

Science 10:

A Bibliography of Resources

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Stewart Resources Centre

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*Annotations have been excerpted and/or adapted from descriptions provided by the publishers.

This is an initial list of resources. For more recent information, please use the following link to the Ministry of Education Curriculum

Resources page:

<https://www.edonline.sk.ca/webapps/moe-curriculum-BBLEARN/FullResourceList?id=63>

Items on this web page that include a “Borrow From the STF Library” button can be requested directly from this site.



Please note: Videos recommended for this curriculum are available on ROVER. Please go to this site: <https://rover.edonline.sk.ca/> .

For additional video resources, also check out the CBC and NFB collections linked to the ROVER site.

304.2 S477

Senker, Cathy

A teen guide to being eco in your community

Chicago, IL: Heinemann Library, 2013.

Subjects: Communities—Environmental aspects. Teenagers and the environment.

Notes: Environmental Science 20. Science 10 (2014).

372.34044 C862

Couros, Alec; Hildebrandt, Katia

Digital citizenship education in Saskatchewan schools : a policy planning guide for school divisions and schools to implement digital citizenship education from Kindergarten to grades 12

Regina, SK: Saskatchewan Ministry of Education, 2015.

Subjects: Computer literacy—Study and teaching—Saskatchewan. Education, Elementary—Saskatchewan—Data processing. Education, Secondary—Saskatchewan—Data processing. Internet literacy.

Summary: Printed from the internet.

388.50971 G622

Goldsworthy, Steve

Should Canada build pipelines in the United States?

Calgary, AB: Weigl, 2013.

Subjects: Petroleum industry and trade—Canada. Pipelines—Canada—Juvenile literature. Pipelines—United States—Juvenile literature.

Notes: Environmental Science 20. Science 20 (2014). Science 10.

428.24 B453

Beltran, Dolores; Sarmiento, Lilia E.

Science for English language learners : developing academic language through inquiry-based instruction

Huntington Beach, CA: Shell Education, 2013.

Subjects: English language—Study and teaching—Foreign speakers. Science—Study and teaching.

Summary: This book discusses academic language development in science for English language learners. Teachers will learn how to develop K-12 students' language abilities in science while developing their content knowledge. In addition, this resource demonstrates how to use the 5E model of instruction effectively with English language learners and provides specific strategies to use with each E.

500 A193

Adam-Carr, Christine; Gabber, Martin

Nelson science perspectives 10

Toronto, ON: Nelson Education, 2010.

Subjects: Science—Study and teaching (Secondary). Science—Textbooks.

Summary: Science 10 (2014).

500 A548

Anderson, Michelle; Bocknek, Jonathan

Nova Scotia science 10

Toronto, ON: McGraw-Hill Ryerson, 2012.

Subjects: Science—Study and teaching (Secondary). Science—Textbooks.

Summary: Science 10 (2014).

500 N424

Nelson science 10

Scarborough, ON: Nelson Thomson Learning, 2001.

Subjects: Science—Experiments. Science—Study and teaching (Secondary).

Notes: Aboriginal Resource List. Science 10.

500 S216

Sandner, Lionel; Ellis, Clayton

Investigating science 10

Toronto, ON: Pearson Education Centre, 2009.

Subjects: Education, Secondary. Science—Study and teaching (Secondary). Science—Textbooks.

Notes: Science 10 (2014).

500 R258

Rawle, Fiona; Nickle, Todd

Science³ : a science student's success guide

Toronto, ON: Nelson Education, 2014.

Subjects: Science—Handbooks, manuals, etc. Science—Study and teaching (Secondary)

Summary: This resource provides a good introduction to high school science, showing how chemistry, physics and biology are interrelated. It provides useful study strategies, an explanation of the vocabulary of science (commonly used root words, prefixes and suffixes) and tips for how to think critically and use mathematics as a science tool.

Notes: Biology 30. Chemistry 30. Earth Science 30. Environmental Science 20. Health Science 20. Physical Science 20. Physics 30. Science 10.

500 S218

Sandner, Lionel; Fatkin, Glen

BC science 10

Toronto, ON: McGraw-Hill Ryerson, 2008.

Subjects: Science—Study and teaching (Secondary). Science—Textbooks.

Summary: This textbook, designed for the British Columbia science curriculum, provides support for climate change, ecosystems, and chemical reactions outcomes, as well as moderate support for the force and motion in our world outcomes of the renewed Saskatchewan Science 10 curriculum. This resource includes strategies for a variety of learners, hand-on activities, and web-based content.

Notes: Science 10 (2014).

500.8997 A291

Aikenhead, Glen

Bridging cultures : scientific and Indigenous ways of knowing nature

Toronto, ON: Pearson, 2011.

Subjects: Ethnoscience. Indian philosophy. Native Peoples—Education—Canada. Science—Study and teaching.

Summary: The recognition of Indigenous knowledge as an important, legitimate source of understanding of the physical world is increasing within education jurisdictions worldwide. This book provides science educators with knowledgeable perspectives on scientific and Indigenous content.

Notes: Science grade 1 (2010). Science grade 2 (2010). Science grade 3 (2010). Science grade 4 (2010). Science grade 5 (2010). Science grade 6 (2009). Science grade 7 (2009). Science grade 8 (2009). Science grade 9 (2009). Science 10.

507.1 K26

Keeley, Page

Science formative assessment : 75 practical strategies for linking assessment, instruction, and learning

Thousand Oaks, CA: Corwin Press, 2008.

Subjects: Creative ability in science. Effective teaching. Interaction analysis in education. Science—Study and teaching—Evaluation.

Summary: Formative assessment allows educators to discover the varied ideas that students bring to the classroom, to determine students' understanding of key concepts, and to design learning opportunities that will deepen students' mastery of content and standards. The author shares 75 specific assessment techniques to help science teachers in Grades K-12 provide effective instruction. These assessments can be used with any science curriculum, and the author includes: a description of how each technique promotes student learning; considerations for design and

implementation, such as required materials, timing, modeling the technique, and grouping students; modifications for different types of students or purposes; caveats for using each technique; and ways the techniques can be used in other content areas.

Notes: Science grade 1 (2010). Science grade 2 (2010). Science grade 3 (2010). Science grade 4 (2010). Science grade 5 (2010). Science grade 6 (2009). Science grade 7 (2009). Science grade 8 (2009). Science grade 9 (2009). Science 10.

507.12 G466

Gilbert, Stephen W.

Understanding models in earth and space science

Arlington, VA: NSTA Press, 2003.

Subjects: Mathematics—Study and teaching. Models and modelmaking. Science—Mathematical models. Science—Study and teaching.

Summary: Science grade 6 (2009). Science grade 7 (2009). Science grade 8 (2009). Science grade 9 (2009). Science 10.

507.12 L791

Llewellyn, Douglas

Teaching high school science through inquiry and argumentation

Thousand Oaks, CA: Corwin, 2013.

Subjects: Inquiry (Theory of knowledge). Science—Study and teaching (Secondary).

Summary: This text aligns the four key elements of effective science education: scientific literacy, inquiry, argumentation, and the nature of science.

Notes: Science 10.

530.11 P445

Everyday Einstein. Teacher's kit [kit]

Waterloo, ON: Perimeter Institute for Theoretical Physics, 2013.

Subjects: Educational films. Global Positioning System. Relativity (Physics). Science—Study and teaching (Secondary). Teaching—Aids and devices.

540 R652

Robertson, William C.

Chemistry basics

Arlington, VA: NSTA Press, 2007.

Subjects: Chemistry—Study and teaching.

Summary: This guide provides background information for teachers to build their understanding of the basics of chemistry. It introduces concepts from quantum mechanics to build conceptual understanding of the atom without resorting to complicated mathematics equations.

Notes: Science grade 9 (2009). Science 10.

540.78 S192

Sampson, Victor; Carafano, Peter

Argument-driven inquiry in chemistry : lab investigations for grades 9-12

Arlington, VA: National Science Teachers Association, 2015.

Subjects: Chemistry—Laboratory manuals. Chemistry—Study and teaching (Secondary)—Handbooks, manuals, etc. Science—Study and teaching (Secondary).

Summary: This teacher resource provides the instructional materials to introduce students to argument-driven inquiry, followed by field-tested labs that allow students to apply their inquiry skills. Lab topics include: molecular polarity, rate of dissolution, molar relationships, atomic structure and electromagnetic radiation, chemical reactions, stoichiometry and acid-base titration. The book's appendices include options for implementing the lab investigations and a scoring rubric. A complementary Student Lab Manual for this resource is also available for purchase from the publisher.

Notes: Science 10 (2014). Physical Science 20. Chemistry 30.

546.22 W324

Water analysis [DVD]

Wynnewood, PA: Schlessinger Media, 2006.

Subjects: Water—Analysis. Water—Experiments.

Summary: Viewers follow a group of high school students as they test and compare different water sources for eight factors: temperature, pH, dissolved oxygen, hardness, alkalinity, nitrates, coliform bacteria, and chlorine.

Notes: Science grade 8 (2009). Science 10.

551.375 J79

Jonker, Peter

The sand dunes of Lake Athabasca : your adventure in learning

Saskatoon, SK: University Extension Press, University of Saskatchewan, 2001.

Subjects: Athabasca, Lake, Region (Sask. and Alta.). Natural history—Athabasca, Lake, Region (Sask. and Alta.). Sand dunes—Athabasca, Lake, Region (Sask. and Alta.).

Summary: This resource provides an example of ecosystem research in a Saskatchewan context. Following a description of the landscape and how it was formed, the distinctive species of the region are discussed. Adaptations to the environment by a variety of mammals, birds, amphibians, insects, fish, and vegetation are the focus of this book. The human impact is also discussed.

Notes: Science grade 7 (2009). Science grade 8 (2009). Science 10.

571.2 F652

Bekolay, Elizabeth

Cultural perspectives of Saskatchewan native plant uses. Grade 10

Regina, SK: Native Plant Society of Saskatchewan, 200?

Subjects: Environmental education—Study and teaching (Secondary). Nature study—Study and teaching (Secondary). Plants—Study and teaching (Secondary).

Summary: Students will connect science and Indigenous knowledge while inquiring about the uses of a specific native plant. The students will each choose an individual local native plant to study, focusing on the human uses of that plant. A walk in a local native ecosystem is integral to this study.

Notes: Science 10 (2014).

571.2 F652

Bekolay, Elizabeth

Nutrient cycling and native plants of Saskatchewan. Grade 10

Regina, SK: Native Plant Society of Saskatchewan, 200?

Subjects: Environmental education—Study and teaching (Secondary). Nature study—Study and teaching (Secondary). Plants—Study and teaching (Secondary).

Summary: Students will study a local native legume in its habitat and create a piece of art that shows the cycling of nutrients and energy through the ecosystem.

Notes: Science 10 (2014).

571.2 F652

Bekolay, Elizabeth

Sustaining biodiversity and the role of native plants. Grade 10

Regina, SK: Native Plant Society of Saskatchewan, 200?

Subjects: Environmental education—Study and teaching (Secondary). Nature study—Study and teaching (Secondary). Plants—Study and teaching (Secondary).

Summary: The students will study a local ecosystem to understand the amount of biodiversity that is in a local, healthy, functioning ecosystem. They will try to mimic the ecosystem by creating a small native plant garden in an area that is lacking biodiversity. This is a hands-on lesson in the active participation of sustaining biodiversity.

Notes: Science 10 (2014).

577 B615

Biodiversity perspectives

Regina, SK: Keewatin Publications, 2005.

Subjects: Biodiversity—Canada. Biodiversity—Prairie Provinces. Biodiversity—Saskatchewan. Environmental protection.

Summary: This resource provides a broad overview of biodiversity-related issues from global, regional, and national perspectives.

Notes: Science grade 6 (2009). Science grade 7 (2009).

577.4 B615

Grasslands [DVD]

Wynnewood, PA: Schlessinger Media, 2003.

Subjects: Biotic communities. Grasslands. Savannas.

Summary: Students will examine the importance of grassland regions and participate in a hands-on experiment to measure the moisture content of soil. An ecologist also discusses how scientists are restoring grassland regions to their original state.

Notes: Science grade 7 (2009). Science 10.

577.6 W958

Wruck, Garth

Native plants, water and us!

Saskatoon, SK: Native Plant Society of Saskatchewan, 2003.

Subjects: Aquatic ecology—Saskatchewan. Aquatic plants—Saskatchewan.

Summary: This booklet offers general information on aquatic ecosystems, their functions, and the important roles that native plants play within them.

Notes: Science grade 6 (2009). Science grade 7 (2009). Science 10.

578.42 B452

Below zero activity guide

Kanata, ON: Canadian Wildlife Federation, 2009.

Subjects: Adaptation (Biology)—Study and teaching. Animal ecology—Study and teaching. Plant ecology—Study and teaching. Snow ecology—Study and teaching. Winter—Study and teaching.

Summary: This guide provides an interdisciplinary, supplementary education program on the environment and conservation in winter and frozen conditions for educators of young people from kindergarten to high school age.

Notes: Science grade 6 (2009). Science grade 7 (2009). Science 10. Biology 20, 30.

581.76 L184

Lahring, Heinjo

Water and wetland plants of the Prairie Provinces

Regina, SK: Canadian Plains Research Center, University of Regina, 2003.

Subjects: Aquatic plants—Prairie Provinces. Wetland ecology—Prairie Provinces. Wetland plants—Prairie Provinces.

Summary: This field guide presents identification keys, descriptive information, and colour photographs of water and wetland plants in Saskatchewan, Alberta, Manitoba, and the northern United States. It provides a relevant, easy-to-use guide for field trips to wetland ecosystems.

Notes: Science grade 7 (2009). Science grade 8 (2009). Science 10. Biology 20.

599.786 F251

Fast, Dennis

Wapusk : white bear of the North

Winnipeg, MB: Heartland Associates, 2003.

Subjects: Polar bear—Pictorial works.

Summary: This resource outlines some of the challenges faced by the polar bear, or wapusk, white bear of the north. Environmental dangers such as toxic pollutants and global warming encroach on and threaten this species. The photography captures the life cycle of the polar bear within its natural environment.

Notes: Aboriginal Resource List. Science grade 7 (2009). Science 10.

639.9 P964

Project WILD activity guide

Ottawa, ON: Canadian Wildlife Federation, 2002.

Subjects: Animals—Study and teaching—Canada. Environmental conservation—Canada. Wildlife conservation—Study and teaching—Canada.

Summary: *Project Wild* is an interdisciplinary, supplementary environmental and conservation education programme for educators of kindergarten through high school age young people. This guide features activities designed to develop awareness, knowledge, skills, and responsible behaviour towards wildlife and the environment. Through many of the activities, students are engaged in informed decision making in which they consider the impact of their actions on the

ecosystem. Each multigrade activity includes objectives, method, background information, materials and procedures, as well as extension and evaluation ideas.

Notes: Science grade 6 (2009). Science grade 7 (2009). Science 10.

CURR SASK SCI

Saskatchewan Learning

Science 10 Curriculum Guide

Regina, SK: Saskatchewan Learning, 2005.

Subjects: Science—Study and teaching (Secondary)—Saskatchewan—Curricula.

Summary: Curriculum guide. Science 10. Also includes: Supporting science renewal 10 : an information bulletin.

TMC S106.1

Hlady, David

Exploring motion-related technology through a First Nations' game : a lesson to support Science 10

Saskatoon, SK: Saskatchewan Teachers' Federation, 2007.

Subjects: Motion—Study and teaching (Secondary). Science—Study and teaching (Secondary).

Summary: This lesson is from the unit in the Science 10 Curriculum Guide entitled Physical science: motion in our world, and can be used as an introduction to the concept of motion. The lesson uses a First Nations' game, snow snakes, to illustrate motion. Because snow is necessary for this game, the unit will need to be used during the winter.

Notes: Science 10.

TMC S106.2

View, Ted

From mission to action : lessons on sustainability of ecosystems to support Science 10

Saskatoon, SK: Saskatchewan Teachers' Federation, 2008.

Subjects: Ethnoscience. Science—Study and teaching (Secondary). Sustainable development—Study and teaching (Secondary).

Summary: These lessons incorporate objectives from the unit entitled Life science: sustainability of ecosystems in the Science 10 Curriculum Guide. After an examination of ecological footprints, a discussion on different cultural perspectives ensues. Students are invited to explore the Aboriginal perspective through a guided activity, and they end the study by creating their own personal mission statement and action plan. Includes *Elders in the classroom*, by Anna-Leah King.

Notes: Science 10.

TMC S106.121

View, Ted

Natural chemical changes and common everyday reactions : a lesson to support Science 10

Saskatoon, SK: Saskatchewan Teachers' Federation, 2008.

Subjects: Chemical reactions—Study and teaching (Secondary). Ethnoscience. Science—Study and teaching (Secondary).

Summary: These activities and lab incorporate objectives from the unit entitled Physical change: chemical reactions in the Science 10 Curriculum Guide. The activities look at chemical change

in a First Nations and Métis context. A lab is included, but the lab is not intended as a substitute for a chemical change lab. It can act as a supplement to the usual lab. Includes *Elders in the classroom*, by Anna-Leah King.

Notes: Science 10.

TMC S106.22

Johnson, Duane

The six seasons of the Woodland Cree : a lesson to support Science 10

Saskatoon, SK: Saskatchewan Teachers' Federation, 2008.

Subjects: Ethnoscience. Science—Study and teaching (Secondary). Weather—Study and teaching (Secondary).

Summary: This lesson incorporates foundational objectives from the unit entitled Earth and Space Science: Weather Dynamics in the Science 10 Curriculum Guide. Students will examine cultural perspectives regarding weather and, specifically, the seasons of the year. The focus here is on a six-season model used by the Woodland Cree. This lesson could be presented as an introduction to the topic of weather.

Notes: Science 10.

TMC S106.23

Lorensen, Lana

Sustainability of ecosystems : a lesson to support Science 10

Saskatoon, SK: Saskatchewan Teachers' Federation, 2008.

Subjects: Biological diversity—Study and teaching (Secondary). Biotic communities—Study and teaching (Secondary). Godkin, Celia. Wolf island. Science—Study and teaching (Secondary).

Summary: These lessons incorporate objectives from the unit entitled Life science: sustainability of ecosystems in the Science 10 Curriculum Guide. It has story as its central point. The topic of sustainability of ecosystems is discussed using the picture book, *Wolf Island*, the story of wolves that are removed from their own habitat, and the effect this has on biodiversity and population dynamics. Although the lesson is based on one specific story, teachers may incorporate books from their own libraries with similar themes. Includes *Elders in the classroom*, by Anna-Leah King.

Notes: Science 10.

TMC S106.24

Klein, Marcia

Walking with the earth – Pimohtiwín : lessons to support Science 10

Saskatoon, SK: Saskatchewan Teachers' Federation, 2008.

Subjects: Biotic communities—Study and teaching (Secondary). Indians of North America—Canada—Social life and customs. Science—Study and teaching (Secondary).

Summary: These lessons incorporate objectives from the unit entitled Life science: sustainability of ecosystems in the Science 10 Curriculum Guide. Students experience a walk in nature that could take place in any community, or could also be a field trip to an environmental centre. The material here is based on experiences at Brightwater Science and Environment Centre with Saskatoon Public Schools, an outdoor education centre located near Saskatoon. In these visits, students are accompanied by an Elder or a traditional knowledge keeper. A PowerPoint

presentation has been created to accompany these lessons and can be downloaded separately. Includes *Elders in the classroom*, by Anna-Leah King.
Notes: Science 10.

TMC S106.3

Wright, John

Indigenous knowledge and cultural weather perspectives : lessons to support Science 10

Saskatoon, SK: Saskatchewan Teachers' Federation, 2007.

Subjects: Ethnoscience. Science—Study and teaching (Secondary). Weather—Study and teaching (Secondary).

Summary: This series of lessons incorporates four of the foundational objectives from the unit entitled Earth and Space Science: Weather Dynamics in the Science 10 Curriculum Guide. These lessons examine cultural perspectives on weather and weather predictions, and are designed to be an introduction to the topic of weather.

TMC S106.5

Lorensen, Lana

Mother Earth : a lesson to support Science 10

Saskatoon, SK: Saskatchewan Teachers' Federation, 2007.

Subjects: Environmental education. Science—Study and teaching (Secondary). Sustainable development—Study and teaching (Secondary).

Summary: This lesson incorporates objectives from the unit entitled Life science: sustainability of ecosystems in the Science 10 Curriculum Guide. It can be taught as an introduction to the unit or as a review and closure. The lesson uses the children's book, *Dear children of the earth: a letter from home*, by Schim Schimmel as its central point, but teachers could substitute books from their own libraries with similar themes. Includes *Elders in the classroom*, by Anna-Leah King.

Notes: Science 10.

TMC S106.6

Lorensen, Lana

Human impact on ecosystems : a lesson to support Science 10

Saskatoon, SK: Saskatchewan Teachers' Federation, 2008.

Subjects: Environmental education. Man—Influence on nature—Study and teaching (Secondary). Science—Study and teaching (Secondary).

Summary: This lesson incorporates objectives from the unit entitled Life science: sustainability of ecosystems in the Science 10 Curriculum Guide. In the lesson, students will investigate key concepts surrounding the impact of humans on ecosystems. The legend, Awi Usdi: the little deer, is used as its central point. Although the lesson is based on this one specific story, teachers may also use books from their own libraries with similar themes. Includes *Elders in the classroom*, by Anna-Leah King.

Notes: Science 10.