

SCIENCE SUBJECT GUIDE - I/S

Books:

100 greatest science discoveries of all time / Kendall Haven
Q180.55.D57 H349 2007

All in a day's work: careers using science / by Megan Sullivan
Q149.U5 S92 2007

Analyze this!: understanding the scientific method / Susan Glass
on order

Assessment in science: practical experiences and education research / Maureen
McMahon
LB1585 .A785 2006

Best practices for teaching science: what award-winning classroom teachers do /
Randi Stone
LB1585 .B44 2007

Developing scientific literacy: using news media in the classroom / Ruth Jarman
and Billy McClune
Q181.J37t 2007

**(The) Essentials of science, grades 7-12: effective curriculum, instruction, and
assessment** / Rick Allen
Q181 .A414 2007

Forensic DNA analysis / Lawrence Kobilinsky, Louis Levine, Henrietta Margolis-Nunno
RA1057.55 K63 2007

Handbook of research on science education / Sandra K. Abell and Norman G.
Lederman
Q181 .H149 2007

History of science / Philip Steele
Q125 .S7424 2007

Improving subject teaching: lessons from research in science education / Robin Millar ... [et al.]
Q181 .I623 2006

Science education for everyday life: evidence-based practice / Glen S. Aikenhead
Q181 .A36 2006

Science as inquiry in the secondary setting / Julie Luft, Randy L. Bell, & Julie Gess-Newsome
on order

Science education issues and developments / Calvin L. Petroselli
Q181 .S37342 2008

Science education for gifted learners / edited by Keith S. Taber
Q181 .S3688 2007

Science from a Native American perspective curriculum syllabi / Gregory A. Cajete
YEDC.002 (on reserve)

Teaching science for understanding: a practical guide for middle and high school teachers / James J. Gallagher
Q183.3.A1 G35 2007

Teaching science as investigations: modeling inquiry through learning cycle lessons / Richard H. Moyer, Jay K. Hackett, Susan A. Everett.
Received

What's science ever done for us?: what The Simpsons can teach us about physics, robots, life and the universe / Paul Halpern
Q162 .H3154 2007

Textbooks: (Approved textbooks on the Ontario Trillium List)

Grade 9 Science - Academic (SNC1D)

Nelson Science 9/ Donald Plumb ... [et al.]
Q161.2 N45 1999t (teacher's resource also available)

SCIENCEPOWER 9: science, technology, society, environment / Elgin Wolfe
Q161.2 .S386 1999t (teacher's resource also available)

Grade 9 Science - Applied (SNC1P)

Nelson Science 9/ Donald Plumb ... [et al.]
Q161.2 N45 1999t (teacher's resource also available)

Nelson Science 9: Concepts and Connections / Ted Gibb... [et al.]
Q161.2 .N45 2003 (teacher's resource also available)

SCIENCEPOWER 9: science, technology, society, environment / Elgin Wolfe
Q161.2 .S386 1999t (teacher's resource also available)

Grade 10 Science - Academic (SNC2D)

Nelson Science 10/ Bob Ritter.....[et al.]
Q161.2 .N46 2001t (teacher's resource also available)

SCIENCEPOWER 10: Science, Technology, Society, Environment /Erin Grace
Q161.2 .S387 2001t (teacher's resource also available)

Grade 10 Science - Applied (SNC2P)

Nelson Science 10/ Bob Ritter.....[et al.]
Q161.2 .N46 2001t

Nelson Science 10: Concepts and Connections/ Ted Gibb... [et al.]
Q161.2 .N47 2002

SCIENCEPOWER 10: Science, Technology, Society, Environment /Erin Grace
Q161.2 .S387 2001t (teacher's resource also available)

Grade 11 Biology - College Preparation (SBI3C)

Nelson Biology 11: College preparation / Maurice Di Giuseppe ... [et al]
QH308.7 .B58 2003 (teacher's resource and solution manual also available)

Grade 11 Biology - University Preparation (SBI3U)

Addison Wesley Biology 11/ Ray Bowers
QH308.7 .A25 2002 (teacher's resource also available)

McGraw-Hill Ryerson Biology 11/ Don Galbraith, Catherine Little
QH308.7 .M356 2001t (teacher's resource also available)

Nelson Biology 11 / Bob Ritter, Christine Adam-Carr, Douglas Fraser
QH308.7 .N45 2002t (teacher's resource also available)

Grade 11 Chemistry - University Preparation (SCH3U)

Addison Wesley Chemistry 11/ Geoff Rayner-Canham, Sadru Damji, Ute Goering-Boone
QD31.2 .A363 2002t (teacher's resource also available)

McGraw-Hill Ryerson Chemistry 11/ Frank Mustoe ... [et al.]
QD33 .M335 2001t (teacher's resource also available)

Nelson Chemistry 11/ Frank Jenkins
QD33 .N44 2002t (teacher's resource also available)

Grade 11 Science - Workplace Preparation (SNC3E)

ScienceWise: Succeeding in Today's World/ Mirella Agusta-Palmisano ... [et al.]
Q161.2 .S39 2003 (teacher's resource also available)

Grade 11 Science - University/College Preparation (SNC3M)

Nelson Science Perspectives 11/ Maurice Di Giuseppe ... [et al.]
Q161.2 .S3417 2005

Grade 11 Physics - University Preparation (SPH3U)

Addison Wesley Physics 11/ Elgin Wolfe, Eric Brown, Dale Parker
QC23 .W64 2002t (teacher's resource also available)

McGraw-Hill Ryerson Physics 11/ Elio Covello ... [et al.]
QC23 .M254 2001t teachers guide

Nelson Physics 11/ Alan Hirsch ... [et al.]
QC23 .N446 2002t (teacher's resource also available)

Physics: Concepts and Connections / Igor Nowikow, Brian Heimbecker
QC23 N68 2001t

Grade 12 Biology - University Preparation (SBI4U)

McGraw-Hill Ryerson Biology 12 / Leesa Blake ... [et al.]
QH308.7 .M357 2002t (teacher's resource also available)

Nelson Biology 12 / Maurice DiGuseppe ... [et al.]
QH308.7 N452 2003t (teacher's resource also available)

Grade 12 Chemistry - College Preparation (SCH4C)

Nelson Chemistry 12: College Preparation / Lucille Davies ... [et al.]
QD33.2 .N44 2004 (teacher's resource and solutions manual also available)

Grade 12 Chemistry - University Preparation (SCH4U)

McGraw-Hill Ryerson Chemistry 12 / Frank Mustoe ... [et al.]
QD33 .M3352 2002t

Nelson Chemistry 12 / Hans van Kessel ... [et al.].
QD33 .N442 2003t (teacher's resource also available)

Grade 12 Science - Workplace Preparation (SNC4E)

Science Wise 12 Succeeding in Today's World / Mirella Agusta-Palmisano ... [et al.]
Q161.2 .S393 2003

Grade 12 Physics - College Preparation (SPH4C)

Nelson Physics 12: College Preparation / Alan J. Hirsch
QC23.2 .H578 2004 (teacher's resource and solutions manual also available)

Grade 12 Physics - University Preparation (SPH4U)

McGraw-Hill Ryerson Physics 12 / Greg Dick...[et al.]
QC23 .M2542 2002t

Nelson Physics 12 / Alan J. Hirsch
QC23 .N4462 2003t (teacher's resource and solutions manual also available)

Physics: Concepts and Connections, Book 2/ Brian Heimbecker, Igor Nowikow,
Christopher T. Howes ... [et al.]
QC23 N68 2002t

Multimedia:

Videos/ DVDs

Bill Nye the science guy. Energy / Disney Educational Productions

Bill Nye the science guy. Forensics / Disney Educational Productions
HV8073 .F674 2004 DVD

Bio Basics / Cambridge Educational
QH308 .B56 2005 VHS

Body systems and health series/ producer, Brian A. Jerome
QP37 .B63 2008 DVD

(The) Ecological Footprint : accounting for a small planet / Bullfrog Films
HC79.E5 E26 2005 DVD

Great moments in the history of science: Galileo Galilei moves the Earth ; Louis Pasteur proves germs cause disease ; Marie Curie finds radium and radioactivity / Bill Stonebarger
QB36.G2 G71 2002 DVD

History of science / Francois Ayotte
Q127.C2 H57 2000 VHS pt.1-9

Modern chemistry: an introduction / Bill Stonebarger
QD40 .M63 2003 DVD

Physics in your life. Part 1 - 3 / Richard Wolfson
QC21.2 W65 2004 DVD pt.001-pt.003

Science & society 1: Scientific methods and values; Women in science / A Hawkhill Production
In Process

Teacher Resources:

Activities for the differentiated classroom, grades 6-8, science / Gayle H. Gregory, Carolyn Chapman
LB1585 .G733 2008

Doing good science in middle school: a practical guide to inquiry-based instruction / by Olaf Jorgenson, Jackie Cleveland, and Rick Vanosdall.
Q181 .J69 2004

Janice VanCleave's great science project ideas from real kids / Janice VanCleave
Q182.3 .V354 2007

Journals:

In Print:

American Biology Teacher

CHEM13 News

Crucible: Magazine of the Science Teachers' Association of Ontario

Green Teacher

Interactions: the Ontario Journal of Environmental Education

Journal of Biological Education

Journal of Chemical Education

Journal of Environmental Education

SB & F: Science Books & Films (review guide)

Science Activities: Classroom Projects & Curriculum Ideas

Science Scope

Science Teacher

Websites:

GENERAL

Amazing Space

An excellent resource for astronomy that provides homework help, detailed articles, space news, and an up to date video analysis of this month's night sky.

<http://amazing-space.stsci.edu/>

CBC Digital Archives – For Teachers:

A great Canadian site with science based material from the past and present. This site is geared towards grades 6 – 12 and has many video and radio clips that can be easily downloaded for use in classrooms to supplement a variety of lessons. Teachers may also link to “Science and Technology” and “Natural Science”.

<http://archives.cbc.ca/health/>

Charles Darwin Foundation

Explores the Science of the Galpagos Islands . Provides an online herbarium, journal articles, news releases, publications, and resources for biology and general science students.

<http://www.darwinfoundation.org/>

CSIRO Web Links

Indexing page with many links to Astronomy, Biology, Engineering, Chemistry, and Environmental subject sites in addition to fun science sites and career research pages.

<http://www.csiro.au/csiro/channel/pchef.html>

Fact Monster

A science index page with links to many online subject specific and general online resources.

<http://www.factmonster.com/ipka/A0193131.html>

Kid Sites

A general science page that encompasses a variety of topics at a simplistic level through explanation and links to subject specific sites. Also contains math, history, music, and art resources.

<http://www.kidsites.com/sites-edu/science.htm>

Ontario Science Centre

Provides news about the latest Science Centre Exhibits as well as interactive tools to investigate everyday science through online labs and trivia. Also posts news and projects from its annual science fair.

<http://www.ontariosciencecentre.ca/>

PBS

An interactive timeline of our universe from the Big Bang to the end of the Universe. Provides links to PBS articles and videos about galactic phenomena.

<http://www.pbs.org/deepspace/timeline/index.html>

PSB Teachers – Science & Technology

Just a great site – it has plenty of science resources, ideas and links to other recommended sites and book lists.

<http://www.pbs.org/teachers/sciencetech/>

Popular Science

Official website for the magazine Popular Science. Very cool technology resource that covers technological innovations and inventions from past to present and the science behind everyday things, including step by step instructions on how to make them.

<http://www.popsci.com/popsci/>

Science Buddies

Amazing science resources that covers all areas of science; Engineering, Chemistry, Biology, Physics and more. Contains guides on how to write/do a report, projects, or labs, including tips, techniques, and sample projects. 'Ask An Expert' section gives answers to popular questions.

http://www.sciencebuddies.org/mentoring/project_ideas.shtml

Science Net Link:

A nice link for many science based lesson plans, tools and ideas for teaching science for all grades.

<http://www.sciencenetlinks.com/>

Science Olympics

Official site of the YRDSB Science Olympics. Provides examples of past projects, including pictures, as well as schedules and registration information.

<http://www.markhamdistrict.hs.yrdsb.edu.on.ca/science.olympics/>

Skynews

Weekly online astronomy magazine with links to sub category sites and downloadable programs for astronomy related information. Also focuses on weekly featured articles.

<http://www.skynews.ca/>

BIOLOGY

Access Excellence @ the National Health Museum

Check out this site's resource center and the cool "AE Graphics Gallery".

<http://www.accessexcellence.org/>

The Biology Corner:

A great Biology teacher resource with lesson ideas, labs and more!

<http://www.biologycorner.com/>

BioEd Online: Biology Teacher – Check out this site's classroom activities and worksheets! Includes slides, videos, lab techniques and teaching strategies for a variety of units. <http://www.bioedonline.org/resources/index.cfm>

Busy Teacher's Website K-12 Biology:

Just like the name of the website, this page has some resources for the busy Biology teacher.

<http://www.ceismc.gatech.edu/busyt/bio.shtml>

Bitesize – Science: Biology

This site gives little "bites" of information for teachers and students alike. It's a great source

for mini study notes and quizzes.

<http://www.bbc.co.uk/schools/ks3bitesize/science/biology/index.shtml>

Health Canada: Government of Canada

This site has great information on the latest health issues that affects all Canadians, including resources from the Canada's Food Guide, and plenty of reports about developing research on climate change, diseases and healthy living.

http://www.hc-sc.gc.ca/ahc-asc/index_e.html

Human Anatomy Online

Great tool for teachers who teach anatomy and physiology – students can use this as a study tool.

<http://www.innerbody.com/htm/body.html>

National Association of Biology Teachers: This site has some fun resources for teaching Biology and instructional materials that pertain to current and important issues.
<http://www.nabt.org/sites/S1/index.php?p=25>

Understanding Evolution: Berkley University

This website is a great resource for aid in teaching evolution! Provides interesting connections to medicine and has a nice story on arthropods
<http://evolution.berkeley.edu/evolibrary/home.php>

World Health Organization

Help build student awareness of this organization's ongoing cause to help build and maintain health standards worldwide. This site contains an abundance of information, including a World Health Day kit for teachers.
http://www.who.int/topics/infectious_diseases/en/

ZeroBio – Great fun site with worksheets and tests for teachers' use and games and quizzes for students to study from.
<http://www.execulink.com/~ekimmel/index.htm>

PHYSICS

Kettering University- Superposition of Waves

Describes and provides animations of various sine waves. Examines interference, beats, and frequency of a transverse wave.
<http://www.kettering.edu/~drussell/Demos/superposition/superposition.html>

Ontario Ministry of Energy - Electricity

This site provides information on different types of electricity
<http://www.energy.gov.on.ca/index.cfm?fuseaction=english.electricity>

Ontario Power Generation

Everything you need to know about electricity in one place. Includes student projects, career opportunities, technical explanations, and physical principles behind electricity.
<http://www.opg.com/education/grades9-12/>

Phet – Physics Education Technology

Fun, interactive simulations of physical phenomena from the Physics Education Technology project at the University of Colorado .
<http://phet.colorado.edu/web-pages/index.html>

Physics 2000

This site provides an interactive journey through modern physics! Have fun learning visually and conceptually about 20th Century science and high-tech devices.

<http://www.colorado.edu/physics/2000/index.pl>

The Physics Classroom

All encompassing physics resource that explains both basic and advanced physics concepts for grade 11's and 12's. Includes multimedia aids for explanation of difficult concepts.

<http://www.physicsclassroom.com/>

Physics Classroom Online

One of the best physics resources that covers nearly every topic in high school physics broken down into unit topics. Includes labs, sample projects, quizzes, and concepts made easy with multimedia and detailed explanation.

<http://www.glenbrook.k12.il.us/gbssci/phys/projects/proj.html>

Physics Today

A daily physics news and research source. The site includes news, research, jobs and buyers guide.

<http://www.physicstoday.org/>

UniServe Science – Electrical Energy in the Home

Information and links to electrical energy information

<http://science.uniserve.edu.au/school/curric/stage6/phys/eenergy.html#circuits>

University of British Columbia - Simulations & Animations

Provides several interactive java applets that animate occurrences in our universe; Big Bang, Black Body Radiation, Relativity etc.

<http://www.astro.ubc.ca/~scharein/a311/Sim.html#Doppler>

University of Winnipeg- Introductory Physics Notes

Explores grade 12 level physics material by topic. Provides explanations of formulas and general topics.

<http://theory.uwinnipeg.ca/physics>

Professional Associations:

Council of Science Educators of Canada

<http://csec.ca/french/index.html>

National Science Teachers Association (US)

<http://www.nsta.org/>

Science Teachers Association of Ontario

<http://www.stao.org/>