
**Wildlife Management
10, 20, 30
Curriculum Guide
A Practical and Applied Art**

**Saskatchewan Education
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Acknowledgements

Saskatchewan Education acknowledges the contributions of the Practical and Applied Arts Reference Committee formed in 1996. Current members are:

Jerry Cherneski, Instructor
SIASST Palliser Campus

Hazel Lorenz, Consultant
LandsWest S.D. #123
Saskatchewan Teachers' Federation
Saskatchewan Career/Work Education Association (SCWEA)

Dean Lucyk, Teacher
Regina RCSSD #81
Saskatchewan Teachers' Federation (STF)
Saskatchewan Industrial Education Association (SIEA)

Barbara McKinnon, Teacher
Moose Jaw S.D. #1
Saskatchewan Teachers' Federation
Saskatchewan Business Teachers' Association (SBTA)

Lance Moen, Dean
Associated Studies
SIASST Kelsey Campus

Rose Olson
Saskatchewan School Trustees Association (SSTA)

Dr. Len Proctor
Professor, College of Education
University of Saskatchewan

Ron Provali, Teacher
Potashville S.D. #80
Saskatchewan Teachers' Federation
Saskatchewan Association for Computers in Education (SACE)

Dr. Kevin Quinlan
Professor, Faculty of Education
University of Regina

Doug Robertson
Lloydminster RCSSD #89
League of Educational Administrators, Directors and
Superintendents (LEADS)

Gayleen Turner, Teacher
Swift Current Comprehensive High School Board
Saskatchewan Teachers' Federation
Saskatchewan Home Economics Teachers' Association
(SHETA)

Previous Members:

Susan Buck, SIASST

Laurent Fournier, SSTA

Morris Smith, LEADS

Dave Spencer, LEADS

Ron Wallace, SCWEA

Debbie Ward, SSTA

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Introduction

Within Core Curriculum, the Practical and Applied Arts (PAA) is a major area of study that incorporates five traditional areas of Home Economics Education, Business Education, Work Experience Education/Career Education, Computer Education and Industrial Arts Education. Saskatchewan Education, its educational partners and other stakeholders have collaborated to complete the PAA curriculum renewal. Some PAA curriculum guidelines have been updated by integrating, adapting or deleting some components; some Locally Developed Courses have been elevated to provincial status; and some new guidelines have been developed.

A companion, *Practical and Applied Arts Handbook*, provides background on Core Curriculum philosophy, perspectives and initiatives. The Handbook provides a renewed set of goals for PAA. It presents additional information about the PAA area of study, including guidelines about work study and related transition-to-work dimensions. A *Practical and Applied Arts Information Bulletin* provides direction for administrators and others. Lists of recommended resources from all guidelines will be compiled into a PAA Bibliography with periodic updates.

An initial list of resources for Wildlife Management 10, 20, 30 accompanies the curriculum guide.

Philosophy and Rationale

The Wildlife Management curriculum guidelines are designed to stimulate an awareness of the importance of wildlife in the daily life of an individual and for society as a whole. Modules of study will be flexible and allow students to build on their own knowledge to create new understandings. Students will be provided with the opportunity for success through a blending of theory and practical experience achieved in and out of school. The activities and theory are intended to lead to an understanding of career development opportunities and hobbies in the field of wildlife appreciation and management.

Aim, Goals and Foundational Objectives

Aim

The aim of Wildlife Management 10, 20, 30 is to provide students with the opportunity to examine beliefs and attitudes related to wildlife, and to develop the knowledge and skills that allow an examination of the many occupations in the field of wildlife management.

Goals

Appreciation: To examine wildlife from more than one perspective and create a measure of its value to humans individually and as a community.

Culture: To understand how the natural world has contributed to the Canadian identity.

Personal Skills: To develop skills in outdoor experiences that will allow students to develop a relationship to nature and to identify the skills needed to study wildlife.

Accountability: To study how wildlife management occurs and how the government and private agencies can contribute to the maintenance and management of wildlife resources.

Teamwork: To examine the societal issues that surround how people interrelate with wildlife.

Environmental Conservation: To evaluate the importance of developing a conservation ethic to preserve wildlife.

Foundational Objectives

- To demonstrate safety practices while engaged in outdoor experiences.
- To develop values that will increase an appreciation and respect for wildlife.
- To understand the role and obligations of government agencies, interest groups and individuals to preserve wildlife.
- To examine issues and opinions as to how wildlife should be managed.
- To develop skills that allow students to appreciate the natural world through direct experience.
- To examine relationships between wildlife species and humans and how populations are affected.
- To research the structure, diversity, behaviour and habitat of Saskatchewan wildlife species.
- To create an awareness of and respect for laws that regulate human interaction with and exploitation of wildlife.
- To cultivate an appreciation and understanding of how other cultures view wildlife.
- To develop workplace skills, knowledge and attitudes in wildlife management that may lead to successful employment.
- To recognize how the work skills developed in the classroom will be used to meet workplace expectations.
- To be aware of the career opportunities in the field of wildlife management that exist in Saskatchewan and other provinces.
- To integrate classroom learning with work-related learning.
- To increase awareness of employability skills as they relate to the work environment.
- To understand how skills acquired in school may transfer to the workplace.

Common Essential Learnings (CELs)

The incorporation of the CELs into the instruction and assessment of the Practical and Applied Arts (PAA) curriculum offers many opportunities to develop students knowledge, skills and abilities. The purpose of the CELs is to assist students with learning concepts, skills and attitudes necessary to make transitions to career, work and adult life.

The CELs establish a link between the Transition-to-Work dimensions and Practical and Applied Arts curriculum content. The Transition-to-Work dimensions included in the PAA curricula are: apprenticeship, career exploration/development, community project(s), employability skills, entrepreneurial skills, occupational skilling, personal accountability, processing of information, teamwork and work study/experience. Throughout the PAA curricula, the CELs objectives are stated explicitly at the beginning of each module and are coded in this document, as follows:

COM	=	Communication
NUM	=	Numeracy
CCT	=	Critical and Creative Thinking
TL	=	Technological Literacy
PSVS	=	Personal and Social Values and Skills
IL	=	Independent Learning

Although certain CELs are to be emphasized in each module, as indicated by the CELs Foundational Objectives, other interrelated CELs may be addressed at the teacher's discretion.

Course Components and Considerations

This curriculum is new to the PAA program. It is theme-based with Wildlife and Ecosystems serving as a background for all other themes. Students and teachers have the flexibility to use the modules in the order that best suits their needs to achieve the required 100 credit hours.

Program delivery, being both theoretical and practical, can be done using a variety of locations including an outdoor field trip location and a job shadow location with a wildlife officer or technician.

It is recommended that the modules Wildlife and Ecosystems (Module 1) and Natural History of Saskatchewan Wildlife (Module 2) provide a background for all other modules. The selection of other modules is at the teacher's discretion although some modules have prerequisites:

- Outdoor Experiences I is a prerequisite to Outdoor Experiences II
- Regulating Hunting and Game Management I is a prerequisite to Regulating Hunting and Game Management II
- Application of Wildlife Research is a prerequisite to Managing Wildlife.

Work Study Component

This module permits the student to apply school-based learning to workplace settings in the community. Students are provided with an opportunity to experience the optional work study component through appropriate placements. Module 17, Work Study Preparation and Follow-up Activities must be covered prior to and following the work study module. *The Practical and Applied Arts Handbook* has detailed information in the “Work Study Guidelines” section. Students who have previously taken a work study module may cover content developed by Saskatchewan Labour found in the *Career and Work Exploration Curriculum Guide* and the *Practical and Applied Arts Handbook*. These content references include:

- Labour Standards
- Occupational Health and Safety Act
- Workplace Hazardous Materials Information System (WHMIS).

Creating Partnerships for Work Study

Partnerships are important to the success of the work study component. There are three distinct partners that play an important role: the industry/business, the school and the student.

Personal contact is the best approach to building partnerships. One should begin by making a presentation to colleagues within the school, to the student body, to school board members, to parents and to local businesses. It is important to outline the curriculum and the benefits and responsibilities for each of the partners.

See the modules outlined in the curriculum and the “Work Study Guidelines” in the *Practical and Applied Arts Handbook* for further information on work study.

Portfolios

A personal career portfolio is a valuable organizer of student projects and assignments. It encourages students to collect examples of their work as they progress through the various activities, labs and projects. Selecting particular items to include in a portfolio encourages students to reflect on what they have learned or accomplished and what they have yet to learn. Portfolio items may include: journal notes, drafts, photographs, audio or video tapes, computer discs, sketches and drawings, etc. Portfolios may be used for peer, teacher, self-assessment and as a format to present selected works to parents, post-secondary institutions or potential employers. In addition, the portfolio can demonstrate the link between home, school and community in the student’s education. Each student should have a portfolio representing his or her work during the course.

The portfolio helps students:

- reflect on personal growth and accomplishment
- see links between home, school and community education and activities
- collect materials to prepare applications for post-secondary education and scholarship program entrance
- collect materials to prepare for employment applications
- focus on career planning.

The portfolio helps teachers:

- provide a framework for independent learning strategies for the student
- communicate student learning from one school year to another in a specific area of study
- identify career planning needs for students
- assess and evaluate the student’s progress and achievement in a course of study.

The portfolio helps post-secondary institutions:

- determine suitable candidates for awards and scholarships
- evaluate candidates for program entrance
- evaluate prior learning for program placement.

The portfolio helps the community:

- reflect on the involvement in a student’s education and the support offered to learners
- demonstrate the link between the home, school and community in education.

The portfolio helps potential employers:

- identify employable skills desired in future employees
- provide evidence of knowledge and skill development of potential employees.

Working Portfolio

Students collect work over time in a working folder. Each student should also keep a journal of observations, critiques, ideas and reflections as part of his or her working portfolio. Items in this portfolio may be used for the purpose of reflection, for ongoing and summative evaluations, peer, teacher and self-evaluations, for documenting skill development and mastery.

Working portfolios may be used for purposes of conferencing between student and teacher, teacher and parent, teacher and teacher or student and student. When a teacher examines a student's portfolio in order to make a decision regarding student progress, the information it contains may become documented evidence for the evaluation.

A daily journal may also become a part of a working portfolio as a means of tracking the student's use of time and to record progress on ideas that are being developed. This will provide the student with a focus for self-directed or independent learning as well as an anecdotal record for part of the course evaluation.

Presentation Portfolio

To compile a presentation portfolio, students should select items from their working portfolio. The presentation portfolio should cover the range of students' experiences and should display their best efforts. The preparation of a presentation portfolio can be an assessment strategy. It is strongly suggested that students at the 30 level prepare a presentation portfolio suitable for submission to potential employers or post-secondary institutions.

Through collecting, selecting and reflecting, students are able to compile presentation portfolios that display their best collection of work.

Extended Study Modules

The extended study module is designed to provide schools with an opportunity to meet current and future demands that are not addressed by current modules in the renewed PAA curriculum.

The flexibility of this module allows a school/school division to design one new module per credit to complement or extend the study of existing pure core modules and optional modules. The extended study module is designed to extend the content of the pure courses and to offer survey course modules beyond the scope of the selection of PAA modules.

The list of possibilities for topics of study or projects for the extended study module approach is as varied as the imagination of those involved in using the module. These optional extended study module guidelines,

found in the *Practical and Applied Arts Handbook*, should be used to strengthen the knowledge, skills and processes advocated in the Practical and Applied Arts curriculum in which the extended study module is used.

It is recommended that a summary of any extended study module be sent to the Regional Superintendent of Curriculum and Instruction to establish a resource bank of module topics.

For more information on the extended study module, refer to the *Practical and Applied Arts Handbook*.

Instructional Resources

To support the principle of Resource-based Learning, a variety of instructional resources have been evaluated and recommended for the teaching and learning of Wildlife Management 10, 20, 30. See the enclosed *Wildlife Management 10, 20, 30: An Initial List of Implementation Materials* for a list of annotated resources. Teachers should also consult the comprehensive PAA bibliography. The annual *Learning Resource Materials Update* can also provide information about new materials evaluated since the curriculum was printed.

To order materials, except videos, teachers should also consult the department's Learning Resources Distribution Centre (LRDC) catalogue. An on-line ordering service is available at lrdc.sasked.gov.sk.ca.

The on-line version of this Guide and the accompanying list of implementation materials is accessible at www.sasked.gov.sk.ca/docs/paa.html. It will be "Evergreened", as appropriate.

Assessment and Evaluation

Student evaluation is an important part of teaching as it allows the teacher to report the successes and challenges of the student and the parent. Evaluation also provides valuable feedback about how a student learns best. It is important that teachers use a variety of evaluation strategies to evaluate student progress. Additional information on evaluation of student achievement can be found in the Saskatchewan Education documents *Student Evaluation: A Teacher Handbook*, 1991 and *Curriculum Evaluation in Saskatchewan*, 1991.

It is important that the teacher discuss the evaluation strategies to be used in the course, when the evaluation can be expected to occur and the weighting of each evaluation strategy and how it relates to the overall student evaluation. The weighting of the evaluation should be determined in relation to the amount of time spent and emphasis placed on each area of the course as suggested in the curriculum guidelines.

The *Wildlife Management 10, 20, 30 Curriculum Guide* provides many opportunities for teachers to use a variety of instructional and evaluation strategies. Evaluation instruments used in the teaching of this course are included in the *Practical and Applied Arts Handbook*. Sample copies of overall evaluation for the course, evaluation for general student skills and work study are included for teachers to adapt and use.

A sample evaluation scheme for this course:

Portfolios	10%
Written Tests	10%
Practical Tests	20%
Project Work	30%
Assignments	20%
Class Presentations or Work Study	10%

Regular program evaluation could include a survey involving parents, students and employers to determine program effectiveness and needs for change, if any. Information specific to program evaluation is found in Saskatchewan Education's *School-Based Program Evaluation Resource Book* (1989) and the *Practical and Applied Arts Handbook*.

For more information about student evaluation refer to the *Practical and Applied Arts Handbook* (Saskatchewan Education) or *Student Evaluation: A Teacher Handbook* (Saskatchewan Education, 1991).

For information about curriculum evaluation refer to *Curriculum Evaluation in Saskatchewan* (Saskatchewan Education, 1991).

Module Overview

Module Code	Module	Suggested Time (Hours)
WILD01	Module 1: Wildlife and Ecosystems (Core)	10-20
WILD02	Module 2: Natural History of Saskatchewan Wildlife (Core)	10-20
WILD03A	Module 3A: Outdoor Experiences I (Optional)	10-20
WILD03B	Module 3B: Outdoor Experiences II (Optional)	10-20
WILD03C	Module 3C: Outdoor Experiences III (Optional)	10-20
WILD04	Module 4: Wildlife - Our Responsibility (Optional)	3-5
WILD05	Module 5: Regulated Hunting (Optional)	10-15
WILD06	Module 6: Fishing and the Aquatic Environment (Optional)	5-10
WILD07	Module 7: Wildlife - An Aboriginal Perspective (Core)	5-10
WILD08	Module 8: The Value of Wildlife (Optional)	10-15
WILD09	Module 9: Career Opportunities in Wildlife (Core)	2-5
WILD10	Module 10: Wildlife Areas and Species (Optional)	15-20
WILD11	Module 11: Interactions of Wildlife and Society (Optional)	15-20
WILD12	Module 12: Hunting and Game Handling (Optional)	5-10
WILD13A	Module 13A: Issues in Wildlife I (Optional)	5-10
WILD13B	Module 13B: Issues in Wildlife II (Optional)	10-20
WILD14	Module 14: Making a Difference to Wildlife (Optional)	10-15
WILD15	Module 15: Applications of Wildlife Research (Optional)	5-10
WILD16A	Module 16A: Managing Wildlife (Optional)	15-20
WILD16B	Module 16B: Managing Wildlife (Optional)	10-15
WILD17A,B,C	Module 17A, B, C: Work Study Preparation and Follow-up (Optional)	5-10
WILD18A,B,C	Module 18A, B, C: Modules Work Study (Optional)	25-50
WILD99A,B,C	Module 99A, B, C: Extended Study (Optional)	5-20

Suggested Course Configuration

Module Code	Module	Suggested Time (Hours)
Wildlife Management 10		
WILD01	Module 1: Wildlife and Ecosystems (Core)	10-20
WILD02	Module 2: Natural History of Saskatchewan Wildlife (Core)	10-20
WILD03A	Module 3A: Outdoor Experiences I (Optional)	10-20
WILD04	Module 4: Wildlife - Our Responsibility (Optional)	3-5
WILD05	Module 5: Regulated Hunting (Optional)	10-15
WILD06	Module 6: Fishing and the Aquatic Environment (Optional)	5-10
WILD07	Module 7: Wildlife - An Aboriginal Perspective (Core)	5-10
WILD09	Module 9: Career Opportunities in Wildlife (Core)	2-5
WILD17A	Module 17A: Work Study Preparation and Follow-up (Optional)	5-10
WILD18A	Module 18A: Work Study (Optional)	25-50
WILD99	Module 99: Extended Study (Optional)	5-20
	Minimum	100 hours
Wildlife Management 20		
WILD03B	Module 3B: Outdoor Experiences II (Optional)	10-20
WILD08	Module 8: The Value of Wildlife (Optional)	10-15
WILD10	Module 10: Wildlife Areas and Species (Optional)	15-20
WILD11	Module 11: Interactions of Wildlife and Society (Optional)	15-20
WILD12	Module 12: Hunting and Game Handling (Optional)	5-10
WILD13A	Module 13A: Issues in Wildlife I (Optional)	5-10
WILD17B	Module 17B: Work Study Preparation and Follow-up (Optional)	5-10
WILD18B	Module 18B: Work Study (Optional)	25-50
WILD99	Module 99: Extended Study (Optional)	5-20
	Minimum	100 hours
Wildlife Management 30		
WILD03C	Module 3C: Outdoor Experiences III (Optional)	10-20
WILD13B	Module 13B: Issues in Wildlife II (Optional)	10-20
WILD14	Module 14: Making a Difference to Wildlife (Optional)	10-15
WILD15	Module 15: Applications of Wildlife Research (Optional)	5-10
WILD16A	Module 16A: Managing Wildlife (Optional)	15-20
WILD16B	Module 16B: Managing Wildlife (Optional)	10-15
WILD17C	Module 17C: Work Study Preparation and Follow-up (Optional)	5-10
WILD18C	Module 18C: Work Study (Optional)	25-50
WILD99	Module 99: Extended Study (Optional)	5-20
	Minimum	100 hours

Note: This is a suggested configuration only.

Module 1: Wildlife and Ecosystems (Core)

Suggested time: 10 – 20 hours

Level: Introductory

Prerequisite: None

Module Overview

This introductory module provides students with opportunities to develop a definition of wildlife and create an understanding of the relationships in an ecosystem. This will allow them to develop and examine their own views of wildlife while exploring the views of others in an inquiring manner.

The introduction should also serve as a way of establishing the connections to the modules selected for study in Wildlife Studies.

Foundational Objectives

- To develop values that will increase an appreciation and respect for wildlife.
- To develop skills that allow students to appreciate the natural world through direct experience.
- To examine relationships between wildlife species and humans and how populations are affected.

Common Essential Learnings Foundational Objectives

- To enable students to understand and use the vocabulary, structures and forms of expression that characterise an understanding of wildlife and ecosystems. (COM)
- To support students in treating themselves, others and the environment with respect. (PSVS)

Learning Objectives		Notes
1.1	To define <i>wildlife</i> based on personal experience and research. (COM)	Use a concept attainment activity to elicit the idea of domestic or wild. Have students examine definitions of wildlife from the resources, dictionaries and encyclopaedias. Animals such as elk, bison or deer that are raised for production should be discussed in terms of their status. Discuss plants as well as animals.
1.2	To recognize the diversity of species in Saskatchewan.	Define invertebrates and vertebrates. Brainstorm the variety of wildlife found in each area of Saskatchewan. Refer to the bibliography for a listing of resources dealing with Saskatchewan wildlife. Have students research a number of Saskatchewan animals and give brief descriptions of their habitat and niche.
1.3	To identify biotic and abiotic components of a local ecosystem. (COM)	Define the terms <i>biotic</i> and <i>abiotic</i> . Use Saskatchewan wildlife as a basis for developing a game of charades. Research a list of plants and animals found in the local area. Important terms such as producers, consumers, decomposers, habitat, food chains, food webs and niche could also be included in the charades.
1.4	To understand how the components within an ecosystem interrelate.	Have students examine an aquarium ecosystem or the school yard and develop a list of biotic and abiotic components within that ecosystem. Describe relationships between these components. Use resources listed to develop an ecosystem tree for the different biomes of Saskatchewan. Dioramas or posters for each of the areas could be created and a narrative developed.

Learning Objectives

Notes

1.5	To identify relationships among wildlife species including social relationships (hierarchies), food chains and webs and the roles of producers, consumers and decomposers.	Examine owl pellets to identify relationships between predator prey species. See Ecology section (1.3 to 1.7) of Biology 20. Biological supply houses sell owl pellets or if there are owls in the local area, pellets can be retrieved.
1.6	To recognize the many environmental factors that affect wildlife populations.	
1.7	To relate the concepts of “limiting factors” and “carrying capacity” to wildlife populations.	<p>Introduce the concepts of “limiting factors” and “carrying capacity” by playing games that illustrate population dynamics.</p> <p>Have students research the fox, coyote, swift fox, wolf and plains grizzly in Saskatchewan as examples of adaptation and change. (IL) Use a jigsaw approach to share information.</p>
1.8	To recognize adaptation and change as a natural force in species.	Take a field trip to a natural conservation site in the local area. Ducks Unlimited or Wildlife Habitat Canada sites are excellent. Invite a guest speaker to share the perspective of his/her job as it relates to conservation or preservation.
1.9	To compare wildlife conservation with preservation, recognising a variety of opinions regarding the value of wildlife conservation and preservation. (PSVS)	<p>Debate the concept of preservation versus conservation. Have students examine these concepts from regional, provincial and federal perspectives.</p> <p>Contact agencies such as the Saskatchewan Wildlife Federation, Nature Saskatchewan and Saskatchewan Environment and Resource Management. Obtain their vision statements and compare and contrast them as they relate to preservation and conservation. The bibliography provides Internet addresses for these and other agencies.</p>
1.10	To understand how the well-being of both humans and wildlife depend upon the quality of the natural environment.	<p>Do a guided imagery activity using a descriptive writing from the bibliography. Have students use discussion and a writing or drawing activity to draw parallels between human and wildlife needs.</p> <p>Use the Saskatchewan Education video duplication service to develop a library of videos that illustrate the need to examine how human needs are similar to those of wildlife.</p>

Module 2: Natural History of Saskatchewan Wildlife (Core)

Suggested time: 10 – 20 hours

Level: Introductory

Prerequisite: None

Module Overview

Students will have the opportunity to examine the diversity of plants and animals that are found in Saskatchewan. The variety of ecozones in Saskatchewan will allow for comparisons between regions or an in-depth look at one or more of the zones. Wildlife will be researched in terms of behaviour, structure and habitat and these characteristics will be compared to wildlife in the rest of Canada and the world.

Foundational Objective

- To research the structure, diversity, behaviour and habitat of Saskatchewan wildlife species.

Common Essential Learnings Foundational Objectives

- To develop students' abilities to access knowledge about wildlife management on a provincial and national level. (IL)
- To promote both intuitive, imaginative thought and the ability to evaluate ideas, processes, experiences and objects in meaningful contexts. (CCT)

Learning Objectives		Notes
2.1	To be able to describe the major groups of wildlife present in Saskatchewan and Canada. (COM)	<p>Students should brainstorm examples of wildlife in Saskatchewan and then create groupings that would accommodate the examples. Make sure that all major groups are represented e.g., micro-organisms, plants, invertebrates, insects, fish, amphibians, reptiles, birds, mammals. Refer to the Diversity of Life unit in Biology 20.</p> <p>Watch videos that illustrate the wildlife found in Saskatchewan and Canada. Have students develop concept maps or mind maps that would illustrate their location and relationship with each other. Maps of Canada and Saskatchewan could be used to illustrate range.</p>
2.2	To identify and compare key species within major groups of wildlife.	Discuss keystone species and in small groups have students develop their own keystone species for each grouping that was developed.
2.3	To give examples of wildlife species found in different habitats in Saskatchewan. Rural and urban, terrestrial and aquatic habitats should be examined.	Categorize the list of organisms as to whether they would be common in rural or urban, terrestrial or aquatic habitats.
2.4	To compare the structures, behaviour and habitat of Saskatchewan wildlife species.	Have students use resources to create a profile of the keystone species developed in 2.2. Drawings or dioramas could be used to illustrate structure, behaviour and habitat.
2.5	To explain interactions of selected wildlife species with other species and the environment. (CCT)	<p>Use simulations and games to develop the following concepts:</p> <ul style="list-style-type: none">• predator/prey relationships• food chains and webs• symbiotic relationships. <p>Curriculum resources include Biology 20, Grade 6 Science and Grade 8 Science.</p>
Learning Objectives		Notes
2.6	To assess how wildlife species have adapted to their environment.	Map the major ecozones and/or ecoregions of Canada and include their climatic and physical features. Create an extensive inventory of key plants and animals for each of the ecozones. List these on slips of paper and have

		students draw out names at random for each ecozone. Describe why the wildlife would or would not fit each of the ecozones based on their adaptations, e.g., a polar bear drawn for the Prairie Grassland would not allow the bear to obtain the food of its choice or be appropriately dressed for the climate.
2.7	To understand why wildlife may live in some areas of Saskatchewan or Canada, but not in others.	Refer to the bibliography for resources that deal with Saskatchewan wildlife.
2.8	To conduct research on one or more species present in Saskatchewan. (IL)	Conduct a research study on one or more wildlife species present in Saskatchewan. Topics that could be investigated are: structural and behavioural adaptations, interactions with other species, habitat, life cycle and social organization.
2.9	To compare diversity among living organisms in Saskatchewan and other parts of the world. (CCT)	Have students work in small groups to develop a creature/plant that would be well developed for a specific environment. Posters, dioramas or clay models can be used here. Have students describe the special adaptations to the rest of the class.
2.10	To examine reasons for differences in diversity between the Saskatchewan prairie or boreal biomes and other major world biomes. (CCT)	Brainstorm reasons for differences between biomes. Climatograms and information on soil types would help here. Refer to Biology 20 (1.1 to 1.3) for information on ecosystems. Develop a game that illustrates biome characteristics and the range traits of indicator species that would exist in those biomes.

Module 3A: Outdoor Experiences I (Optional)

Suggested time: 10 – 20 hours

Level: Introductory

Prerequisite: None

Module Overview

Students develop and demonstrate the basic skills that are required for responsible participation in a range of outdoor activities. Field trips such as day hikes or overnight camping are essential for this module and integration with other modules such as Natural History of Saskatchewan Wildlife could be done.

Foundational Objectives

- To demonstrate safety practices while engaged in outdoor experiences.
- To develop values that will increase an appreciation and respect for wildlife.
- To develop skills that allow students to appreciate the natural world through direct experience.
- To examine relationships between wildlife species and humans and how populations are affected.

Common Essential Learnings Foundational Objectives

- To develop students' abilities to meet their own learning needs in planning for outdoor activities. (IL)
- To support students in treating themselves, others and the environment with respect. (PSVS)
- To enable students to think for themselves, to recognize the limits of individual reflection and the need to build on mutual understandings when planning and undertaking outdoor activities. (CCT)

Learning Objectives		Notes
3.1	Identify, assess and respond to physical hazards encountered in the natural environment. (CCT)	Use slides or a video that exhibits a variety of terrain. Have students identify and analyze hazards that relate to wildlife, weather and terrain that could be encountered during an expedition.
3.2	To identify, assess and respond to physiological and psychological factors often associated with outdoor experiences.	Research the following terms and dramatize them: hypothermia, frostbite, dehydration, heat stroke and fatigue. (IL) Invite specialists in health care such as a nurse or first aid responder to discuss these factors with the students.
3.3	To list and explain necessary steps to take in emergency and survival situations in the outdoors. (CCT)	Use survival handbooks to develop flow charts or posters that describe the steps to take when confronted with an emergency. Some sample situations could include: what to do if lost or separated, first aid response to injury, construction of emergency shelter, how to gather food from edible plants, how to organize a search party. Refer to the bibliography for examples of survival handbooks related to outdoor experiences.
3.4	To select appropriate personal and group gear for outdoor activities.	Have students plan a field trip and evaluate the need and survival value of the articles that they have chosen for personal and group usage. (CCT)
3.5	To explain and demonstrate techniques for minimum impact/no trace camping. (PSVS)	Simulate an outdoor camping experience by taking the students into the schoolyard or a nearby park and use demonstration and student practice to develop skills in camping. Students should work in small groups to become specialists in one or more of the learning objectives from 3.5 to 3.9 and then workshop these techniques for the other groups. (IL)
Learning Objectives		Notes
3.6	To demonstrate safe procedures for building and maintaining fires. (TL)	Demonstrate procedures for building and maintaining fires. Discuss the responsibility of ensuring fires are extinguished before leaving the campground.

3.7	To understand techniques used to plan, pack, carry and prepare foods during expeditions.	Have a dinner at the park where students use prior planning to create an outdoor meal and cook it over an open fire.
3.8	To describe techniques that can be used to maintain hygiene during expeditions.	Invite a public health nurse to talk to students regarding the need for hygiene in outdoor situations.
3.9	To plan and conduct a safe expedition in the natural environment. (CCT)	
3.10	To utilize different modes of travel to participate in a variety of outdoor activities.	Have the physical education instructor demonstrate the use of equipment such as cross-country skis, footwear for hiking, bicycles, canoes or snowshoes.
3.11	To practise minimal impact/no trace land use while participating in outdoor expeditions. (PSVS)	Plan an overnight camping trip and have students demonstrate and checklist skills involving tool usage, hygiene, safety, fire building and usage, food preparation and no trace camping. Take students hiking, cross-country skiing, snowshoeing or canoeing. (PSVS)
3.12	To identify factors that affect ability to cope with emergency conditions in the outdoors (e.g., pain, cold, thirst, hunger, fatigue, boredom, loneliness and fear).	The Saskatchewan Education video duplication service has several videos on firearms, camping outdoors and wilderness survival.
3.13	To be able to perform emergency first aid techniques (e.g., artificial respiration, control of bleeding, care of victims of shock or concussion, care of sprains, fractures and dislocations, care of burns, blisters, frostbite and animal and insect bites, hypothermia).	Arrange to have a Red Cross First Aid course offered. Survey students and parents to ensure that there are a number of trip participants who have taken a first aid course or an athletics trainer course.
3.14	To demonstrate basic survival techniques (e.g., fire building, shelter building, sending rescue signals, securing food and water).	Do a mock field trip where students demonstrate basic survival techniques.

Module 3B: Outdoor Experiences II (Optional)

Suggested time: 10 – 20 hours of classroom instructional time with an extended outdoor activity involving at least a weekend stay.

Level: Intermediate

Prerequisite: Module 3A

Module Overview

This module has the prerequisite of Outdoor Experiences I and is intended to extend the outdoor experience. Planning, safety and minimal impact are stressed with an extended outdoor activity so students can refine the skills they acquired in Module 3A.

Learning Objectives		Notes
3.15	To plan and prepare for an extended outdoor wilderness trip.	Refer to Module 3A for specific advanced planning for field tripping.
		Hold a pre-trip meeting with students and their parents/guardians prior to the excursion to confirm trip details. Obtain information regarding special needs and discuss trip expectations. Discuss weather conditions and supplies needed for various types of weather. Goals and expectations, length of the trip, destination and general agenda should all be discussed. Secondary goals and learning outcomes should be discussed here.
		Identify, list and obtain all requirements such as water, food, tents, stoves, tools, first aid and survival kits, clothing, footwear and toiletries. Set up and carefully check all equipment for safety and condition before the trip. Obtain missing equipment and make any needed repairs.
		Develop a checklist of equipment, supplies and personal gear and distribute to students. Check the list for completeness and use it when packing. (CCT)
3.16	To identify, assess and respond to psychological and physiological risks that may compromise safety on a wilderness trip. (CCT)	Examine alternatives to equipment that may better supply needs or would lessen impact on the environment. (CCT)
		Plan for weather and trip conditions by identifying hazards particular to the area and examining weather forecasts.
3.17	To list and explain necessary steps to take in emergencies on a field trip.	Examine the effects of hypothermia, isolation or being lost, and discuss or research best courses of action to take if they occur.
		Plan courses of action to deal with potential emergency situations in the wilderness (e.g., extreme weather conditions, fire, flood, injury or illness, becoming lost or animal threats).
		Demonstrate the use of first aid supplies and have students carry on mock injury care. (CCT)
Learning Objectives		Notes
3.18	To acquire and apply minimal impact skills while on a wilderness trip.	Incorporate guidelines for environmental awareness into trip planning and preparation. Check into expectations and strategies for a minimal impact camping.
		Examine the principles of ecotourism and integrate them into the trip.

		Students may develop an ecotourism business plan for the area.
3.19	To safely conduct and conclude an extended outdoor wilderness trip with minimal environmental impact. (PSVS)	<p>Be aware of the activities of wildlife in the area and take precautions to avoid dangerous situations and damaging impact on their habitat.</p> <p>Follow guidelines for safe outdoor travel; for example, check for any weather conditions such as drought that may affect the use of open fires. Inform responsible persons of travel plans and follow travel schedule as planned. Identify potential hazards and take appropriate action. Use orientation and navigation tools and skills. Dress according to weather and travel needs. Watch for changes in weather conditions.</p> <p>Set up the campsite following guidelines for comfort, safety and minimum environmental impact. Campsite selection should be based on site exposure and drainage, access to water and firewood (if open fires are allowed), impact on flora and fauna and proximity to potential dangers. Food and equipment should be protected from animals and the weather when setting up the camp. (IL)</p> <p>Follow minimal impact guidelines in establishing the latrine location and toilet procedures, wash area and procedures, fire site and use and methods of garbage and waste water disposal. Comply with local, provincial and federal legislation relevant to activities that are undertaken. In many areas, all garbage must be carried out. Biodegradable soap should be used where appropriate. (PSVS)</p> <p>Have students perform camp duties on a rotational basis. This should include such things as meal preparation, camp maintenance, hygiene and breaking camp. Use a rating scale or checklist to evaluate.</p> <p>Students should keep a journal of their camping and wildlife experiences. Relevant activities that could be included are orienteering, plant and animal identification, animal track and scat identification, use of equipment or survival skills. Photographs or video taping could be used to record the field trip.</p>
3.20	To conclude the wilderness trip and conduct a post-trip assessment.	<p>Modules 1, 6 and 10 could be integrated into the field trip experience.</p> <p>Follow appropriate procedures to break camp such as packing supplies, equipment and personal gear, and returning the site to as close to its original condition as possible.</p>

Learning Objectives

Notes

If a campfire is used, stress the responsibility to ensure the campfire has been extinguished before leaving the campsite.

Conduct a post-trip assessment to gather feedback and evaluate the success of the wilderness trip. Participants should provide their personal observations and impressions. Identify any problems that were encountered and record recommendations for future trips. Students should use reflection and group assessment to obtain feedback that could be used in planning future trips. Journal activities during the trip could be used to obtain feedback. (PSVS)

Module 3C: Outdoor Experiences III (Optional)

Suggested time: 10 – 20 hours

Level: Advanced

Prerequisites: Modules 3A, 3B

Module Overview

This module is intended to extend the outdoor experience. Planning from the previous outdoor experience modules is to be used to create an extended outdoor adventure. A canoe trip, extended hike or a several day fixed camp experience would fit in this module. Other modules can be integrated here. Some of the theory and classroom activities can be translated into field experiences. Module 6 (Fishing and the Aquatic Environment), Module 5 (Interactions of Wildlife and Society) and Module 12 (Regulated Hunting) are some of the modules that could be integrated here. Safety and minimal impact are stressed with an extended outdoor activity so students can refine the skills that were introduced in Modules 3A and 3B.

Learning Objectives		Notes
3.21	To plan and prepare for an extended outdoor wilderness trip.	Refer to Module 3A for specific planning that must go with field tripping Have students use a time flow chart to plan the materials needed and the activities they will be doing. A guided imagery activity where students fill in the gaps can be used here. For example, we get up at 7:30 a.m. and prepare breakfast. What are we having for breakfast? What do we need to prepare this? (CCT)
3.22	To demonstrate safe use of outdoor hand tools. (PSVS)	Demonstrate the safe use and care of cutting tools and then have students model their usage. All of these tools may not be needed on each field trip. Safety should be a prime consideration here. Brainstorm the many ways that tools can be used and misused on a camping trip. Research how misused tools (e.g., carving initials into trees) can effect the wildlife or vegetation.
3.23	Integrate this field trip with other units that could be enriched by experience.	Concept mapping of the units would help students see the interrelationships that exist. Individual, small group or large group projects could be done while on the field trip.

Module 4: Wildlife – Our Responsibility (Optional)

Suggested time: 3 – 5 hours

Level: Introductory

Prerequisite: None

Module Overview

Wildlife has a significant impact on all cultures and has contributed to our literature, mythologies, spiritual nature and economic and recreational activities. Our relationship to wildlife will be examined and the significance of how our actions affect wildlife will be assessed.

Foundational Objectives

- To develop values that will increase an appreciation and respect for wildlife.
- To understand the role and obligations of government agencies, interest groups and individuals to preserve wildlife.
- To examine relationships between wildlife species and humans and how populations are affected.

Common Essential Learnings Foundational Objectives

- To enable students to think for themselves, to recognize the limits of individual reflection and the need to contribute to and build upon mutual understandings of conservation and management. (CCT)
- To support students in treating themselves, others and the environment with respect. (PSVS)

Learning Objectives		Notes
4.1	To explain the social and cultural significance of wildlife. (PSVS)	Use magazines and Internet sources to develop a collage that describes how wildlife contributes to our culture. Have students look for examples that show uses related to: recreation, literature, mythology, spirituality, aesthetics and medicines. Have students develop criteria of excellence and then use peer and teacher evaluation. There are several magazines for environmental educators. Refer to the foreword of the bibliography for sample titles.
4.2	To explain the economic significance of wildlife.	Have resource people from the community, either through interview or class visit, describe how wildlife has contributed to their business or vocation. Game farming, guiding, forestry and ranching are some areas affected by wildlife.
4.3	To explain the environmental significance of wildlife.	Have students compare and contrast a natural area such as a slough with a wheat field. A field trip would allow students to examine diversity of life forms and look for signs of water, air and soil quality. Research how the canary was used as an environmental barometer in coal mining and have students look for similar barometers in other areas.
4.4	To evaluate how individual attitudes, actions and lifestyle may affect wildlife and the environment. (CCT)	Have students brainstorm the different attitudes people have about the environment and then predict the actions and the lifestyles that evolve from these attitudes. Create characters that represent a stereotype of lifestyles in our communities. Role play these characters at the coffee shop discussing an issue related to wildlife that is of local interest. For example, the issue might be a Ducks Unlimited project to benefit waterfowl being put next to some of the best farmland in the area.

Learning Objectives

Notes

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- 4.5 To describe how the growth of human populations may affect wildlife through the destruction of habitat. Examine the diversity of wildlife in areas of high human population compared to low human population. Graph species diversity versus human population.

Module 5: Regulated Hunting (Optional)

Suggested time: 10 – 15 hours

Level: Introductory

Prerequisites: Modules 1 and 2

Module Overview

Management and conservation are detailed with reference to a Saskatchewan context. The importance of a well described management plan for wildlife is examined and the need for regulations to carry out that management plan detailed. Identification of wildlife in Saskatchewan will be stressed as will the safe use of equipment. A St. John's Ambulance (Standard First Aid) course could be given here if this has not already been done in the Outdoor Experiences module.

Foundational Objectives

- To demonstrate safety practices while engaged in outdoor experiences.
- To understand the role and obligations of government agencies, interest groups and individuals to preserve wildlife.
- To examine issues and opinions as to how wildlife should be managed.
- To create an awareness of and respect for laws that regulate human interaction with and exploitation of wildlife.

Common Essential Learnings Foundational Objectives

- To enable students to understand and use the vocabulary, structures and forms of expression necessary to interpret wildlife regulations and their purpose. (COM)
- To support students in coming to a better understanding of the personal, moral, social and cultural aspects of management and conservation of wildlife. (PSVS)
- To develop an understanding that technology dealing with wildlife management shapes and is shaped by society. (TL)

Learning Objectives		Notes
5.1	To describe the goals of game management and agencies responsible for managing Saskatchewan's game animals.	Research material can be obtained from many government agencies and interest groups. Saskatchewan Environment and Resource Management (SERM), the Saskatchewan Wildlife Federation and Nature Saskatchewan have resources that would supplement this area. Have students examine the mandate of the Wildlife Branch of Saskatchewan Environment and Resource Management. The website addresses for these agencies are located in the foreword of the bibliography.
5.2	To identify components and techniques of a game management system; including biological research, inventory, habitat manipulation and managing wildlife populations. (COM)	Play a simulation that illustrates game management. Have the students do a wildlife inventory in the schoolyard or at a nearby park. Use a variety of techniques such as the line intersect or quadrant method of survey.
5.3	To explain the role of regulated hunting in game management and conservation.	Research how hunting limits are established in Saskatchewan. Conservation officers or the Wildlife Branch of Saskatchewan Environment and Resource Management have information in this area. Saskatchewan Education video duplication service has several videos on firearms.

Learning Objectives		Notes
5.4	To discuss and describe the hunting regulations and how they contribute to safety and game management.	Research how animal populations were affected by a lack of regulations. Case studies on the bison, passenger pigeon or Plains Grizzly could be done here. Compare the hunting seasons in Saskatchewan to those in neighbouring provinces and states.

		Use the Saskatchewan Hunting Guide to identify the regulations for hunting. Use brainstorming to develop cause and effect relationships that relate safety and management to the regulations. Create posters that illustrate these relationships.
5.5	To understand the responsibilities of the hunter in reporting conditions that may endanger wildlife (e.g., pollution and its effect on wildlife, habitat loss and abuse, threats to rare and endangered species, neglect of wildlife laws). (PSVS)	Do role playing and examine dilemmas that relate to ethical and legal decisions that students might make while hunting. Dilemma cards could be created with several open ended possible solutions.
5.6	To identify ethical considerations that provide a social standard for conduct when hunting (e.g., pollution and its effect on wildlife, habitat loss and abuse, threats to rare and endangered species, neglect of wildlife). (PSVS)	Students interview landowners and hunters to identify the needs and expectations of each group. Have students role play satisfactory and unsatisfactory landowner-hunter encounters.
5.7	To identify and describe the distinguishing characteristics and habits of Saskatchewan's game and fur bearing species; carnivores, upland game birds, waterfowl, ungulates and fur bearing species. (COM)	Field trips to zoos or natural history museums would help identify game species. Individual or small group research, accompanied by drawings, can be used to identify game species and their habitat. Use resources to develop a list of game animals found in Saskatchewan and their ranges. Have students develop a mural that illustrates the range and distribution of game species in Saskatchewan. This activity may be used in conjunction with Module 2, Natural History of Saskatchewan Wildlife. Contact Saskatchewan Environment and Resource Management for information on trapping. Inquire about their fur program. Upland game birds have population cycles that could be researched.

	Learning Objectives	Notes
5.8	To distinguish between similar game and non-game species (e.g., sage hen and sharptail grouse). (CCT)	Take a field trip to a local slough with field guides and identify waterfowl found there. Look for an area where both diving and dabbling ducks may be found.
5.9	To describe the characteristics, use and care of hunting gear.	Have a local hunter come in and describe the use and basic care of equipment used when hunting. (TL)

Module 6: Fishing and the Aquatic Environment (Optional)

Suggested time: 5 - 10 hours

Level: Introductory

Prerequisite: None

Module Overview

Management and conservation of aquatic environments and fish stocks are detailed with reference to a Saskatchewan context. Fishing is an activity that brings people in contact with nature and supplies enjoyment for many. Fish identification will be described with reference to habitat and the use of basic equipment for sports fishing.

Foundational Objectives

- To demonstrate safety practices while engaged in outdoor experiences.
- To examine issues and opinions as to how wildlife should be managed.
- To develop skills that allow students to appreciate the natural world through direct experience.
- To research the structure, diversity, behaviour and habitat of Saskatchewan wildlife species.
- To create an awareness of and respect for laws that regulate human interaction with and exploitation of wildlife.

Common Essential Learnings Foundational Objectives

- To enable students to understand and use the vocabulary, structures and forms of expression necessary to interpret wildlife regulations and their purpose. (COM)
- To support student development of a better understanding of the personal, moral, social and cultural aspects of management and conservation of wildlife. (PSVS)
- To develop an understanding use of technology in wildlife management as it shapes and is shaped by society. (TL)

Learning Objectives		Notes
6.1	To identify ethical considerations that provide a social standard of conduct for game fishing (e.g., fisher-landholder relations, regard for others, respect for self, respect for wildlife, catch and release fishing, respect for laws). (PSVS)	Use the <i>Saskatchewan Angler's Guide</i> and information from Saskatchewan Environment and Resource Management website (see the bibliography) to create a vision statement of the department. Compare this to the actual vision statement that Saskatchewan Environment and Resource Management has in its fishery department. Have guest speakers from fisheries or a conservation officer talk to the class about the purpose of laws and regulations related to fishing.
6.2	To describe fishing regulations and associated legislation that provide a legal standard of conduct for game fishing.	Have students compare and contrast commercial, sport and trophy fishing. Arrange a debate. Interview people in the community that fish. Ask them where they fish and whether they feel fish stocks have changed over the years.
6.3	Describe common ways of classifying fish. (COM)	Visit a fish hatchery and have students examine the role of fish stocking in sports fishing. Have students develop ethical dilemmas related to fishing and discuss possible courses of action.
6.4	To describe water characteristics that influence the distribution and abundance of fish.	Collect water samples from various locations and test for turbidity and oxygen levels. Activities from the <i>Grade 10 Science Curriculum</i> could be used here.

Learning Objectives	Notes
6.5 To identify and describe the distinguishing characteristics of major game fish species in Saskatchewan. (PSVS)	<p>Develop posters or collages that illustrate game fish that are found in Saskatchewan.</p> <p>Have students cut out photographs of game fish to use as flash cards to help identify major game species.</p> <p>Integrate this unit with Regulating Hunting.</p> <p>Have students classify fish by species, feeding habits and preference for water temperature</p> <p>Have students do individual or group research to develop fact sheets and drawings that give the main distinguishing features of major fish species. Relate physical features, habitat, spawning habitats and angling techniques to the fish studied. The habitat characteristics could include water temperature, dissolved oxygen needs, water depth and response to acid/alkaline conditions. (NUM)</p>
6.6 To understand safe practices for fishing and engaging in related outdoor activities. (PSVS)	Develop posters that illustrate safe practices.
6.7 To know the characteristics, use and care of common fishing equipment. (TL)	<p>Role play unsafe angling practice, without hooks or other possible sources of injury.</p> <p>Integrate this with Outdoor Experiences by taking the students on a field trip to the “old fishing hole”. Demonstrate use of equipment and techniques that are used for sports fishing. Adhere to licensing and catch regulations.</p>
6.8 To know the nature and purpose of different angling techniques.	Invite guest speakers who have an interest in fly fishing or other specialized angling into the classroom.
6.9 To demonstrate techniques for the care of table fish and trophy fish.	Visit a taxidermist or have one visit the class.
6.10 To demonstrate techniques for handling and cooking table fish. (TL)	Integrate this with the Food Studies course. Demonstrate and have students model filleting, scaling, cleaning and cooking of fish.
6.11 To know emergency first aid and survival techniques, and items to be included in first aid and survival kits. (CCT)	<p>Include discussion of what to do for fishing-specific injuries such as fish hook injuries, hypothermia and others.</p> <p>Suggest students take a first aid course in the community.</p>

Module 7: Wildlife – An Aboriginal Perspective (Core)

Suggested time: 5 – 10 hours

Level: Introductory

Prerequisite: None

Module Overview

Wildlife was, and continues to be, a crucial component of the life of aboriginal people in North America. Historical perspectives will be examined as will the philosophical viewpoints of wildlife utilization. Treaty rights as they are applied to wildlife management will be described and examined.

Foundational Objectives

- To examine relationships between wildlife species and humans and how populations are affected.
- To cultivate an appreciation and understanding of how other cultures view wildlife.

Common Essential Learnings Foundational Objectives

- To promote both intuitive, imaginative thought and the ability to evaluate ideas, processes, experiences and objects in meaningful contexts. (CCT)
- To support students in coming to a better understanding of the personal, moral, social and cultural aspects of management and conservation of wildlife. (PSVS)
- To develop a lifelong conservation ethic. (IL)

Learning Objectives		Notes
7.1	To examine how aboriginal people have interacted with wildlife from a historical perspective.	Invite an elder in to describe traditional wildlife usage. (PSVS)
		For information on protocol and guidelines for inviting aboriginal elders into the classroom, see the bibliography.
		Research the historical uses of wildlife by the different aboriginal peoples of Saskatchewan.
7.2	To understand the treaties between the First Nations and Government of Canada as they relate to rights to wildlife utilization and Métis rights as defined by courts.	Examine relevant clauses in treaties that deal with wildlife usage. (CCT)
		Develop posters that illustrate the rights First Nation's people have to wildlife resource usage.
		Use the media to examine issues related to aboriginal utilization of rights (e.g., lobster fishing in the Maritimes).
7.3	To investigate the aboriginal philosophy of wildlife usage. (IL)	Research the medicinal and spiritual uses of wildlife by aboriginal peoples. Recognize the spiritual importance of wildlife to each aboriginal culture in Saskatchewan.
		Compare and contrast the views that aboriginal cultures have toward wildlife.

Module 8: The Value of Wildlife (Optional)

Suggested time: 10 - 15 hours

Level: Intermediate

Prerequisite: None

Module Overview

The world has been enriched by the poetry, literature and art that has its roots in the natural world. Nature and wildlife have always been a source of inspiration as well as economic value. The cultural, social and economic significance of wildlife will be examined from both a group and a personal point of view.

Foundational Objectives

- To develop values that will increase an appreciation and respect for wildlife.
- To be aware of the career development opportunities in the field of wildlife that exist in Saskatchewan and other provinces.
- To develop skills that allow students to appreciate the natural world through direct experience.
- To examine relationships between wildlife species and humans and how populations are affected.

Common Essential Learnings Foundational Objectives

- To enable students to understand and use the vocabulary, structures and forms of expression necessary to interpret wildlife regulations and their purpose. (COM)
- To support students in treating themselves, others and the environment with respect. (PSVS)
- To support the development of a positive disposition to life-long learning. (IL)

Learning Objectives		Notes
8.1	To examine how human values have been impacted by relationships with wildlife. (PSVS)	<p>Refer to Grade 6 Science or Grade 7 Science for related activities.</p> <p>Examine how wildlife has impacted on our values as they relate to religious teachings, art, music, drama, literature or other areas of human endeavour.</p> <p>Examine literature, art, music and drama that has been inspired or influenced by wildlife. (IL)</p> <p>Do a guided imagery activity from a descriptive reading.</p> <p>Visit an art gallery or use the resource room to examine photographs or paintings that have been influenced by wildlife.</p> <p>Interview a religious leader about the significance of wildlife in his/her belief system.</p>
8.2	To assess social and health benefits that are derived from wildlife. (CCT)	<p>Brainstorm social and health benefits derived from wildlife.</p>
8.3	To examine how wildlife contributes to the economy of an area.	<p>Research recreational, medicinal and spiritual or aesthetic benefits of wildlife. (IL)</p> <p>Have students develop a simulation that illustrates how wildlife contributes to the economy of an area.</p> <p>Do a concept attainment activity that illustrates economic activities related to wildlife.</p>

Learning Objectives

Notes

Research statistics to illustrate the benefits of wildlife. Refer to the list of

		<p>websites in the foreword to the bibliography, particularly Saskatchewan Tourism.</p> <p>Investigate the economic impact of wildlife in Saskatchewan. Investigate ecotourism and job-related opportunities in the province.</p>
8.4	To investigate game farming in Saskatchewan.	Create a list of the various types of game farming in Saskatchewan. Discuss reasons why game farming is growing in Saskatchewan. Where possible, visit a local game farm or invite the game farmer to visit the classroom.
8.5	To explain how wildlife can be used as a barometer of overall environmental quality.	<p>Refer to Grade 10 Science Curriculum on Water Quality A-1.27 and A-1.28.</p> <p>Refer to the Canadian Wildlife Fund's provincial report card on the environment. Research contextual examples that support or contradict the information in it.</p> <p>Examine diversity of life forms and water, air and soil quality as it relates to environmental health.</p>
8.6	To assess the impact of individual attitudes, actions and lifestyle on wildlife and the environment. (CCT)	Brainstorm examples of attitudes, actions and lifestyles that benefit wildlife.
8.7	To examine the impact of human population growth on wildlife and its habitat.	<p>Examine the diversity and population of wildlife in relation to rural and urban population growth. Use population statistics from Saskatchewan Environment and Resources Management.</p> <p>Invite a field biologist or resource officer to share their understanding of wildlife populations.</p>
8.8	To develop responsible and healthy lifestyle actions in relation to wildlife and the environment.	Design posters that illustrate responsible action in relation to wildlife and the environment. (IL, CCT)
8.9	To identify pursuits in wildlife that lead to personal growth and satisfaction. (PSVS)	<p>Have students examine hobbies they and friends have that relate to the outdoors and wildlife.</p> <p>Examine the values and attitudes that develop with an appreciation of wildlife and the environment. Encourage students to express their own viewpoints and experiences. (PSVS)</p> <p>Invite students to browse websites of environmental and wildlife special interest groups and examine the philosophies and major objectives of the groups. Examples of special interest groups include the Saskatchewan Environment Society, Saskatchewan Outdoor and Environmental Education Association, Saskatchewan Wildlife Federation, Nature Saskatchewan, Saskatchewan</p>
Learning Objectives		Notes
		<p>Watchable Wildlife Association, The Sierra Club, World Wildlife Fund and the Canadian Wildlife Federation (IL, TL). The addresses of these and other agencies, can be found in the Internet section of the bibliography.</p> <p>Invite guest speakers to the classroom. People who are active in wildlife groups or who take private delight in feeding birds often welcome the opportunity to share their passions.</p>

Module 9: Career Opportunities in Wildlife (Core)

Suggested Time: 2 - 5 hours

Level: Introductory

Prerequisite: None

Foundational Objective

- To be aware of the career and development opportunities in the field of wildlife that exist in Saskatchewan and other provinces.

Common Essential Learnings Foundational Objectives

- To identify personal interests and aptitudes in order to initiate career exploration. (IL, PSVS)
- To evaluate ideas related to occupational choices. (CCT)
- To develop technological skills to access career information. (TL, IL)

Learning Objectives		Notes
9.1	To develop a list of career development opportunities related to the field of wildlife management. (IL)	Students may list many different career development opportunities in the professional, semi-professional and skilled trade areas related to the field of wildlife. They should begin by listing all of the guest speakers who have made presentations throughout the course, then list workers within the field of wildlife in the community or in the province. Students are encouraged to use a variety of sources of information such as guidance counsellors, career software packages, personal interviews and websites.
9.2	To identify personal skills and interests that may lead to career exploration.	Ask each student to create an inventory of favourite activities and interests. Have students examine their lists to determine how these activities and interests might be job-related. This task of creating an interest inventory may be done using a variety of computer program software packages. Once students have determined areas of interest related to wildlife, they should research wildlife careers using available resources in the library, community or Internet. (PSVS) Websites that will be of interest when conducting research are in the bibliography.
9.3	To determine skills and interests that would enhance occupational choices. (CCT)	Using the interest inventory created, students may select two choices of possible occupations for further research. Investigate the career choices including: <ul style="list-style-type: none">• description of work duties• personal qualities an individual must possess to succeed in the occupation• process to become certified within the occupation• length of education and training• school locations• cost of education and up-grading• trends within the business or career cluster• best and worst parts of the job• beginning salary• opportunities for advancement.

Learning Objectives

Notes

If a work study is to be done, the student may investigate links within the community for possible work study placement. The student may interview individuals within the community as part of the career research.

Refer to Appendix B, Career Research Interview Questions.

Module 10: Wildlife Areas and Species (Optional)

Suggested time: 15 - 20 hours

Level: Intermediate

Prerequisites: Modules 1 and 2

Module Overview

This module examines wildlife management strategies. Saskatchewan research on wildlife areas and species is examined and compared to management strategies used elsewhere in the world.

Foundational Objectives

- To develop values that will increase an appreciation and respect for wildlife.
- To understand the role and obligations of government agencies, interest groups and individuals to preserve wildlife.
- To examine issues and opinions as to how wildlife should be managed.
- To research the structure, diversity, behaviour and habitat of Saskatchewan wildlife species.

Common Essential Learnings Foundational Objectives

- To develop students' appreciation of the value and limitations of technology within society. (TL)
- To develop an understanding of how knowledge is created, evaluated, refined and changed within subject areas. (CCT)
- To develop compassionate, empathetic and fair-minded students who can make positive contributions to society as individuals and as members of groups. (PSVS)

Learning Objectives		Notes
10.1	To research representative wildlife areas and species in Saskatchewan and other parts of the world. (IL)	<p>Prepare a poster, collage, mural or diorama that identifies the seven major ecoregions in Canada and represents the indicator species. Illustrate the interdependence of wildlife species within selected ecoregions of Saskatchewan and Canada through the use of food webs, energy chains and symbiotic relationships.</p> <p>Develop simulations that identify regulating factors for wildlife species within selected ecoregions of Saskatchewan and Canada. Environmental factors such as food and water, habitat, predators, carrying capacity, species competition, diseases and parasites should be examined in the simulation.</p>
10.2	To identify and describe wildlife areas and species in Saskatchewan and Canada that have become threatened or endangered.	<p>Use a concept attainment activity to have students identify the concept of endangered as it relates to wildlife.</p> <p>Discuss and debate protecting endangered species. Examine the issue from a variety of perspectives, e.g., moral, economic.</p> <p>Contact Saskatchewan Environment and Resource Management for information and maps on critical wildlife habitat in Saskatchewan.</p> <p>Visit a critical wildlife habitat in the local area. Identify the features that make this habitat critical for wildlife.</p>
10.3	To compare local and global strategies for wildlife protection and habitat management.	<p>Use Internet sources to examine the list of endangered species in Canada. Compare this to lists from previous years. A list of suggested sites may be found in the bibliography.</p> <p>Examine commitments the government of Canada has made to preserve representative ecosystems in Canada.</p>
Learning Objectives		Notes
		<p>Compare and contrast wildlife in similar ecoregions around the world.</p> <p>Use case studies to examine strategies of wildlife management in different</p>

		countries.
10.4	To identify relevant representative ecoregions in Saskatchewan and Canada and indicator species found in these regions. (COM)	<p>Contact Saskatchewan Environment and Resource Management for information and maps on ecoregions in Saskatchewan. The bibliography of recommended resources contains maps and information on the ecoregions of Canada.</p> <p>Refer to the bibliography for resources on wildlife, ecosystems and Saskatchewan wildlife.</p> <p>Create food chains or webs for each of the ecoregions in Saskatchewan or Canada. Examine the concept of indicator or keystone species.</p>
10.5	To identify factors that affect wildlife populations within selected ecoregions of Saskatchewan and Canada. (CCT)	<p>Brainstorm factors that affect wildlife populations. Have students rate each of these factors as to importance, first individually and then as a class.</p> <p>Work in small groups to research factors that have led to endangerment, extinction or extermination of species in Saskatchewan and Canada. Share this information through posters, web pages or presentations.</p>
10.6	To research policy and factors used to determine if a species or population is endangered. (TL)	<p>Contact provincial and federal environmental agencies to obtain information on how a species gets put on the endangered species listing.</p> <p>Examine Committee on the Status of Endangered Wildlife in Canada (COSEWIC) policy in developing the list of endangered species. Refer to the Internet address in the bibliography.</p>
10.7	To explain the role of protected spaces in managing ecosystems at local, national and global levels.	<p>Guest speakers can give a historical perspective to land use and species changes over the last several decades.</p> <p>Develop range maps for large carnivores found in Saskatchewan, Canada and worldwide. Use these to create habitat maps that would meet the needs of these species.</p> <p>Investigate the Endangered Spaces campaign and the Canadian Wilderness Charter.</p>
10.8	To explain the role of public and private organizations and other nations with regard to protecting and conserving wildlife. (PSVS)	<p>Discuss the roles of local, provincial and federal governments in establishing policies for wildlife protection and management. (COM)</p> <p>Research the viewpoints of indigenous peoples in Canada and other nations regarding the use of the wildlife spaces and species (e.g., traditional wilderness use, current use and future directions).</p>

Learning Objectives

Notes

Compare policies and philosophies regarding wildlife protection and habitat management in Canada with those of other nations and governments.

Examine the role of individuals, private organizations and public institutions in terms of protecting and conserving wildlife.

Module 11: Interactions of Wildlife and Society (Optional)

Suggested time: 15 - 20 hours

Level: Intermediate

Prerequisites: Modules 1 and 2

Module Overview

Human population growth and land use practices have always affected wildlife. Saskatchewan has a strong agricultural base and land use practices have had major impacts on many native species. Strategies used to manage interactions between wildlife and society have been influenced by the values that people hold towards wildlife. These values and the policies that are developed from them will be examined.

Foundational Objectives

- To develop values that will increase an appreciation and respect for wildlife.
- To examine relationships between wildlife species and humans and how populations are affected.

Common Essential Learnings Foundational Objectives

- To develop students' appreciation of the value and limitations of technology within society. (TL)
- To develop students understanding of the uses and abuses of mathematical concepts in everyday life. (NUM)
- To develop compassionate, empathetic and fair-minded students who can make positive contributions to society as individuals and as members of groups. (PSVS)

Learning Objectives	Notes
11.1 To describe how wildlife affects the development, movement and size of human populations.	<p>Graph local, national and global human population growth over the last 100 years. (NUM, TL)</p> <p>Examine how wildlife populations have affected the pattern of settlement location in Saskatchewan and Canada.</p> <p>Compare and contrast human population reliance on wildlife in developing and industrial nations.</p> <p>Research how the fur trade impacted exploration and the colonization of western Canada.</p>
11.2 To explain the effects of human populations and developing technologies on wildlife and habitat.	<p>Guided imagery readings will allow students to see how human populations have impacted wildlife and habitat. Concept map these impacts or use a time line to correlate technological changes with habitat changes.</p> <p>Use local history books and, where possible, interview elders in the community to chart changes in habitat, distribution, diversity and abundance of local species.</p> <p>For information on protocols and guidelines for aboriginal elders, see the bibliography. (PSVS)</p>
11.3 To identify Canadian wildlife areas and species that have become threatened, endangered or extinct as a result of human populations. (COM)	<p>Refer to Module 10, Wildlife Areas and Species for activities related to endangered species.</p>

Learning Objectives	Notes
11.4 To examine human and societal interactions with wildlife. (PSVS)	<p>Brainstorm human activities such as agriculture, energy and mining, forestry, tourism, outdoor recreation that impact on wildlife. Identify the positive and</p>

		negative aspects of these activities on wildlife.
		Research the positive and negative affects of land use practices on wildlife (e.g., deforestation, habitat protection and improvement and agricultural practice: habitat loss, degradation, zero tillage, shelterbelts, pest management, urbanization and diversification of land use by farmers).
		Research game farming (e.g., wild boar, elk, whitetail deer, ostrich or bison as an alternative to domestic livestock). (TL)
11.5	To describe the goals and objectives of different stakeholder groups in managing interactions between wildlife and society.	<p>Identify the stakeholders. Some examples of interest groups are hunters, trappers, conservation groups, government and politicians, recreational users, farmers and ranchers, aboriginal groups and the general public.</p> <p>Investigate relationships among the different stakeholder groups that are affected by wildlife.</p> <p>Have students work in groups to represent different stakeholders who have specific interests in wildlife. Students should do independent research to develop personal positions regarding wildlife usage and then share and debate these positions with other groups. This would allow them to recognize that the needs of different stakeholders may be in conflict and that management plans must developed that serve the needs of these diverse groups.</p> <p>Define the term <i>consensus</i> and describe how it might be used in decision making or problem solving. Use a role play and simulation activity to arrive at consensus on wildlife use and sustainable development.</p>
11.6	To research possible approaches and techniques to manage interactions between wildlife and society. (CCT)	<p>Examine some of the approaches used to manage the interactions between wildlife and society. Some of these include:</p> <ul style="list-style-type: none"> • legal approaches such as environmental assessment reviews • incentive programs sponsored by Ducks Unlimited, Prairie Farm Rehabilitation Administration and Wildlife Habitat • education programs sponsored by Ducks Unlimited, Saskatchewan Environment and Resource Management • multiple land use planning.
11.7	To consider the consequences of an existing management plan for wildlife.	<p>Examine the consequences of an existing wildlife management plan for wildlife. Environmental, social, cultural and economic issues could be examined. Refer to the websites listed in the bibliography for examples of wildlife recovery plans.</p> <p>This module fits in well with Module 13A, Issues in Wildlife.</p>

Module 12: Hunting and Game Handling (Optional)

Suggested time: 5 - 10 hours

Level: Intermediate

Prerequisite: None

Note: Student safety is of primary concern and must be considered with any activity in this unit.

Module Overview

Hunting and Game Handling is a natural extension to Module 5, Regulated Hunting. To successfully offer this module, the teacher should be registered in the Saskatchewan Hunter Education Instructors Program and have completed the Canadian Firearms Safety Course, or the teacher should enlist the assistance of a community member with these qualifications. Students will develop knowledge of the safe handling and basic parts of hunting implements such as bows and arrows, firearms and ammunition. The legal and ethical responsibilities of the sportsperson will also be examined. Division board approval must be in place prior to offering this module. Parental approval for each student should also be acquired.

Foundational Objectives

- To demonstrate safety practices while engaged in outdoor experiences.
- To understand the role and obligations of government agencies, interest groups and individuals to preserve wildlife.

Common Essential Learnings Foundational Objectives

- To develop student's abilities to meet their own learning needs in planning for outdoor activities (IL)
- To support students in treating themselves, others and the environment with respect. (PSVS)
- To enable students to think for themselves, to recognize the limits of individual reflection and the need to build on mutual understandings when planning and undertaking outdoor activities. (CCT)

Learning Objectives	Notes
12.1 To demonstrate knowledge and safe handling of the basic parts of bows and arrows, firearms and ammunition. (PSVS)	<p>Recommend students enrol in the Saskatchewan Hunter Education Program.</p> <p>Demonstrate safe practices for bow use. The instructors should demonstrate the fundamental techniques of archery while students observe; then students should practise the techniques with supervision to develop the skills themselves. Student use can be evaluated using rating scales or a checklist.</p> <p>Students research the historical use of archery in hunting and how technology has changed archery.</p> <p>Invite a guest speaker to discuss primitive weapons use in hunting. (PSVS)</p> <p>Research the types of black powder guns that are currently used for hunting and discuss their popularity.</p> <p>Explain the design, structure and operation of firearms. The types of actions, function of the sights, calibre choice, stance, grip, aim, release and follow-through might be discussed. (COM)</p> <p>Describe the basic components of rifle and shotgun ammunition. Reloaders can put together cartridges without powder or primers for class use for teacher demonstration. Live ammunition should not be brought into the school. (TL)</p>

Learning Objectives

Notes

- Prepare a checklist of the steps to be taken in the care and maintenance of firearms. (IL)
- Posters illustrating firearm safety are available.
- A field trip to a local range and demonstrations of firearm usage in safe

		<p>conditions allow students to see appropriate behaviours for recreational shooting activities.</p> <p>Use rating scales, rubrics and checklists to evaluate students. (NUM)</p> <p>Refer to the bibliography for videos that relate to this topic.</p>
12.2	To examine techniques for targeting, handling and dressing game animals in the field.	<p>Research the importance of visual abilities to the hunter and sportsperson. Depth perception, peripheral vision and colour vision may all be included in the research. (IL)</p> <p>Discuss how hunting and firearm use may be made available to persons with physical disabilities, including those with visual impairment.</p> <p>Identify factors that may affect visual perception and strategies for improving vision in outdoor experiences.</p> <p>Identify vital target areas on game animals.</p> <p>Invite a taxidermist or experienced hunter to explain techniques for handling trophy and non-trophy animals in the field.</p>
12.3	To understand the role of physical conditioning in safe and comfortable outdoor experiences.	<p>Discuss the role of physical conditioning in safe and comfortable outdoor experiences. A half-day hike may be an excellent incentive for the discussion.</p>
12.4	To understand personal and legal responsibilities of the sportsperson.	<p>Consider the public relations problems associated with controversial firearm practices.</p> <p>Identify federal, provincial and municipal laws and regulations that are relevant to a recreational hunter in Saskatchewan.</p> <p>Make a list of situations where recreational hunters may come into conflict with landowners or the public. Role play situations illustrating these issues and discuss more appropriate courses of action. (PSVS)</p>

Module 13A: Issues in Wildlife I (Optional)

Suggested time: 5 - 10 hours

Level: Intermediate

Prerequisite: None

Module Overview

Students will examine a range of issues that affect wildlife and research, in detail, one or more of these issues. Local, provincial and federal issues that impact on wildlife are prevalent in the media and provide a concrete context for students. Conservation groups and their mandates will be examined and evaluated.

Foundational Objectives

- To develop values that will increase an appreciation and respect for wildlife.
- To examine issues and opinions as to how wildlife should be managed.
- To cultivate an appreciation and understanding of how other cultures view wildlife.

Common Essential Learnings Foundational Objectives

- To develop students' abilities to meet their own learning needs. (IL)
- To develop students' appreciation of the value and limitations of technology within society. (IL)
- To enable students to think for themselves, to recognize the limits of individual reflection and the need to build on mutual understandings when planning and undertaking outdoor activities. (CCT)

Learning Objectives		Notes
13.1	To identify a range of wildlife issues.	Examine various journals listed in the bibliography.
		Do a guided imagery activity to stimulate discussion around wildlife issues.
		Conduct a review of magazine articles that focus on local or national wildlife issues.
		Create a scrapbook containing articles on local and international wildlife issues. (IL)
		Review videos and television programming that pertains to wildlife.
		Have students perform an Internet search for information on issues that impact wildlife. (IL, TL)
		Brainstorm issues that effect wildlife locally, provincially, nationally and worldwide.
13.2	To infer the impact of each of these issues on wildlife, humans and the environment.	Categorize wildlife issues into habitat loss and degradation, subsistence and commercial trade, preservation versus conservation. (CCT)
		Develop dilemma cards around wildlife issues with multiple choices of alternatives. Have students justify their choices and infer the consequences for wildlife, humans and the environment.
		Develop a flowchart to illustrate the impact that a particular issue has on wildlife, humans and the environment.
Learning Objectives		Research the Internet to find the issues that environmental groups support.
		Notes
		Use brainstorming to infer the impact of a particular issue on wildlife, humans and the environment.

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| 13.3 | To examine different philosophies, ethics and alternatives regarding each of these issues. (PSVS) | <p>Survey the community as to its stand on a particular wildlife issue.</p> <p>Concept map an issue from the perspectives of different interest groups.</p> <p>Role play and simulation to examine the complexities and philosophies that enter into evaluating a wildlife issue. Working in groups, students represent different stakeholders who have specific interests in wildlife. Students should do independent research, develop personal positions and share and debate these positions with others.</p> |
| 13.4 | To conduct research on a significant wildlife issue in Canada. | <p>Research a significant wildlife issue in Canada. Identify key elements and stakeholders, distinguish among facts, opinions and beliefs. Consider implications and consequences. E-mail interest groups and obtain their beliefs and arguments first hand. Have students carry on a panel discussion or environmental review of the issue.</p> |
| 13.5 | To assess the goals and achievements of one or more wildlife conservation groups with respect to the issue or issues that they are pursuing. | <p>Obtain the vision statements and accomplishments of wildlife conservation groups. Develop an appropriate "end vision" for individual or groups of conservation organizations and then work back to the accomplishments that they have achieved. This could be done as a timeline and stretch back into the organization's past. This would allow students to see the sequence of steps necessary for the accomplishment of goal.</p> <p>Join a wildlife conservation group as a class and carry on a local activity to support its cause.</p> |

Module 13B: Issues In Wildlife II (Optional)

Suggested time: 10 - 20 hours

Level: Advanced

Prerequisite: Module 13A

Module Overview

Issues in management and conservation at the local, regional, federal and global levels will be examined and discussed. Opportunities to analyze social, economic and environmental perspectives that are related to current wildlife issues will be given. Local problems and issues will be examined in the context of world wildlife concerns. Personal and shared action to support wildlife initiatives will be stressed.

Learning Objectives		Notes
13.6	To examine past and present trends in the recreational and commercial use of wildlife areas and species.	<p>Brainstorm past and present uses of wildlife habitat and species.</p> <p>Use old maps and photographs and other historical information to examine habitat and species use in the past. Compare these to current land and species use.</p> <p>Examine history books for the local area and atlases of Saskatchewan to determine land use in the local area.</p> <p>Invite an elder in the community to share experiences and memories. For information on protocols and guidelines for aboriginal elders, see the bibliography.</p>
13.7	To analyze differing points of view regarding the utilization of habitat or species. (CCT)	<p>Examine varied viewpoints regarding the utilization of habitat or wildlife.</p> <p>Use a role play or simulation activity to arrive at a consensus for land use of a native area. Working in cooperative groups, students represent different stakeholders with different interests. Students should do individual research and develop positions in relation to the land use, share that position and debate it with others. This would allow students to recognize the needs of different stakeholders often in conflict and that cooperation is needed to develop land use strategies. (IL)</p>
13.8	To analyze issues concerning the scientific, biological, aesthetic, economic and intrinsic value of habitat or species.	<p>Define <i>intrinsic</i> value.</p> <p>Compare different land uses in terms of their advantages and disadvantages. Consider environmental, economic and aesthetic uses.</p>
13.9	To compare and contrast a Canadian issue involving wildlife with a similar issue in other parts of the world.	<p>Examine magazines that focus on Canadian and global wildlife issues. A list of suggested titles is in the foreword to the bibliography.</p> <p>Compare habitat or species loss in Saskatchewan or Canada to that found in other parts of the world. (CCT)</p> <p>Nature programs on television could be examined to illustrate issues dealing with wildlife and habitat concerns.</p>
Learning Objectives		Notes
13.10	To research global impacts of the recreational and commercial use of a wildlife space or species. (IL)	<p>Use the Internet to research world and Canadian issues related to wildlife. Refer to the Internet section of the bibliography for the website addresses of organizations.</p>

13.11	To infer the long-range effects of acquiring, protecting, improving and restoring wildlife habitat in Canada and other parts of the world.	Refer to the bibliography for a list of websites that relate to changing practices and policies.
13.12	To compare and contrast different philosophies, ethics and alternatives regarding how best to ensure the health and viability of a wildlife area or species. (CCT)	<p>Examine existing policies such as the critical wildlife habitat and infer its affect on wildlife populations. Use wildlife statistics that can be obtained from Saskatchewan Environment and Resource Management.</p> <p>Use a role play or simulation activity to examine the philosophies of different groups. Working in cooperative groups, students represent different stakeholders with different interests. Students should do individual research and develop philosophical positions in relation to the land use, share that position and debate it with others. This allows students to recognize the needs of different stakeholders are often in conflict and that cooperation is needed to develop land use strategies.</p>
13.13	To assess the goals and objectives of one or more wildlife conservation groups. (IL)	<p>Research and present the goals and objectives of a wildlife conservation group.</p> <p>Create posters or advertisements that illustrate the goals and objectives of conservation groups.</p>
13.14	To debate a global issue regarding the consumptive and non-consumptive use of wildlife. (CCT)	Conduct research, develop a position and participate in a debate regarding a consumptive and non-consumptive use of wildlife. The selling of ivory to fund conservation in Africa is one such issue.
13.15	To create a model plan for the use of wildlife.	Cooperative learning groups can conduct research, generate alternatives and achieve consensus on an issue related to habitat or wildlife.
13.16	To have students make responsible and ethical decisions in relation to wildlife and the environment. (PSVS)	Have students determine and implement a course of action, recognizing the need for individual, group and government action.

Module 14: Making a Difference to Wildlife (Optional)

Suggested time: 10 - 15 hours

Level: Advanced

Prerequisite: None

Module Overview

Wildlife and humans have always coexisted. Wildlife has supplied inspiration, as well as the staples of life, to many cultures. It has importance in all human cultures. Strategies for managing different interactions between humans and wildlife will be examined, and the need to demonstrate individual and shared actions that foster environmental stewardship will be encouraged.

Foundational Objectives

- To develop values that will increase an appreciation of and respect for wildlife.
- To understand the role and obligations of government agencies, interest groups and individuals to preserve wildlife.
- To cultivate an appreciation and understanding of how other cultures view wildlife.

Common Essential Learnings Foundational Objectives

- To enable students to use language for differing audiences and purposes that are relevant to the students and the subject area. (COM)
- To support students in coming to a better understanding of the personal, moral, social and cultural aspects of wildlife. (PSVS)
- To enable students to think for themselves, to recognize the limits of individual reflection and the need to contribute to and build upon mutual understandings of wildlife management. (CCT)

Learning Objectives	Notes
14.1 To explain past and present influences of wildlife on cultures and societies.	<p>The Grade 9 Science unit <i>Saskatchewan – The Environment</i> and the Grade 7 Science unit on <i>The Basics of Life</i> will contribute some background for this topic.</p> <p>Visit cultural and natural history museums to examine how wildlife relationships are expressed through art, literature, dance, music and drama. The Internet will allow a virtual tour of some remote sites. (TL)</p> <p>Examine differing cultural views regarding wildlife under the following headings: food, clothing and shelter, spiritual and aesthetic benefits, medicinal values and recreation and companionship. (PSVS)</p>
14.2 To explain how social attitudes and values regarding wildlife have changed. (PSVS)	<p>Develop a timeline that illustrates changing attitudes to wildlife. Use drawings and symbols to enhance the timeline.</p> <p>Have students examine writings from different eras dealing with wildlife. Henry David Thoreau, Ernest Thompson Seton, Aldo Leopold and Monte Hummel span more than a century of ideas.</p> <p>Visit a National, Provincial or Regional Park or other historic sites to examine changes in social attitudes and values relating to wildlife.</p>

Learning Objectives	Notes
14.3 To explain how decisions involving Canada's wildlife are a shared responsibility of government agencies, government and landowners, and are influenced by trans-boundary concerns. (CCT)	<p>Investigate acts or agreements. Examples of appropriate documents and representative organizations are listed in the foreword of the bibliography.</p> <p>Reflect on what the responsibilities of government, government agencies and landowners are in relation to wildlife.</p> <p>Research international agreements on cooperative wildlife protection plans.</p>
14.4 To research decision-making processes that affect wildlife and the environment.	<p>Research the perspectives of different societal groups that affect wildlife. Examine political, economic, social and/or scientific viewpoints.</p> <p>Debate two or more wildlife management strategies. (PSVS)</p> <p>Discuss trade-offs or compromises that accompany any wildlife decision.</p>
14.5 To compare the contributions of different stakeholder groups that conduct management activities.	<p>Brainstorm and then research the contributions to wildlife of different stakeholders such as landowners, individuals, business and industry, government and non-governmental agencies. Start locally and widen the research to become provincial, regional and then federal.</p>
14.6 To propose an individual action plan for managing wildlife that permits the achievement of social, cultural, economic and environmental goals.	<p>Examine local needs and then develop and implement a plan to benefit wildlife in the community.</p> <p>Develop an inventory of wildlife for the local area. Wildflowers, trees, insects, birds and small mammals could be included.</p>
14.7 To plan, conduct and assess a school wide campaign to increase awareness of relationships between lifestyle and wildlife and the environment.	<p>Create a wildlife walk in the local community highlighting native plants and animals that exist in the area.</p> <p>Refer to the bibliography for resources that discuss positive community action.</p> <p>Cooperative learning groups can create and maintain projects that students have initiated. Student and teacher developed rubrics that allow peer and self-evaluation, along with teacher evaluation, help to internalize the idea of quality.</p> <p>Research environmental project information on the Internet. Many sites have examples of projects that have been done in other communities.</p> <p>Funding for many environmental projects may be obtained from many agencies. The Internet has many websites promoting environmental projects. A listing of sample websites is given in the bibliography.</p>

Learning Objectives	Notes
14.8 To identify ways in which individuals may influence public decisions that affect wildlife and the environment.	<p>Adopt a natural area in the local community. Work with landowners and the urban or rural municipality to educate citizens and preserve the area.</p> <p>Create posters that identify ways that individuals can influence public decisions that affect wildlife and the environment. Voting, lobbying, seeking office, supporting interest groups and taking personal action are some the activities that may be undertaken. (PSVS)</p>

Invite speakers from government or private agencies to speak on how public decisions regarding wildlife may be influenced.

Module 15: Applications of Wildlife Research (Optional)

Suggested time: 5 - 10 hours

Level: Advanced

Prerequisite: None

Module Overview

Research has allowed us to better understand wildlife populations and how they interact with each other. Research will be used to better understand a wildlife area or species. The applications of this research will be stressed. This module might be handled as an independent research project.

Note: Module 15 is a prerequisite for Modules 16A and 16B. It is recommended that students work on a common theme for all three modules.

Foundational Objective

- To develop values that will increase an appreciation and respect for wildlife.
- To understand the role and obligations of government agencies, interest groups and individuals to preserve wildlife.
- To research career development and volunteer opportunities that exist in the field of wildlife in Saskatchewan and other provinces.

Common Essential Learnings Foundational Objectives

- To strengthen students' knowledge and understanding of how to compute, measure, estimate and interpret numerical data as it relates to wildlife studies. (NUM)
- To develop an understanding of how knowledge is created, evaluated, refined and changed in wildlife study. (CCT)
- To enable students to use language (listening, speaking, reading, writing) for differing audiences and purposes that are relevant to the students and the wildlife management unit. (COM)

Learning Objectives		Notes
15.1	To identify and describe major stages and steps in the research process. (COM)	Have students review articles on research provided in scientific journals as listed in the bibliography.
		Invite a practising field biologist to speak to the students on research being conducted.
		Have students use the research process to analyze a contemporary Saskatchewan wildlife issue (e.g., burrowing owl or peregrine falcon recovery program, mule deer or antelope hunting limits).
15.2	To relate the research process to an existing piece of wildlife research.	The steps to the research process include: <ul style="list-style-type: none">• defining a research problem• conducting a literature review• organizing information• proposing a plan for data collection• collecting data• analyzing/assessing data• drawing conclusions and making recommendations• communicating results.
		Contact government agencies and environmental or wildlife organizations for copies of research papers or reports. The names of suitable organizations are in the bibliography.
		Have students identify the steps to the research process in existing research documents. (COM)

Learning Objectives

Notes

Attend a conference on wildlife and use the presentations and handouts to examine the research process.

15.3	To identify a problem or question regarding a wildlife area or species.	<p>Identify a research problem that might be studied in the local area. Some possibilities are:</p> <ul style="list-style-type: none"> • growth rate of a plant • germination rate of introduced and native species • encroachment of introduced species on native spaces • bird preference to seed type • effect of light on plant growth • habitat preference of an animal or plant species • overwintering of species • reproductive rate of composting worms. <p>Survey the local community to identify problems or needs regarding habitat preservation and wildlife needs. (IL)</p>
15.4	To gather background information about the problem or question. (IL)	<p>Work with birders or conservation groups in the local community to identify a research problem in the community and gather information.</p> <p>Use the Internet, resource centres and universities to research background information.</p>
15.5	To propose a plan for conducting research related to the problem or question.	Cooperative learning groups may be used to simulate the research that is done by scientists. Roles and responsibilities should be clearly delineated and evaluated. (PSVS)
15.6	To collect baseline and specific data using a variety of information gathering techniques.	<p>Do species counts and observations of behaviours through sampling, surveys and observations. Measurement, estimation and experimentation with experimental controls could be done.</p> <p>Introduce the students to quadrat and line intercept techniques and then use them in the field.</p>
15.7	To analyze and interpret data that is gathered and formulate further questions. (NUM)	Use data tables, graphs, anecdotal reports and photographs or line drawings to record observations. Have students analyze this information and propose new questions.
15.8	To draw conclusions related to the problem or question.	Use the data gathered to draw conclusions. Examine alternative conclusions based on the data.
15.9	To communicate the results of research through written reports and oral presentation.	<p>Use video cameras, presentation software, audio recordings or other technologies to have students present their research. (TL)</p> <p>Students and teacher may jointly develop criteria for assessment of this module. Rubrics, checklists, anecdotal observations and rating scales may be used. Teacher, individual and peer evaluation might be used.</p> <p>Prepare posters, collages or displays that share the result of student research.</p>

Module 16A: Managing Wildlife (Optional)

Suggested time: 15 - 20 hours

Level: Advanced

Prerequisite: Module 15

Module Overview

Wildlife management policies are based upon available information that is evaluated through a political, social, economic and scientific lens. Wildlife management involves both conservation and preservation, but the philosophies of policy makers can determine the effectiveness of any policy.

Note: Module 16A is a prerequisite for Module 16B. It is recommended that students work on a common theme for these two modules and their prerequisite, Module 15.

Foundational Objectives

- To develop values that will increase an appreciation and respect for wildlife.
- To understand the role and obligations of government agencies, interest groups and individuals to preserve wildlife.
- To research career development and volunteer opportunities that exist in the field of wildlife in Saskatchewan and other provinces.
- To examine relationships between wildlife species and humans and how populations are affected.

Common Essential Learnings Foundational Objectives

- To enable students to think for themselves, to recognize the limits of individual reflection and the need to contribute to and build upon mutual understandings of wildlife issues. (CCT)
- To develop compassionate, empathetic and fair-minded students who can make positive contributions to society as individuals and as members of groups. (PSVS)

Learning Objectives		Notes
16.1	To describe wildlife management as a process that ensures the long-term viability of areas, species and ecosystems.	Investigate the purpose of wildlife management programs. Create posters, collages or displays that outline the purpose of wildlife management. (PSVS)
16.2	To explain how wildlife management involves the preservation of endangered areas and species, and conservation of all other areas and species.	Study an endangered, exterminated or threatened species in Saskatchewan. Use graphs to illustrate population changes over time and maps to illustrate how range has changed over time. See Module 10 for ideas. Compare and contrast preservation and conservation as it relates to wildlife management. Contact Saskatchewan Environment and Resource Management for critical habitat maps and information on endangered species.
16.3	To analyze relationships between wildlife research and wildlife management. (CCT)	Contact Saskatchewan Environment and Resource Management for big game census statistics over the last 10 years. Correlate the statistics to game limits. Antelope or mule deer hunters are chosen by draw. These animal populations are good analysis subjects.

Learning Objectives		Notes
16.4	To understand how wildlife management programs and policies	Investigate current management plans and evaluate whose interests are best served by them. (IL)

	are developed through political, social, economic and scientific decisions.	Compare the purpose of regional, provincial and federal parks.
16.5	To identify and describe basic steps involved in developing a wildlife management plan.	<p>Examine the basic steps to develop a wildlife management plan:</p> <ul style="list-style-type: none"> • state goals and objectives • collect data and conduct research • gather government and non-government input • consider alternatives, consequences and potential conflicts • select a course of action • implement the action plan • monitor and evaluate outcomes • make recommendations and revisions. <p>Simulate the process of developing a wildlife management plan regarding an issue that is relevant to the local area.</p> <p>Develop a game that illustrates the steps to developing a wildlife management plan.</p>
16.6	To analyze a variety of issues and problems affecting the management of wildlife areas and species. (CCT)	<p>Debate issues that affect the management of wildlife areas and species:</p> <ul style="list-style-type: none"> • preservation versus conservation • legislation versus no legislation • species management versus ecosystem management • wildlife habitat preservation versus commercial/agriculture land modification. <p>Conduct interviews with naturalists, conservationists, preservationists and stakeholder groups.</p>
16.7	To examine how philosophies and goals of different wildlife management practices are sometimes incompatible with each other, and how conflicts and trade-offs may occur.	<p>Debate the philosophy of total preservation versus multiple wildlife/habitat usage. (PSVS)</p> <p>Examine land use policy in Banff National Park and in Prince Albert National Park.</p>

Module 16B: Managing Wildlife (Optional)

Suggested time: 10 - 15 hours

Level: Advanced

Prerequisite: Module 16A

Module Overview

Students develop and present a plan for managing a wildlife space or species. Previous research information is used to create a management plan for habitat or wildlife in the local or regional area. Action is stressed and the action plan could be developed and carried out.

Note: Module 16A is a prerequisite for Module 16B. It is recommended that students work on a common theme for these two modules and their prerequisite, Module 15.

Learning Objectives		Notes
16.8	To explain sustainable management within the context of wildlife spaces and species.	<p>Investigate the concept of sustainable development. Generate student responses regarding the definitions of sustainable development and the similarities between sustainable development and sustainable management, and then compare the different definitions.</p> <p>Have students generate scenarios that are sustainable and those that are not. Identify the critical attributes of sustainable management. (CCT)</p>
16.9	To explain how decisions involving wildlife in Canada are made by local, provincial and federal government agencies, concerned individuals and private landowners.	<p>Case studies allow students to see how decisions are shared between levels of government and private individuals.</p> <p>Flow chart possible wildlife decisions considering the people that would be impacted and the government agencies that would be responsible</p>
16.10	To identify local opportunities for consultation and public involvement in wildlife management decisions.	<p>Discuss where opportunities for local input in wildlife or habitat management could take place.</p> <p>Have a SERM resource officer speak to the class about the public involvement process in wildlife management decisions.</p>
16.11	To establish short and long-term goals for the management of a wildlife space or species.	<p>Examine existing wildlife management plans and identify short-and long-term goals.</p> <p>Use a concept attainment activity to distinguish between short term and long term management goals. (CCT)</p> <p>Develop a management plan for an existing natural habitat in the local area.</p>
16.12	Identify some scientific, economic and social factors that should be addressed through the management plan.	<p>Survey the different stakeholders to consider and resolve conflicts that may arise. Recreational, environmental, aboriginal and commercial interests may be present. (IL)</p>
Learning Objectives		Notes
16.13	To incorporate consultation with other resource users and public involvement into the planning process. (PSVS)	<p>Do a simulation of a panel discussion to illustrate and identify the many stakeholders and their viewpoints.</p> <p>Research environmental impact statements examining them for varieties of opinion.</p>

		Investigate the need for permits, licenses or other legal agreements that may be required for the management plan to proceed.
		Hold a public meeting to share information regarding the project and obtain input from the community.
16.14	To identify alternative means of achieving management goals, and select the preferred alternatives. (CCT)	<p>Cooperative learning groups may identify different management goals by examining the different interests of various groups or organizations.</p> <p>Use synectics to put management goals and perspectives into student context. How are wildlife management goals like keeping your room clean?</p> <p>Use a case study that illustrates more than one possible solution. Biological versus chemical control and non-interference for spruce budworm or purple loosestrife are possibilities.</p>
16.15	To develop a set of actions and present the management plan.	<p>Flow chart the management plan include:</p> <ul style="list-style-type: none"> • general description and background • long-term management objectives • short-term management objectives • proposed standards and guidelines • schedule of short-term management activities. <p>Mindmap the management plan so it can be seen graphically.</p>
16.16	To prepare a map to accompany and elaborate upon the management plan.	<p>Create a keyed map of the area enclosed by the management plan including:</p> <ul style="list-style-type: none"> • boundaries • land cover and other resources in the area • physical features • history of past development • road access • proposed development activities.
16.17	To describe techniques for monitoring the management plan to ensure that goals are being achieved.	Develop checklists, rating scales and rubrics to monitor the management plan.

Module 17A, B, C: Work Study Preparation and Follow-up Activities (Optional)

Note: If students have participated in a work study module in a previous Practical and Applied Arts course, a review of this module is still required but less time is needed.

Suggested time: 5 - 10 hours

Prerequisite: None

Module Overview

Students will prepare for work study in the community. Expectations for the student, the teacher and the employer should be discussed. During follow-up, students will reflect on work study experiences.

Foundational Objectives

- To develop workplace skills, knowledge and attitudes in the wildlife management field that may lead to successful employment.
- To understand how skills acquired in school may transfer to the workplace.

Common Essential Learnings Foundational Objective(s)

- To demonstrate skills and attitudes that contribute to the development of positive human relationships. (IL, PSVS)

Note: Other CELs may be emphasized.

Learning Objectives	Notes
17.1 To be aware of the expectations of each of the partners in the work study component.	In order to establish a successful working relationship with all the partners involved in the workplace, it is important to define the expectations of each partner. For a list of roles and responsibilities of the business, personnel, manager, teacher monitor, school, parent and student, see the Work Study Guidelines for the Practical and Applied Arts included in the <i>Practical and Applied Arts Handbook</i> .
17.2 To determine the factors that may affect the student's contribution in the workplace. (CCT)	Brainstorm a list, then verify through experience. The list may include previous work experience, volunteer work, teamwork activities and extra-curricular participation within the school.
17.3 To build good communication skills for the workplace. (COM, PSVS)	<p>Discuss verbal and non-verbal communication. List some ways in which negative and positive non-verbal communication may be displayed. Encourage students to role play ways of demonstrating effective techniques of verbal communication on the job when giving or receiving instructions and resolving conflict. Use case studies, and divide the students into groups to role play how effective communication may be used to resolve conflict on the job.</p> <p>Emphasize the Employability Skills (from the Conference Board of Canada) and compare them to the Common Essential Learnings of Saskatchewan's curriculum. Make the direct link between skill development in this course and the needs of employers. Development of skills and documentation of the skills leads to employment using those skills.</p>

Learning Objectives

Notes

17.4	To develop a resumé that may be forwarded to a potential employer.	<p>The student will develop a resumé using the correct format. (IL)</p> <p>The resumé may be used to introduce the student to the employer of a workplace site prior to an interview. Teachers are encouraged to work with other staff members to ensure resumé preparation is taught. Resumé writing is covered in <i>English Language Arts 20 and A30</i>, <i>Information Processing 10, 20, 30</i> and <i>Career and Work Exploration 20</i> curriculum guides.</p> <p>Students should save the resumé and update it as changes need to be made and as references are added. Skills that have been developed can also be added to the updated resumé.</p>
17.5	To create a student guide in preparation for an interview.	<p>Students should develop their resumés and update them during the course, as work placement references are accumulated. A discussion with students about the benefits of a portfolio of sample work is appropriate at this time.</p> <p>A personal website that highlights the student’s skills and training might be created and referred to in the resumé.</p> <p>If students have already completed a resumé and cover letter in another course, the teacher may do a review and encourage students to update their information. Each student should submit a résumé for teacher approval prior to going to an interview or directly to the workplace.</p>
17.6	To determine student guidelines in preparation for an interview. (COM)	<p>Through a classroom discussion or in groups, students should compile a “guide” for job interviews. After the students formulate their guide, the teacher may prompt them for missing items.</p> <p>Outline and describe the three stages of an interview. Point out to students at which stage of the interview each of the guidelines previously discussed will be used.</p> <p>The greeting involves an introduction between the student and employer. Discuss or demonstrate how this should be done.</p> <p>The exchange is the longest part of the interview where the employer asks a series of questions and engages in a dialogue with the student about information on the resumé and other matters relating to the job. A student’s portfolio may be examined by the employer as part of the exchange.</p> <p>The parting provides closure to the interview and may be just as important as the greeting. Explain how this may be done.</p> <p>Provide the students with a list of questions frequently asked by employers or ask students to make a list. Students may role play the stages of the interview.</p>

Learning Objectives

Notes

17.7	To discuss the post interview.	After the student has completed the interview with the employer, do a follow-up activity. Review the interview with the student using the three stages above as points for discussion.
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17.8	To develop a procedural guide for the work site.	<p>Discuss the following work site items with students:</p> <ul style="list-style-type: none">• transportation• hours of work• absence and tardiness• procedures for conflict resolution• role of the student, teacher and workplace supervisor• dress code• job description• school and employer expectations.
17.9	To relate feedback from the work placement.	<p>Students provide feedback about work placement including: location, type of business, duties, most rewarding experience, most difficult situation and how they handled it.</p> <p>Note: It is recommended that each student send a thank you note or card to the employer upon the completion of each work placement. If more than one placement has been made in the course, follow-up activities must be completed after each placement.</p> <p>Ensure that students understand these guidelines by asking students to describe each of these items.</p> <p>Note: Look for opportunities to introduce and reinforce ideas about Labour Standards, Occupational Health and Safety and WHMIS. Use the <i>Career and Work Exploration Curriculum Guide</i>, the <i>Practical and Applied Arts Handbook</i>, the Saskatchewan Labour website (www.readyforwork.sk.ca) and other resources recommended in the accompanying bibliography.</p>

Module 18A, B, C: Work Study (Optional)

Suggested Time: 25 – 50 hours

Level: Introductory/Intermediate/Advanced

Foundational Objectives

- To be aware of the career opportunities in the field of wildlife management that exist in Saskatchewan and other provinces.
- To integrate classroom learning with work-related learning.
- To increase awareness of employability skills as they relate to the work environment.

Common Essential Learnings Foundational Objectives

- To engage in a work study experience and develop entry level workplace skills that may lead to sustainable employment. (PSVS)
- To expand career research beyond the classroom setting. (IL)

For more information about implementing work study in schools, see the Work Study Guidelines for the Practical and Applied Arts included in the *Practical and Applied Arts Handbook*. Teachers need to use or design appropriate learning objectives for this module; for instance, to demonstrate ability to follow a “Training Plan”. The training plan for the student should be designed to relate to the objectives of the course modules chosen in collaboration with the cooperating employer. Also see Appendix B in this guide.

Note: Consult Saskatchewan Labour for content about Labour Standards, Occupational Health and Safety and WHMIS. If several work study opportunities are offered, these topics will add more depth to the next experience.

Module 99A, B, C: Extended Study (Optional)

Note: The extended study module may be used only once for each 100 hour single credit course. It is important to record the title of the extended study module on the recordkeeping chart. Record 99A for the first extended study module offered in the course series, 99B for the second extended study module offered, etc.

Suggested time: 5 - 20 hours

Level: Introductory/Intermediate/Advanced

Module Overview

Evolving social and personal needs of society, advances in technology and demands to solve current problems require a flexible curriculum that can accommodate new ways and means to support learning in the future. The extended study module is designed to provide schools with an opportunity to meet current and future demands that are not provided for in current modules in the renewed Practical and Applied Arts curriculum.

The flexibility of this module allows a school/school division to design **one new module per credit to complement or extend the study of pure, core and optional modules** configured to meet the specific needs of students or the community. The extended study module is designed to extend the content of the pure courses and to offer survey course modules beyond the scope of the available selection of Practical and Applied Arts modules.

The list of possibilities for topics of study or projects for the extended study module approach is as varied as the imagination of those involved in using the module. These optional extended study module guidelines should be used to strengthen the knowledge, skills and processes advocated in the Practical and Applied Arts curriculum.

For more information on the guidelines for the Extended Study module see the *Practical and Applied Arts Handbook*.

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Appendix A: Sample Recordkeeping Charts

Wildlife Management 10

Student name: _____

School name: _____

Module code	Modules	Hours	Date	Teacher Initial
WILD01	Module 1: Wildlife and Ecosystems C			
WILD02	Module 2: Natural History of Saskatchewan Wildlife C			
WILD03A	Module 3A: Outdoor Experiences I O			
WILD04	Module 4: Wildlife - Our Responsibility O			
WILD05	Module 5: Regulated Hunting O			
WILD06	Module 6: Fishing and the Aquatic Environment O			
WILD07	Module 7: Wildlife - An Aboriginal Perspective C			
WILD9	Module 9: Career Opportunities in Wildlife C			
WILD17A	Module 17A: Work Study Preparation and Follow-up Activities O			
WILD18A	Module 18A: Work Study O			
WILD99A	Module 99A: Extended Study O			

Sample Module Recordkeeping Charts

Wildlife Management 20

Student name: _____

School name: _____

Module code	Modules	Hours	Date	Teacher Initial
WILD03B	Module 3B: Outdoor Experiences II O			
WILD08	Module 8: The Value of Wildlife O			
WILD10	Module 10: Wildlife Space and Species O			
WILD11	Module 11: Interactions of Wildlife and Society O			
WILD12	Module 12: Hunting and Game Handling O			
WILD13A	Module 13A: Issues in Wildlife I O			
WILD17B	Module 17B: Work Study Preparation and Follow-up Activities O			
WILD18B	Module 18B: Work Study O			
WILD99B	Module 99B: Extended Study O			

C = core module

O = optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Sample Module Recordkeeping Charts

Wildlife Management 30

Student name: _____

School name: _____

Module code	Modules	Hours	Date	Teacher Initial
WILD3C	Module 3C: Outdoor Experiences III O			
WILD13B	Module 13B: Issues in Wildlife II O			
WILD14	Module 14: Making a Difference to Wildlife O			
WILD15	Module 15: Applications of Wildlife Research O			
WILD16A	Module 16A: Managing Wildlife O			
WILD16B	Module 16B: Managing Wildlife O			
WILD17C	Module 17C Work Study Preparation and Follow-up Activities O			
WILD18C	Module 18C Work Study O			
WILD99C	Module 99C Extended Study O			

C = core module

O = optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Appendix B: Career Research Interview Questions

Adapted from *Business Education A Curriculum Guide for the Secondary Level Accounting 10, 20, 30* (Saskatchewan Education 1992).

Interview someone who currently works in this occupation.

The assignment may be completed independently, in pairs, in small groups or by whichever method is chosen by the student(s) and teacher. The teacher should encourage students to use a variety of resources to gather information about the career that they are researching. The student may use letters, the Internet, phone or a personal interview to gather information.

After the students have discussed different career paths, students may prepare a short journal writing explaining why they are interested in the occupational area they are about to investigate.

Students may proceed to develop a list of questions to collect the information they require to help them understand more about the career cluster or occupation they have chosen.

The following list of questions may be included in the students' interview project.

1. What is your job title?
2. What are the normal duties on your job?
3. What are some of the things that you enjoy about your job?
4. Are there any things about your job that you dislike? What are those things?
5. Does your company have a dress code for employees? What is considered suitable?
6. How often is working overtime required in your job?
7. Do you have to work nights or weekends?
8. What aptitudes and abilities are needed to succeed in your occupation?
9. What are the post-secondary education and training requirements to enter and advance in your career?
10. Can you give an approximate starting salary for someone just starting out in your occupation? How much does the average person earn after five years? After ten years? What types of employee benefits, such as sick leave or dental plans, do workers in your career usually receive?
11. Do you think the demand for workers in your career will increase or decrease over the next five years? Why?
12. What changes have you seen over the past 5-10 years in this occupation?
13. What are the advantages and disadvantages of entering and being in your occupation?
14. Is there any advice you would give to a young person making career decisions?

After the interview session, students may summarize the information they received and draw a conclusion as to whether they would like to learn more about this occupation.

Students may brainstorm different ways to present their career research to the class. Presentation ideas may include:

- oral presentation
- software supported oral presentation
- written report
- creating a website with links to career information
- role playing a student interviewing a career cluster professional
- role playing a professional promoting his/her occupation or career cluster at a career fair.