Ministry of
Education

Environmental Science 20

July 26, 2016

Environmental Science 20
ISBN 978-1-926631-10-3
1. Study and teaching (Secondary school) - Saskatchewan - Curricula. 2. Competency-based education - Saskatchewan.
Saskatchewan. Ministry of Education.
All rights are reserved by the original copyright owners.

Acknowledgements

The Ministry of Education wishes to acknowledge the professional contributions and advice of the provincial Secondary Science Curriculum Reference Committee members:

Dr. Barry Charington, Teacher
Saskatoon School Division
Saskatchewan Teachers' Federation

Tara Haugen, Teacher
Good Spirit School Division
Saskatchewan Teachers' Federation

Rob Kraft, Teacher
St. Paul's Roman Catholic Separate School Division
Saskatchewan Teachers' Federation

Phil Langford, President
Saskatchewan Science Teacher's Society

Kara Lengyel, Teacher
North East School Division
Saskatchewan Teachers' Federation

Patricia Lysyk, Teacher
Saskatchewan Rivers School Division
Saskatchewan Teachers' Federation

Carol Meachem, Teacher
Horizon School Division
Saskatchewan Teachers' Federation

Dr. Tim Molnar, Assistant Professor
Department of Curriculum Studies
College of Education, University of Saskatchewan

Garry Sibley, Education Outreach
Education and Training Secretariat Federation of Saskatchewan Indian Nations

Don Spencer, Faculty
Mathematics and Science
Saskatchewan Institute of Applied Science and Technology

Dr. Warren Wessel, Associate Professor
Science Education
Faculty of Education, University of Regina

Darrell Zaba, Director
Christ the Teacher Roman Catholic Separate School Division
League of Educational Administrators, Directors and Superintendents of Saskatchewan

In addition, the Ministry of Education wishes to acknowledge the guidance of the *Environmental Science 20* working group members:

David Hall
Luther College High School

Rhonda Phillips
Lumsden High School
Prairie Valley School Division

Kristen Simonson
Swift Current Comprehensive
Chinook School Division

Corey Ziegler
Martin Collegiate
Regina School Division

The Ministry of Education also wishes to thank many others who contributed to the development of this curriculum:

- former Science Reference Committee members;
- First Nations Elders and teachers;
- university faculty members;
- *Environmental Science 20* pilot teachers; and other educators and reviewers.

Outcomes at a Glance

Career Exploration
ES20-CE1 Analyze and explore environmental science related career paths in Saskatchewan, Canada and the world.

Student-Directed Study
ES20-SDS1 Create and carry out a plan to explore one or more topics of personal interest relevant to *Environmental Science 20* in depth.

The Nature of Environmental Science
ES20-ES1 Examine the methods, mindsets and purposes of environmental science.

Atmosphere and Human Health
ES20-AH1 Assess the impact of human activities on indoor and outdoor air quality and the need for regulations and mitigating technologies to minimize risks to human health.
ES20-AH2 Analyze the production, reliability and uses of geoscience data to investigate the effects of a changing climate on society and the environment.

Human Population and Pollution
ES20-HP1 Investigate technologies and processes used for mitigating and managing resource use, waste generation and pollution associated with a growing human population.

Aquatic Systems
ES20-AS1 Analyze the function and condition of freshwater aquatic systems such as rivers, streams, lakes, wetlands and watersheds.
ES20-AS2 Assess the importance of maintaining healthy water for humans and the environment.

Terrestrial Ecosystems
ES20-TE1 Analyze the importance of soil as an integral component of terrestrial ecosystems.
ES20-TE2 Examine the role plants play in an ecosystem, including ways in which humans use plants.
ES20-TE3 Recognize the need for intact habitat to support animal populations and biodiversity.

Legend

ES20-AH1a	
ES20	Course name
AH	Unit of study
1	Outcome number
a	Indicator
[CP, DM, SI, TPS]	Learning context(s) that best support this outcome
(A, K, S, STSE)	Foundation(s) of Scientific Literacy that apply to this indicator