



Serving Northern
British Columbia

Physics

Library Subject Guide

<http://library.nlc.bc.ca>

Information literacy is a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information."

Association of College and Research Libraries

Physics is the branch of science that deals with the nature and properties of matter and energy. Its subject matter includes mechanics, heat, light and other radiations, sound, electricity, magnetism and the structure of atoms. Northern Lights College offers several physics courses, such as Advanced Physics (Physics 11 or ABE Advanced Level Physics equivalency), Provincial Physics, Mechanics (Calculus), and Electromagnetism (Calculus).

Ask a Librarian for assistance in finding relevant books and journal articles and/or if you need help researching a course related topic. The librarian will also provide assistance in using the Library's website, online catalogue, article databases, and the Internet. Contact the librarian directly or use the "Ask a librarian" section on the Library web pages.

Dawson Creek Library

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Fort St. John Library

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Related Subject Guides: view the following Library Subject Guides for related information: **Chemistry**, and **Electrical/Electronics**.

REFERENCE

Consulting dictionaries, encyclopedias and handbooks can be a useful starting point for learning. Many of these sources provide basic information, overviews of topics, as well as introduce specialized terminology and detailed information. Major reference works are held mainly at the DC and FSJ libraries. Reference librarians on those campuses will research these materials for faculty and students. Simply fill out the "Ask the Librarian" form on the library webpage or contact the library directly. Some titles of interest located in the reference section are:

Dawson Creek Reference Collection

QB 14 A873 1992	Astronomy and astrophysics encyclopedia	AC 1 G72 1990 V.32	Mathematical principles of natural philosophy
QB 44.2 M667 1998	Atlas of the universe	QC 5 M34 2003	McGraw-Hill dictionary of physics
QC 61 W67 2000	Cambridge handbook of physics formulas	Q 121 M3 1997	McGraw-Hill encyclopedia of science & tech.
QA 5 W45 1999	CRC concise encyclopedia of mathematics	QC 5 M15 1996	Macmillan encyclopedia of physics
QD 65 H3 1997	CRC handbook of chemistry and physics	QB 44.2 M66 1984	New atlas of the universe
HF 5712 D47	Desk companion: how to measure, convert, calculate	AC 1 G72 1990 V.26	On the loadstone and magnetic bodies
QB 14 E53 2001	Encyclopedia of astronomy and astrophysics	TJ 255 E42 1999	Reed's applied heat for engineers
QC5 F34 1999	Facts on File dictionary of physics	Q 121 W65 1990	World Book encyclopedia of science

Fort St. John Reference Collection

TJ 265 E23 1993	Applied thermodynamics for engineering tech.	QE 5 E51 1998 V. 1	Encyclopedia of earth and physical sciences
QB 44.2 M66 1974	Concise atlas of the universe	QC 94 C37 2003	Encyclopaedia of scientific units, weights, and Energy dictionary
QD 65 H3 1913	CRC handbook of chemistry & physics	TJ 163.2 H87	
QD 65 H3 2004	CRC handbook of chemistry & physics	QB 14 F3 1985	Facts on File dictionary of astronomy
QA 37 M315 1981	CRC standard mathematical tables	QE 5 M33 1996 V.1	Macmillan encyclopedia of earth sciences
HF 5712 D47	Desk companion: how to measure, convert, calculate	QC 5 M34 2003	McGraw-Hill dictionary of physics
TJ 163.16 D5 1983	Dictionary of energy	TJ 255 E42 1999	Reed's applied heat for engineers
QE 28 E12 2001 V1	Earth Science	Q121 W65 1990	World Book encyclopedia of science

CLASSIFICATION SYSTEM:

To assist you in browsing the collection, try the following areas:

QC 220-246	Acoustics	QC 170-197	Atomic Physics	QC 251-338.5	Heat	QC 1-999	Physics
QB 1-991	Astronomy	QC 501-766	Electricity & Magnetism	QC 770-798	Nuclear, Particle Physical, Atomic Energy		
QB 460-460	Astrophysics	QC 801-849	Geophysics	QC 350-467	Optics	QC 81-114	Weights & Measures

LIBRARY CATALOGUE AND ELECTRONIC DATABASES

To find books, journals, and audiovisual materials on your topic, search the library's online **catalogue**. If you are looking for journal articles, search the library's online **journal article indexes & electronic databases**. Use **keywords** to search the online catalogue and/or electronic databases. A keyword is a word or term that best describes the information you are looking for. You can search the library catalogue or an electronic database for either a single keyword or a combination of keywords in order to find articles in an electronic database or books in the online catalogue containing the keyword(s).

Examples of keywords:

acceleration	infrared optic materials	quantum theory
celestial bodies	kinetic energy	relativity
electricity and magnetism	magnetic fields	solid state physics
electron scattering	mechanics	speed and velocity
elementary particles	momentum of an object	thermochemical
force and energy	motion and forces	wave diagram

PERIODICALS & NEWSPAPERS:

The library currently subscribes to several periodicals and newspapers of particular interest to students. To check for campus and holdings, search the title in WebCat.

Periodical Title.....	Library Holdings.....	Campus Library
Discover	3 years + current	FSJ
Science	1969-current	DC/FSJ
Science News	2 years +current	FSJ
Scientific American	1967-current	DC/FSJ

DATABASES & INDEXES:

access: <http://nlc.bc.ca/library/articleindexes.php>

Academic Search Premier: Provides coverage for social sciences, humanities, education, computer sciences, arts and literature, medical sciences, and ethic studies. Citations and full text available. 1984-present. Updated monthly.

AccessScience: Provides general science reference offering fulltext resources updated daily.

Canadian National Research Council Press Journals: Canadian science journals in earth sciences, biology, forestry, aquatic sciences, chemistry, physics. Fulltext 1977-current

CPI.Q: Provides coverage of current event, health, technology, arts, history, culture, and business. 400 Canadian periodicals with 137 fulltext. 1988-present.

Ingenta: Provides over 17,000 scholarly journals in all subject areas.

Science Indexes: Provides citations on astronomy, agriculture, biology, botany, chemistry, conservation, earth science, forestry, horticulture, medicine, physics and zoology. 1983-present.

WEB SITES

Astronomy

Astronomy Resources - Space Telescope Science Institute (STScI): <http://www.stsci.edu/resources/>

Calvin College Observatory Astronomy Links: <http://www.calvin.edu/academic/phys/observatory/extlinks.html>

Canadian Space Agency: <http://www.space.gc.ca/asc/index.html>

Extended <http://www.calvin.edu/academic/phys/observatory/extlinks.html>

Library of Congress Selected Internet Astronomy Resources: <http://www.loc.gov/rr/scitech/selected-internet/astronomy-selected.html>

NASA: <http://www.nasa.gov/>

Constants & Conversions

Constants and equations – TCAEP: <http://www.scenta.co.uk/tcaep/index.htm>

Dictionary of Units – Cleave Books: <http://www.cleavebooks.co.uk/dictunit/index.htm>

NIST Reference Data on Constants, Units and Uncertainty: <http://physics.nist.gov/PhysRefData/contents.html>

Electronic Journals (free full text)

Canadian Journal of Physics: http://pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2_desc_e?cjp

General

DC Physics - : <http://www.dctech.com/physics/>

eFunda – Engineering Fundamentals: <http://www.efunda.com/home.cfm>

Intute - Physics: <http://www.intute.ac.uk/sciences/physics/>

Martindale's The "Virtual" Physics Center: <http://www.martindalecenter.com/GradPhysics.html>

Nano, Quantum & Statistical Mechanics & Thermodynamics Educational Sites:

<http://tigger.uic.edu/~mansoori/Thermodynamics.Educational.Sites.html>

Net Advance of Physics – Massachusetts Institute of technology (MIT): <http://web.mit.edu/redingtn/www/netadv/>

Physics and Astronomy Online - Physlink: <http://www.physlink.com/>

Physics Central <http://www.physicscentral.com>

Physics.Org - Institute of Physics: <http://www.physics.org/index.asp>

Physics Web <http://physicsweb.org/>

Potter's Science Gems: <http://www.sciencegems.com/physical.html>

Usenet Physics FAQ: <http://math.ucr.edu/home/baez/physics/>

Online/Interactive Tutorials

Acoustics and Vibrations Animations: <http://www.gmi.edu/~drussell/Demos.html>

Educational Models and Simulations - Syracuse University Physics: <http://suhep.phy.syr.edu/courses/modsim.html>

Electricity and Magnetism - Animations, Applications and simulations - PH2200 University Physics II - Michigan Tech University:

<http://www.phy.mtu.edu/~weidman/ph2200/pages/simapp.html>

Fear of Physics: <http://www.fearofphysics.com/index.html>

• Virtual Physics: <http://www.fearofphysics.com/index1.html>

Flash Animations for Physics: http://www.upscale.utoronto.ca/GeneralInterest/Harrison/Flash/#class_mech

Interactive Physics and Math with Java - Guelph University: http://www.physics.uoguelph.ca/applets/Intro_physics/kisalev/

Mechanics - Kansas State University: <http://phys.educ.ksu.edu/>

Physics 2000 - University of Colorado - Boulder - <http://www.colorado.edu/physics/2000/index.pl>

The Physics Classroom - high school physics Tutorial: <http://www.glenbrook.k12.il.us/gbssci/phys/Class/BBoard.html>

Visual Quantum Physlets - concepts and processes in physics: http://qbx6.ltu.edu/s_schneider/physlets/main/index.shtml

Reference

Glossary of Frequently Misused or Misunderstood Physics Terms and Concepts - D.E. Simanek of Lock Haven University:

<http://www.lhup.edu/~dsimanek/glossary.htm>

Light and Matter – Physics and Astronomy Resources: <http://www.lightandmatter.com/index.html>

• Free downloadable textbooks: <http://www.lightandmatter.com/area1.html>

• Glossary of Physics Terms: <http://www.lightandmatter.com/area1glossary.shtml>