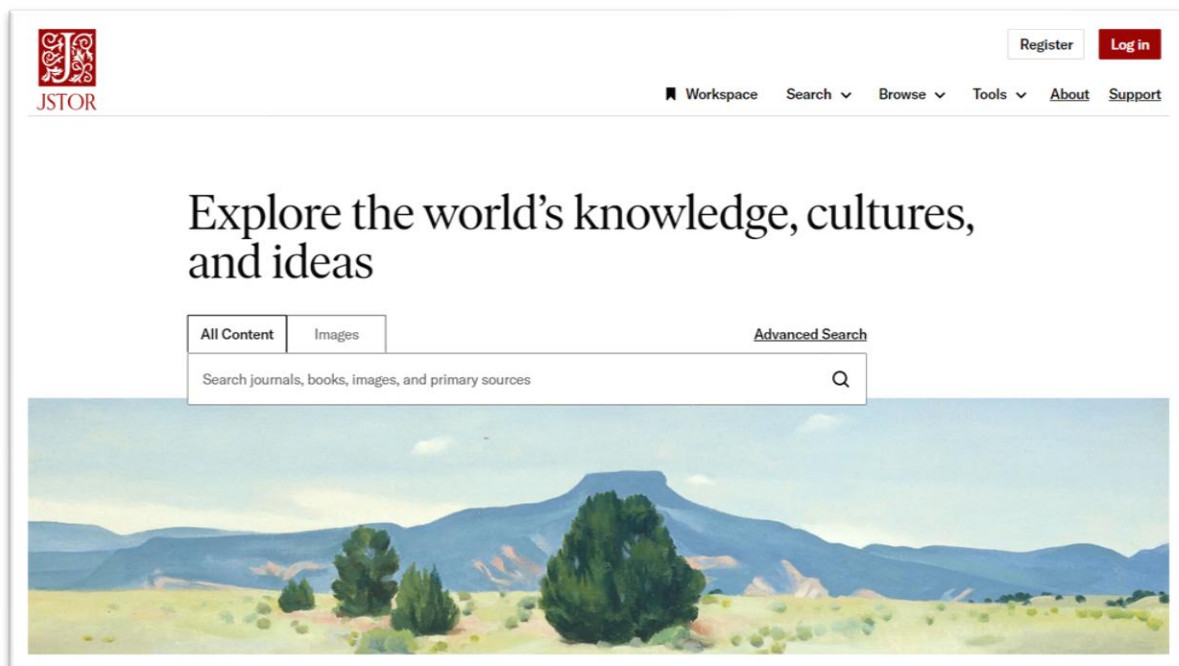


Featured databases

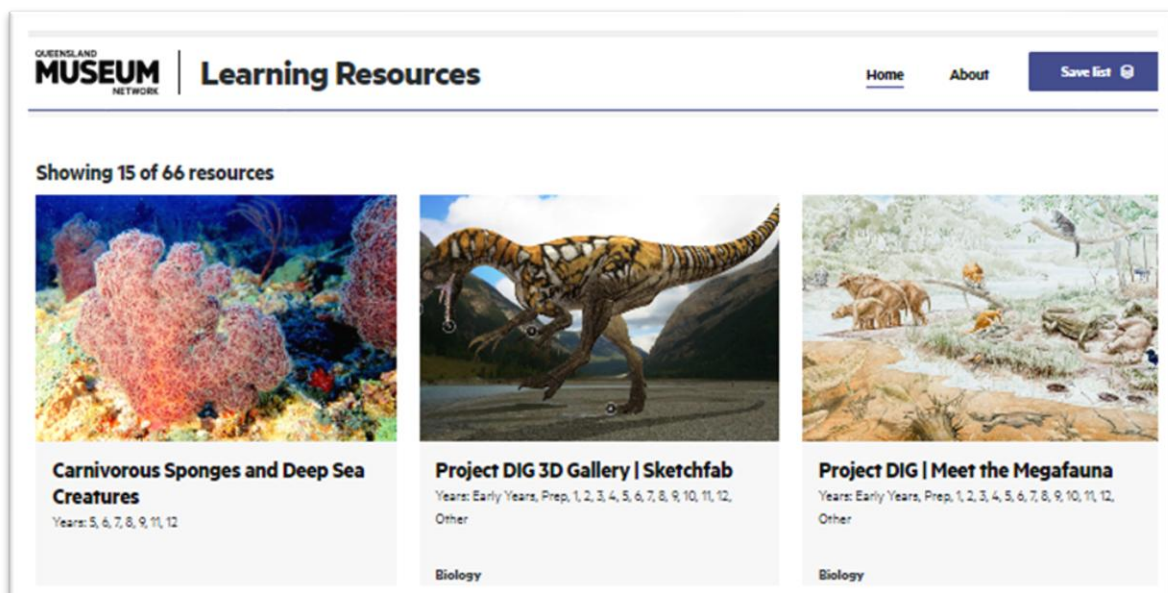
[ProQuest Central](#) brings together 47 databases across 175 subject areas, providing easy intuitive access to an incredibly broad and comprehensive range of content.



[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.



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**

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Ngurrara 2 way learning project



Publication date
Wednesday, 1 June 2016

Type
Presentation

Event
2016 National Native Title Conference

Brendan Fox , Peter Murray

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

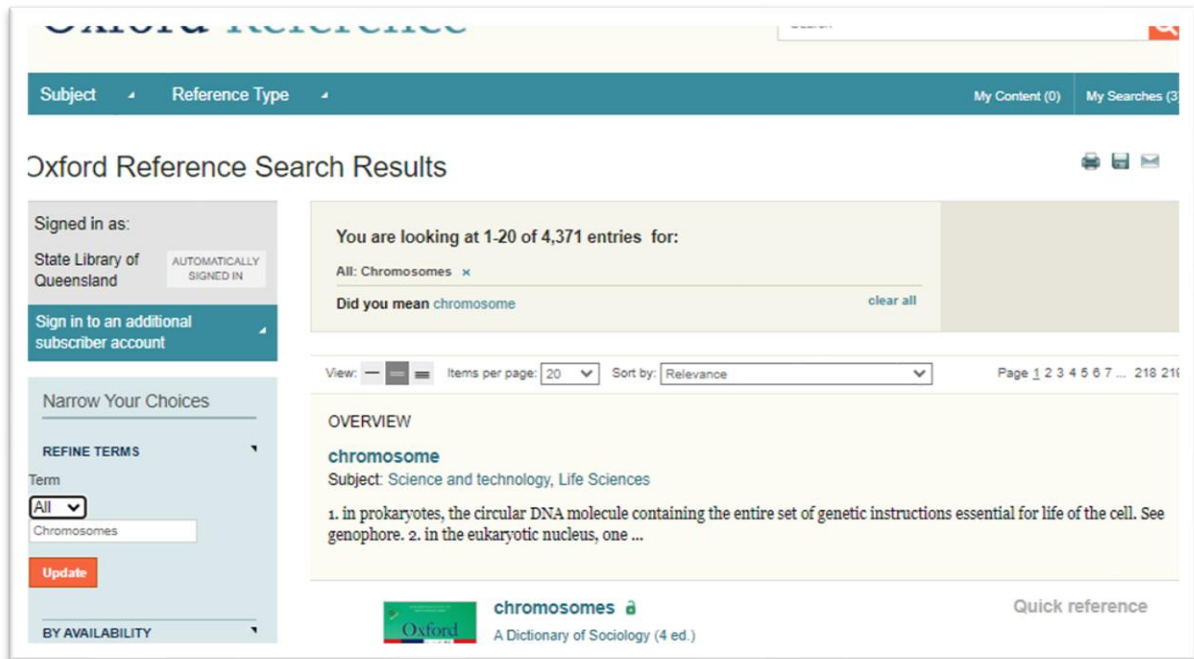
DNA, Chromosomes and Genetics

Explain the role of meiosis and mitosis and the function of chromosomes, DNA and genes in heredity and predict patterns of Mendelian inheritance.

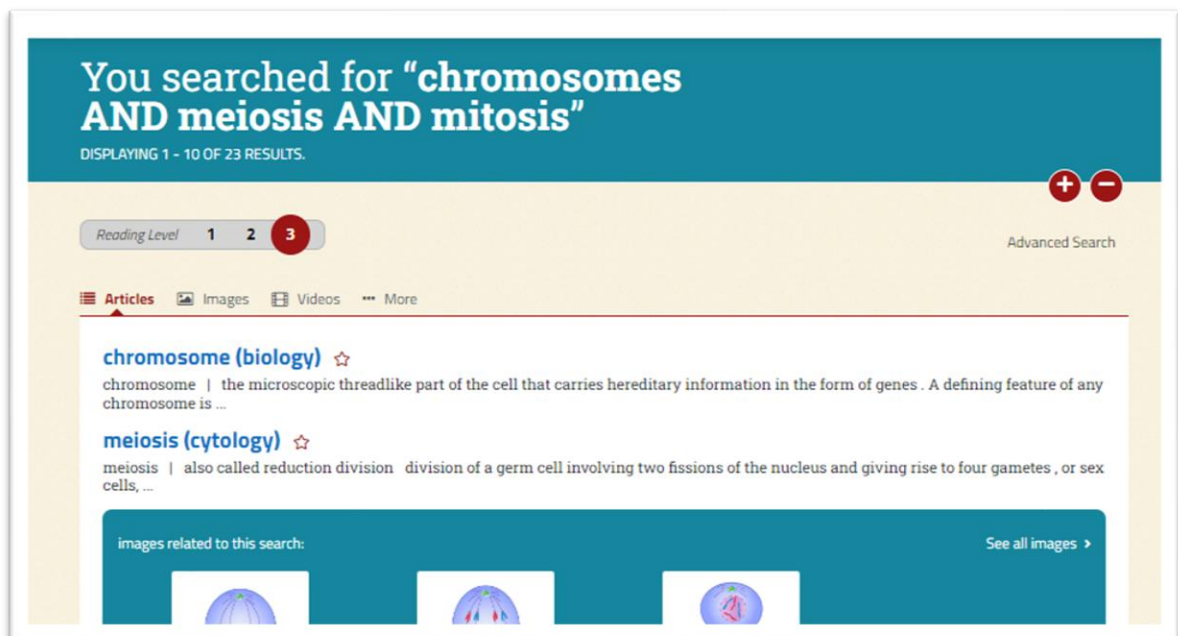
- Using models and diagrams to represent the relationship between genes, chromosomes, and DNA of an organism's genome.
- Explaining how genetic information passed on to offspring from both parents by meiosis and fertilisation.
- Using Mendelian inheritance to predict the ratio of offspring genotypes and phenotypes in monohybrid crosses involving dominant and recessive alleles or in genes that are sex-linked increases the variation of a species.
- Using pedigree diagrams to show patterns of inheritance of simple dominant and recessive characteristics through multigenerational families.
- Investigating First Nations Australians' knowledges of heredity as evidenced by the strict adherence to kinship and family structures, especially marriage laws.
- Exploring environmental and other factors that cause mutations and identifying changes in DNA or chromosomes.
- Exploring the role of DNA in cancer or genetic disorders such as haemochromatosis, sickle cell anaemia, cystic fibrosis or Klinefelter syndrome.

Featured databases

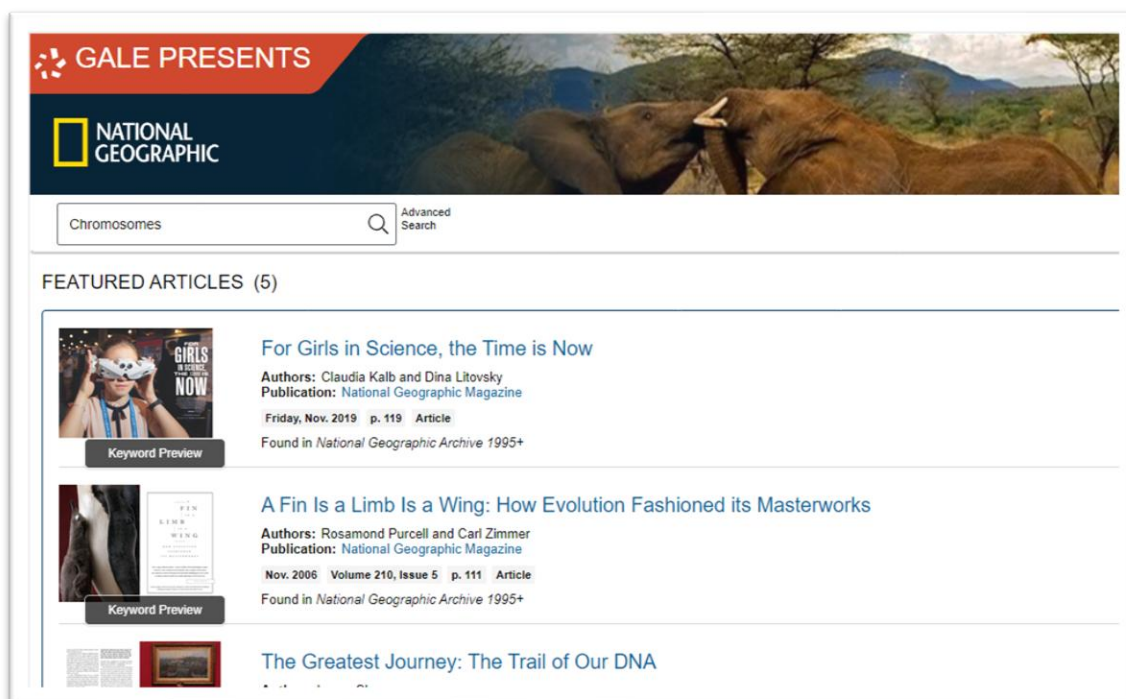
[Oxford Reference](#) spans 25 different subject areas, bringing together 2 million digitised entries across Oxford University Press's dictionaries, companions, and encyclopedias.



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

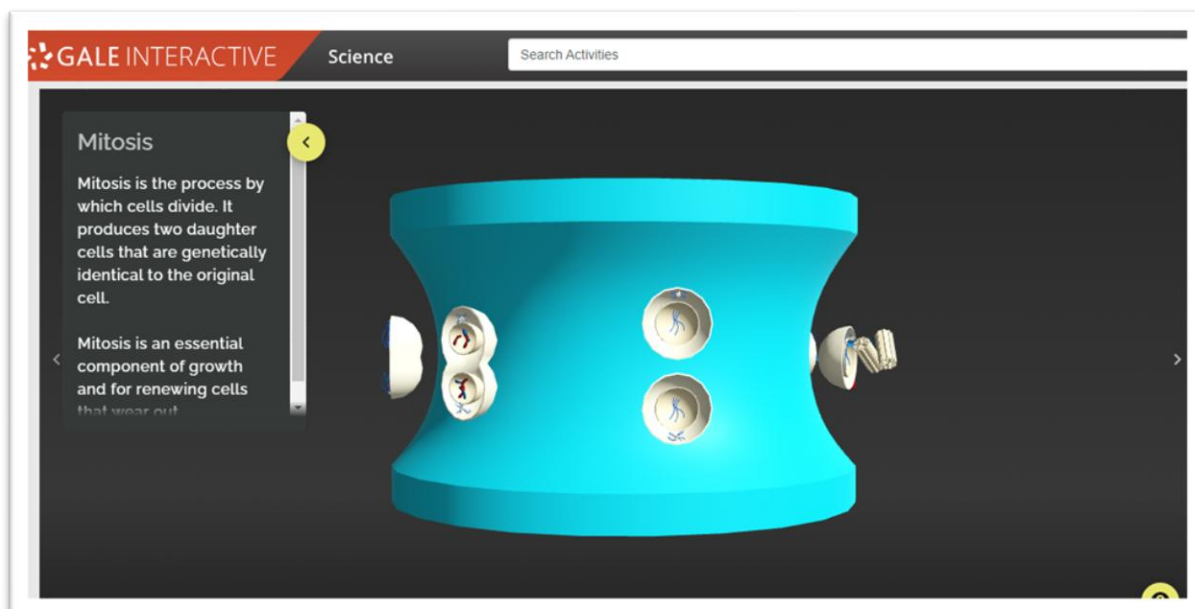


[National Geographic Virtual Library](#) is a powerful tool for research offering access to over 100+ years of magazines and hundreds of books, maps, videos, and images.



Science

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



[Gale Health and Wellness](#) provides access to trusted medical reference materials including journals, pamphlets, and health-related videos and articles from over 2,200 publications.

The screenshot shows the Gale Health and Wellness website interface. At the top, there's a header with the site name and a search bar containing the word 'genes'. Navigation links like 'Browse Topics', 'Search History', 'Get Link', and 'Highlights And More' are visible. Below the search bar, the results are categorized by content type: Reference (1,090), Magazines (166,813), Videos (180), Images (61), Audio (583), News (299,741), and Academic Journals (142,217). The 'Reference' category is selected, showing a list of results. The first result is 'Gene Therapy' from 'The Gale Encyclopedia of Neurological Disorders (Vol. 2, 4th ed.)'. To the right, there are filters for 'Full Text Documents', 'Document Contains Images', 'Consumer Health', 'En Español', and 'Peer-Reviewed Journals'. At the bottom right, there's a 'TOPIC FINDER' section with a button to 'Start the Topic Finder'.

GALE HEALTH AND WELLNESS

enes

[Browse Topics](#) [Search History](#) [Get Link](#) [Highlights And More](#)

[Home](#) > **Results**

SHOWING RESULTS FOR

Content Types

[Reference \(1,090\)](#) [Magazines \(166,813\)](#) [Videos \(180\)](#) [Images \(61\)](#)

[Audio \(583\)](#) [News \(299,741\)](#) [Academic Journals \(142,217\)](#)

ALL CONTENT TYPES

Search Terms: Basic Search: **genes** [Revise Search](#)

Applied Filters: [Full Text](#)

REFERENCE (1,090)

Gene Therapy

Authors: Katherine Hunt, Teresa G. Odle, and L. Lee Culvert

From: *The Gale Encyclopedia of Neurological Disorders* (Vol. 2, 4th ed.)

2023 3,771 words [Topic overview](#)

Gene therapy is a rapidly growing field of medicine in which specific genes are introduced into the body to treat diseases. Genes control heredity and provide the basic biological code for determining the functions of...

FILTER YOUR RESULTS

☒ Full Text Documents

☐ Document Contains Images

☐ Consumer Health

☐ En Español

☐ Peer-Reviewed Journals

TOPIC FINDER

Discover topics and results related to your search

Evolution and Natural Selection

Use the theory of evolution by natural selection to explain past and present diversity and analyse the scientific evidence supporting the theory.

- Outlining processes involved in natural selection including variation, isolation and selection.
- Examining biodiversity as a function of evolution.
- Analysing evidence for the theory of evolution by natural selection including the fossil record, chemical and anatomical similarities, and geographical distribution of species.
- Investigating changes caused by natural selection in a particular population as a result of a specified selection pressure such as artificial selection in breeding for desired characteristics.
- Relating genetic characteristics to survival and reproductive rates.
- Investigating some of the structural and physiological adaptations of first nations australians to the australian environment.

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

Subject Reference Type My Content (0) My Searches (0)

Oxford Reference Search Results

Signed in as: State Library of Queensland AUTOMATICALLY SIGNED IN

Sign in to an additional subscriber account

You are looking at 1-20 of 779 entries for: All: evolution AND "natural selection" x clear all

779 ENTRIES 3 BOOKS

View: Items per page: 20 Sort by: Relevance Page 1 2 3 4 5 6 7 ... 38 39

Constraints on Adaptation FREE
 Reference type: Overview Page Subject: Science and technology, Life Sciences
 Does natural selection lead to a "perfection of animals," as the indefatigable taxonomist Arthur Cain suggested in the 1960s? Or are there constraints on what natural selection can achieve, what ...

non-Darwinian evolution FREE
 Reference type: Overview Page Subject: Science and technology, Psychology

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

You searched for "natural selection AND evolution"

DISPLAYING 1 - 10 OF 65 RESULTS.

Reading Level 1 2 3 Advanced Search

Articles Images Videos More

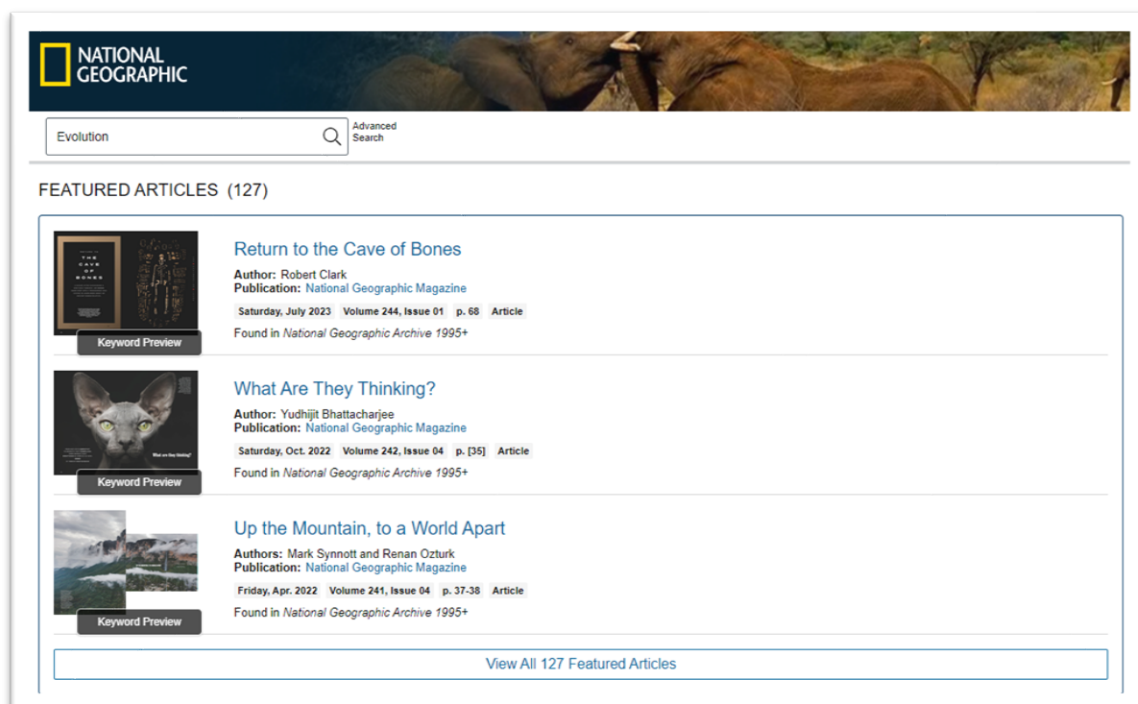
evolution (scientific theory) - TOP 3 RESULTS. 1 MORE RESULTS IN EVOLUTION.

Natural Selection Directs Evolution
 evolution | People have always wondered how life originated and how so many different kinds of plants and animals arose. Stories of a supernatural creation ...

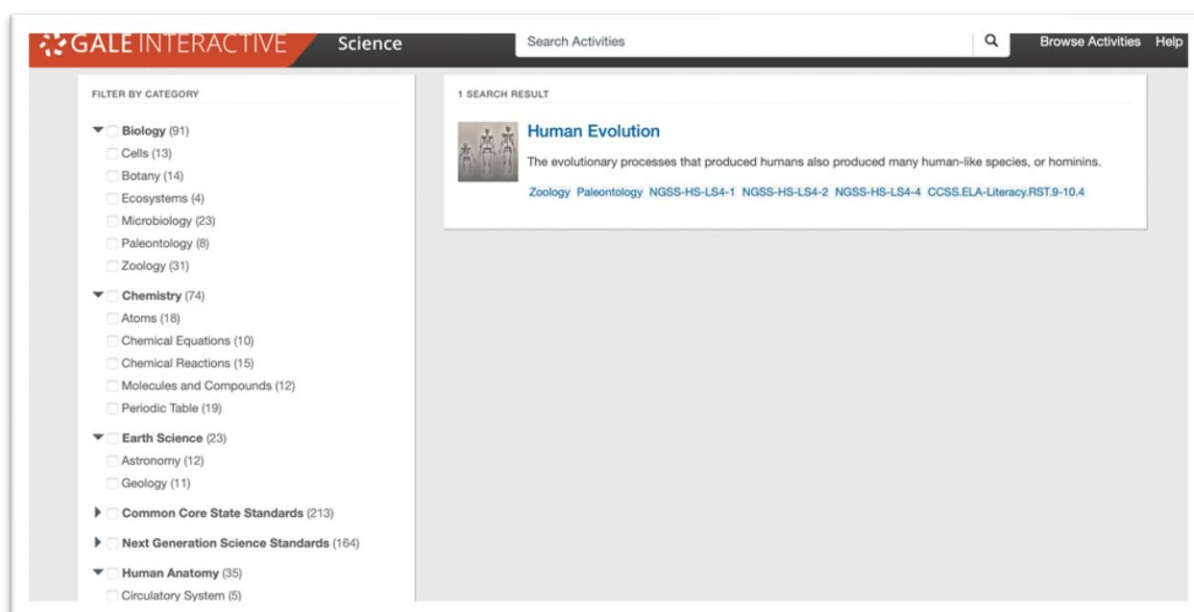
Genetic Factors in Evolution
 evolution | People have always wondered how life originated and how so many different kinds of plants and animals arose. Stories of a supernatural creation ...

Rates of Evolutionary Change
 evolution | People have always wondered how life originated and how so many different kinds of plants and animals arose. Stories of a supernatural creation ...

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Ask your teacher to [bring your classroom to State Library](#) and explore exhibitions, research for your assessments or undertake independent study.