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Britannica Academic User Guide

- For Students and Researchers -

Features

How-tos

Navigation



Britannica[®] ACADEMIC

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Welcome to Britannica Academic



Britannica Academic provides all the essentials for conducting thorough research - all from one site.

It delivers fast and easy access to high-quality, comprehensive information. The rich combination of the respected Encyclopædia Britannica plus Merriam-Webster's Collegiate Dictionary, magazines and periodicals, and many other research tools provides the variety of reliable sources that students need to consult when conducting thorough collegiate research.

Written by Nobel laureates, historians, curators, professors, and other notable experts, Britannica Academic's articles provide trusted information with balanced, global perspectives and insights that users will not find anywhere else.

Here's a guided tour of Britannica Academic's best features, navigation and FAQs.

Home Page

The screenshot shows the Britannica Academic Home Page with several callout boxes:

- Click our Britannica Academic logo to Return to Academic Homepage.** (Points to the logo in the top left navigation bar)
- Click to access different types of content or perform a key word search.** (Points to the search bar and the 'ARTICLE BROWSE', 'MEDIA BROWSE', and 'BIOGRAPHIES' buttons)
- World Atlas is a geographical tool that lets you explore statistics and related content for countries around the world (page 3).** (Points to the 'World Atlas' section)
- Keep on top of daily New & Revised Articles.** (Points to the 'NEW AND UPDATED ARTICLES' section)
- Stay updated with global headlines using our daily News Feeds from BBC News and other major media outlets.** (Points to the 'NEWS FROM BBC NEWS' section)
- Browse Content by category using Article and Media Browse (page 2).** (Points to the 'ARTICLE BROWSE' and 'MEDIA BROWSE' buttons)
- Discover the similarities and differences between any 2 countries using the Compare Countries tool (page 3).** (Points to the 'Compare Countries' tool)
- Access digital transcripts of letters, speeches, historical documents and other primary source material by clicking on any of the Recommended Primary Sources.** (Points to the 'RECOMMENDED PRIMARY SOURCES' section)

Browse Articles and Media

Articles **Media** Biographies

Articles



Clicking on [Article Browse](#) or [Media Browse](#) from the Homepage will let you delve into the contents of Britannica Academic by topic and subtopics.

Articles **Media** **Biographies**

+ - >

ERA

Click to select an era...

NATIONAL/CULTURAL ASSOCIATION

Click to select an association...

KNOWN FOR

Click to select an activity...

GENDER

- male
- female

Clear All Filters

DISPLAYING 1 - 10 OF 34,241 RESULTS.

Aakjær, Jeppe

(born Sept. 10, 1866, Aakjær, Den.—died April 22, 1930, Jenle), poet and novelist, leading exponent of Danish regional literature and of the literature of social



Aaliyah

American rhythm and blues singer and actress (born Jan. 16, 1979, Brooklyn, N.Y.—died Aug. 25, 2001, Abaco Islands, The Bahamas), was considered on the verge of



Aalto, Alvar

(born Feb. 3, 1898, Kuortane, Fin., Russian Empire—died May 11, 1976, Helsinki, Fin.), Finnish architect, city planner, and furniture designer whose international reputation



Aaron

(flourished 14th century bce), the traditional founder and head of the Israelite priesthood, who, with his brother Moses, led the Israelites out of Egypt. The figure of

Click on the [Biographies](#) tab to search and browse biographies of famous people by gender, era, cultural association and their field of expertise using [Explore Biographies](#). You can also navigate via the [Biographies](#) link on the Homepage.

Interactive World Atlas

You're viewing: **Asia > India**

Learn more about this place:
[Summary](#) | [Profile](#) | [Related](#)

India

Official name: Bharat (Hindi); Republic of India (English)

Form of government: multiparty federal republic with two legislative houses (Council of States [245¹]; House of the People [545²])

Head of state: President: Ram Nath Kovind

Head of government: Prime Minister: Narendra Modi

Capital: New Delhi

Official languages: Hindi; English

Official religion: none

Monetary unit: Indian rupee Rs³

Population: (2017 est.) 1,342,550,000

Total area (sq mi): 1,222,550

Total area (sq km): 3,166,391

Urban-rural population: Urban: (2015) 32.7% Rural: (2015) 67.3%

Life expectancy at birth: Male: (2010–2014) 66.4 years Female: (2010–2014) 69.4 years

Literacy: percentage of population age 15 and over: Male: (2007) 76.9% Female: (2007) 66.9%

World Atlas is a geographical tool that lets you explore statistics and related content for countries around the world. Use the Search box to research any country or region of interest.

Click on [Summary](#) to access the country article. Click on [Profile](#) to find current statistical information. Click on [Related](#) to locate other recommended Britannica content.

TOP 3 RESULTS. 172 MORE RESULTS IN INDIA.

Mahatma Gandhi
 (born October 2, 1869, Porbandar, India—died January 30, 1948, Delhi), Indian lawyer, politician, social activist, and writer who became the leader of the nationalist...

Alexander the Great
 (born 356 bce, Pella, Macedonia [northwest of Thessaloniki, Greece]—died June 13, 323 bce, Babylon [near Al-Hillah, Iraq]), king of Macedonia (336–323 bce), who overthrew the...

Tendulkar on Gandhi
 Dinanath Gopal Tendulkar first published his eight-volume biography of Mohandas Karamchand Gandhi, Mahatma, in 1951–54. He published a revised and expanded edition in...

Compare Countries

Stats | [Articles & Media](#)

Australia | Canada

	Australia	Canada
Official name(s):	Commonwealth of Australia	Canada
Form of government:	federal parliamentary state (formally a constitutional monarchy) with two legislative houses (Senate [76]; House of Representatives [150])	federal multiparty parliamentary state with two legislative houses (Senate [105 ^{1,2}]; House of Commons [338])
Executive Branch:	(Head of state) British Monarch: Queen Elizabeth II, represented by Governor-General: Sir Peter John Cosgrove (Head of government) Prime Minister: Malcolm Turnbull	(Head of state) Queen of Canada (British Monarch): Elizabeth II, represented by Governor-General: Julie Payette (Head of government) Prime Minister: Justin Trudeau
Capital(s):	Canberra	Ottawa
Language:	none ¹ (official language)	none (official language)
Religion:	none (official religion)	none (official religion)
Monetary unit(s):	Australian dollar (\$)	Canadian dollar (C\$)
Population:	(2017 est.) 24,503,000	(2017 est.) 37,708,000
Area:	2,969,976 (sq mi) 7,692,202 (sq km)	9,984,670 (sq mi) 25,968,084 (sq km)
Urban-rural population:	Urban: (2014) 89.3% Rural: (2014) 10.7%	Urban: (2014) 81.1% Rural: (2014) 18.9%
Life expectancy at birth:	Male: (2016) 79.8 years Female: (2016) 84.8 years	Male: (2016) 78.8 years Female: (2016) 83.8 years
Literacy: percentage of population age 15 and over:	Male: not available Female: not available	Male: not available Female: not available
GNI per capita (U.S.):	(2016) 54,420	(2016) 41,420

1 There is no official language. English is the most widely spoken language.

Stats | [Articles & Media](#)

Australia | Canada

Article:
 the smallest continent and one of the largest countries on Earth, lying between the Pacific and Indian oceans in the Southern Hemisphere. Australia's capital is Canberra....
[Full Article](#)

Images:
[More Images](#)

Videos:
[More Videos](#)

Discover the similarities and differences between any 2 countries using the Compare Countries tool.

Features of an Article

artificial intelligence (AI)

Alternate titles: AI, intelligence, artificial

Introduction

artificial intelligence (AI), the ability of a digital [computer](#) or computer-controlled not to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, cover meaning, generalize, or learn from past experience. Since the development of the [digital computer](#) in the 1940s, it has been demonstrated that computers can be programmed to carry out very complex tasks—as, for example, [discussing proofs for mathematical theorems](#) or playing [chess](#)—with great proficiency. Still, despite continuing advances, there are as yet no programs that can match human knowledge. On the other hand, some programs have been developed that enable professionals in performing certain specific applications as diverse as medical diagnosis

What is intelligence?

All but the simplest human behaviour is ascribed to intelligence. On the other hand, some programs have been developed that enable professionals in performing certain specific applications as diverse as medical diagnosis

Table of Contents

- Introduction
- What is intelligence?
- Methods and goals in AI
- Alan Turing and the beginning of AI
- Early milestones in AI
- Expert systems
- Connectionism
- Nouvelle AI
- Is strong AI possible?
- Additional Reading

Adjust the Text Size for easier reading. Increase text size by clicking "+" and reduce text size by clicking "-".

Jump to any part of an article by clicking on a subtopic link in the Table of Contents.

Hover your cursor over an image to Magnify it.

artificial intelligence

Experts have already developed several hundred of these machines that

Shakey

Shakey, the robot, was developed (1966-73) at the Stanford Research Institute, Menlo Park, California. The robot is equipped with a television camera, a range finder, and collision sensors that enable it to navigate in an environment. Shakey can perform a few basic actions, such as go forward, turn, and push, albeit at a very slow pace. Controlling Shakey, particularly the task of navigating in an environment, is a very difficult problem.

Clicking on any image or video in an article will open it up in an overlay window.

Click the slider on the right to see other media files from the article.

How do you save images and videos?

- Click to **Save Images** to your My Research account.
- Click to **Print** images, if available.
- Click to **Copy** media URL.
- Click to **Download** a video onto your computer.



species, and reaction to the environment are important. Those morphological features, including the shape and colour of bacterial colonies, are not always constant and can be influenced by environmental conditions. Important in the identification of a genus and species of bacteria are biochemical tests, including the determination of the kinds of nutrients a cell can use, the products of its metabolism, the response to specific chemicals, and the presence of particular characteristic enzymes. Other criteria used for the identification of some types of bacteria might be their antigenic composition, habitat, disease production, and requirement for specific nutrients. Some tests are based on the ultrastructure of the bacteria revealed under the [electron microscope](#) by negative staining and preparation of thin sections.

Robert J. Kadner
Kara Rogers

Additional Reading

A comprehensive survey of the vast array of bacterial species is presented in GEORGE M. GABRITY et al. (eds.), *Bergey's Manual of Systematic Bacteriology*, 5 vol., 2nd ed. (2001–12), a reference and sourcebook accepted as standard throughout the world for classification of bacteria and related microorganisms. Advanced textbooks covering all general characteristics of microorganisms—including morphology, physiology, biochemistry, ecological role, and classification—are MICHAEL T. MADIGAN et al., *Brock Biology of Microorganisms*, 14th ed. (2015); JOANNE M. WILLEY, LINDA M. SHERWOOD, and CHRISTOPHER J. WOOLVERTON, *Prescott's Microbiology*, 10th ed. (2015); and LUCY SHAPIRO and RICHARD LOSICK (eds.), *Cell Biology of Bacteria* (2011).

THOMAS D. BROCK, *The Emergence of Bacterial Genetics* (1990), describes the historical development of bacterial genetics and molecular biology. Additional coverage of the molecular and genetic features of bacteria is found in LARRY SNYDER et al., *Molecular Genetics of Bacteria*, 4th ed. (2013). CLIVE EDWARDS (ed.), *Microbiology of Extreme Environments* (1990); and CHARLES GERDAY and NICOLAS GLANDORFF (eds.), *Physiology and Biochemistry of Extremophiles* (2007), are detailed explorations of microorganisms that live in extreme environments.

Bacteria in the human body and their role in human health and disease are discussed in JULIAN MARCHESI (ed.), *The Human Microbiota and Microbiome* (2014).

Robert J. Kadner
EB Editors

Article Contributors



Article Contributors

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Robert J. Kadner - Professor of Microbiology, School of Medicine, University of Virginia, Charlottesville. Coauthor of *Essentials of Medical Microbiology*.

Scroll to the end of an article to see our suggestions for **Additional Reading** and research references.

Verify the source by clicking to see a list of **Article Contributors** and a short abstract about their accreditations in the subject matter.

Research Tools



How do you conduct a full search?

Bacteria



Advanced Search

ARTICLES DICTIONARY PRIMARY SOURCES JOURNALS / PERIODICALS

1. Type keywords or phrases into the search box, e.g. "bacteria" and press enter.

2. Click each icon to filter results by a content type, e.g. **Articles**, **Images**, **Videos**, **Dictionary**, **Journals/Periodicals**, **Primary Sources/E-books** or **Year in Review**.

4. Select from the search results or refine your search using **Advanced Search** (See over page).



ARTICLES

IMAGES

VIDEOS

DICTIONARY

JOURNALS / PERIODICALS

WEB'S BEST SITES

PRIMARY SOURCES / E-BOOKS

YEAR IN REVIEW

Didn't find what you're looking for?

Try Advanced Search

You searched for "Bacteria"

DISPLAYING 1 - 10 OF 883 RESULTS.

VIEW YOUR SEARCH IN ImageQuest

bacteria

bacteria | singular bacterium any of a group of microscopic single-celled organisms that live in enormous numbers in almost every environment on Earth

food preservation

Bacteria **Bacteria** are unicellular organisms that have a simple internal structure compared with the cells of other organisms. The increase in the number ...

Dehydration As a result of advances made during World...vegetables, skim milk, potatoes, soup mixes, and meats. Pathogenic (toxin-producing) **bacteria** occasionally withstand the ...

Pasteurization Equivalent conditions capable of...15 seconds. When the pH of a food is greater than 4.5, the heat treatment must be severe enough to destroy pathogenic **bacteria**.

IMAGES RELATED TO THIS SEARCH



infectious disease

Bacteria | **Bacteria** can survive within the body but outside individual cells. Some **bacteria**, classified as aerobes , require oxygen for

How do you conduct an advanced search?

Advanced Search lets you refine your search results using parameters. You can fill out one or more of the advanced search parameters available (below). Britannica's search engine will look for content that matches ALL of the parameters that you specify. E.g. The following Advanced Search query will only find content that contains:

The diagram illustrates the advanced search interface with several parameters and their corresponding search results:

- All of these words, and;** (with all the words): Renaissance literature
- Any one of these words, and;** (with any of these words): Petrarch, Machiavelli, Ariosto
- All of these words near each other.** (with these words near each other): humanist, philosophy
- This entire phrase, and;** (with the exact phrase): literary genres
- None of these words, and;** (without these words): Shakespeare

How do you use the Citation Tool?

The screenshot shows the 'Cite' popup window with the following content:

Cite
While every effort has been made to follow citation style rules, there may be some discrepancies. Please refer to the appropriate style manual or other sources if you have any questions.

Select citation style

- MLA
- MLA
- APA
- Harvard
- Chicago Manual of Style

Example citation text: *encyclopaedia Britannica*, 9
<https://academic.oup.com/encyclopaedia/article/bacteria/110416#>

1. Click "Cite" icon in the toolbar to open the Cite popup window. Then select your preferred standard citation style from the drop-down menu.

2. Highlight and copy the generated citation text. Paste into another document as required.

The screenshot shows the 'Select citation style' dropdown menu with 'Harvard' selected. Below the dropdown, the generated citation text is displayed:

Bacteria 2018. *Britannica Academic*. Retrieved 3 August 2018, from <https://academic.oup.com/levels/collegiate/article/bacteria/110416#>

How do you use the Britannica Academic toolbar?

The diagram shows the toolbar with the following icons and their functions:

- Send to Favourites or shared via Email.
- Print full article.
- Generate a Citation for the resource.
- Translate full article.
- Have the article read aloud to you by Text to Speech.
- Click to Enlarge Text Size.
- Click to Reduce Text Size.

My Research



How do you create a My Research account?

1. Click Sign in to My Research found in the top right corner of any page.

2. In the pop-up, click Create an account. You can also sign in with your Google Account if you have one.

Sign In

Sign in with Google

or

Username

Password

Sign In

Create an account.

Forgot your username or password?

Create Account

All fields are required.

MyUsername

Username must be 4 to 100 characters.

.....

Password must be 4 to 22 characters

.....

hello@myuni.edu

Create Account

3. In the new window, enter your details, then Create Account.

☆ How do you add content to My Research?

Favorite



1. Click the Star in the Media Gallery to add an image or video to My Research.

1. Click the Arrow in the article tool bar, then select "favourite" to add an article to My Research.

★ Item added to favourites.

You can also:

Add this to an existing Resource Pack:

Select resource packs...

Create a new Resource Pack and add this item:

Bacteria Project Create

2. When prompted, you can select to save the item to an existing Resource Pack or create a new pack by entering a pack (or folder) name.

📁 How do you organise your content?

Click to see all your Saved Content.

Create New Pack.

To organise your items, Drag and Drop any saved content over into a resource pack on the left.

My Content

Welcome, Willa Wei

★ All Favourites
25 items

Create a new resource pack!
What are Resource Packs?

- Bacteria Project 2 items
- Indonesia 0 items
- World War II: Australia 11 items
- Aboriginal - people, history and culture 11 items

★ Favourites and Resource Packs

Bacteria Project

Rename Pack | Delete Pack | Email Pack | Share Pack

In this pack: 1 Video, 1 Article

Edit / Add Content

Filter by content type:



bacteria

VIDEO

Special staining and imaging techniques were used to create these photographs of bacteria (yellow) and phagocytes (red).

Video on Bacteria staining - see reference for more sources



bacteria

ARTICLE

any of a group of microscopic single-celled organisms that live in enormous numbers in almost every environment on Earth, from deep-sea vents to deep below Earth's surface to...

Good introductory notes on Bacteria strains

Click on My Content in the top right corner of every page to go to My Britannica portal.

Share your packs via a generated link or email.

Click to Filter your content by type e.g. images.

Add Notes to your saved content.

English as a Foreign Language Support

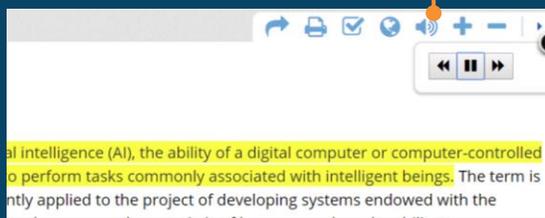
AB Dictionary

Double-click any word in an article to see a Quick-Click Dictionary definition! English and Spanish language available.



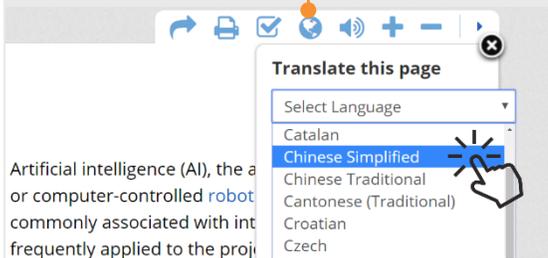
Text to Speech

Click the top-of-page Audio icon to listen to an audio version of the article with our Text-to-Speech feature.



Content Translator

Click the globe icon to open the Translate tool. Select the language you wish to translate to from the dropdown menu.



artificial intelligence (AI)



Do you need help?

Please speak to your librarian if you have questions about using Britannica Academic or any of the features. You can also contact us directly through our:

Website: <https://elearn.eb.com>

Email: contact@eb.com.au

Watch it in action - Our inhouse trainers demo features and tips of using Britannica Academic for collegiate research:

Training Video: <https://bit.ly/2YOa3e4>