

Assessment Criteria and Conditions:

- a comprehensive definition of wildlife based on:
 - current wildlife policies established for Alberta and Canada
 - personal experience with and response to wildlife.

Suggested Reference(s):

- *A Wildlife Policy for Canada*
- *The Status of Wildlife in Alberta*
- *Project Wild*

STANDARD: Address six of the criteria for a definition of wildlife to a minimum standard of 1 on the rating scale

Rating Scale

The student:

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using more precise terminology. Requires little or no prompting.
- 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- 0 does not complete the task, or is unable to provide a suitable response.

N/A Not applicable

Guiding Principles for a Definition of Wildlife*

The following principles may be used as an outline to guide research for a definition of wildlife.

- Wildlife is an integral part of the environment in which Canadians live and a key indicator of the health of that environment.
- Wildlife has intrinsic, social, cultural and economic values.
- Wildlife is a major source of food and a vital part of the cultures and economies of many aboriginal peoples.
- All Canadians have stewardship responsibility for wildlife. Governments are accountable for its management. Aboriginal peoples have a special role in wildlife management and in certain regions are also accountable for it.
- The maintenance of viable natural populations of wildlife always takes precedence over their use by people.
- The way in which land, water and air are used strongly affects the quality and quantity of habitat upon which wildlife depends.
- All Canadians share the costs of conserving wildlife. Those whose actions result in additional costs should bear them.
- Basic and applied scientific research are essential to our understanding of ecosystems and their wildlife components.
- Effective conservation of wildlife relies upon a well-informed and involved public.

* Wildlife Ministers' Council of Canada. *A Wildlife Policy for Canada*, Canadian Wildlife Service, 1990.

Criteria for a Definition of Wildlife

A comprehensive definition of wildlife should:

- incorporate a personal response to wildlife based on experience
- distinguish between domesticated and non-domesticated (wild) species
- include wild organisms and their habitat; e.g.:
 - plants and animals
 - native and non-native species
- make reference to species traditionally regarded as wildlife (e.g., fishes, amphibians, reptiles, birds and mammals), as well as to wild plants, invertebrates and micro-organisms
- demonstrate awareness that wildlife is an integral part of the environment
- cite instances where wildlife has intrinsic social, cultural and economic value
- relate symbols of wildlife to our culture
- identify one or more situations where there are differing opinions regarding whether a species is considered wildlife for not
- _____
- _____
- _____

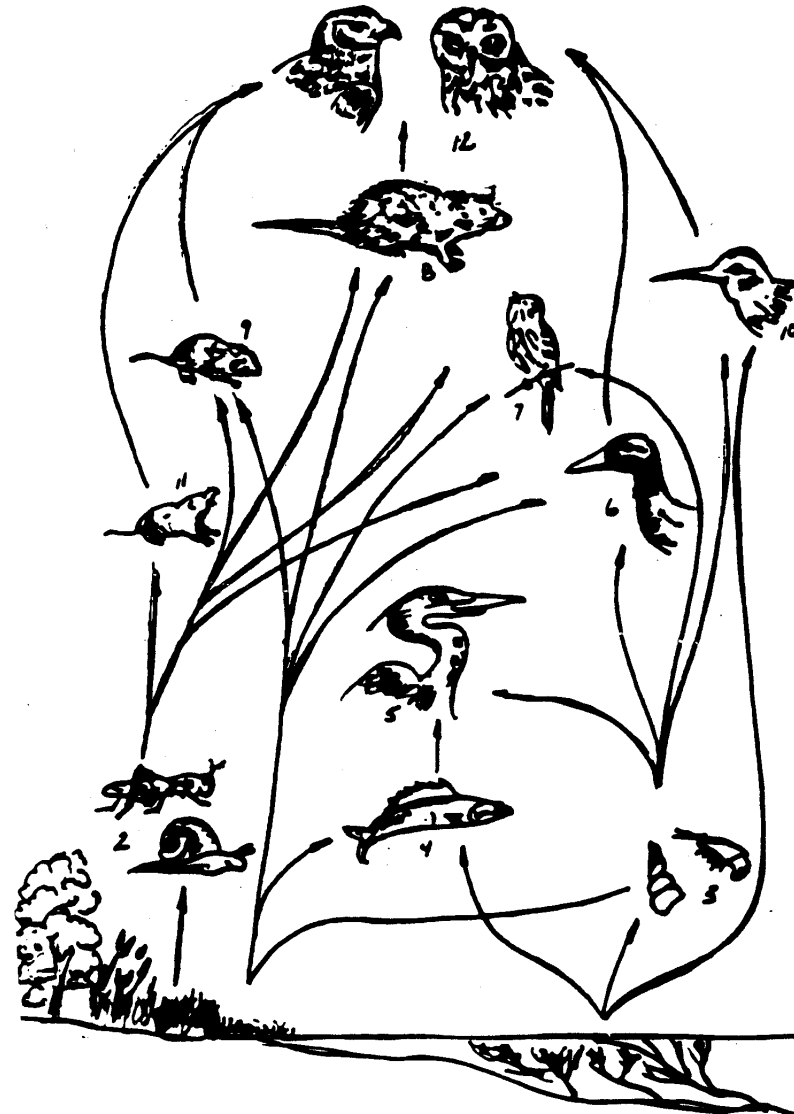
Here is an example of a food web in a slough near Vermilion, Alberta.

Producer organisms are the land and water plants growing in and around the slough itself (1). The plants are then eaten by grasshoppers and snails (2), and the aquatic invertebrates (3). Fish, represented by seven or nine spined stickle backs (4) feed on the vegetative matter from both aquatic and terrestrial ecosystems. The fish are consumed by first-level carnivores, represented by the great blue heron (5). The sandpiper and mallard duck (6), song sparrows (7), muskrats (8), field mouse (9) and the western sandpiper (10) each feed on plants and animals. The shrew is a first-level carnivore (11). The top carnivores (second level) are the marsh hawk and the short-eared owl.

Describe what the effects might be if the song sparrows disappeared from the web.

Sample Questions/Activities:

1. Add micro-organisms to the food web.
2. List abiotic/biotic factors.
3. Identify environmental factors that would affect this food web.
4. List producers, consumers and decomposers.



Assessment Criteria and Conditions:

- identifying and explaining six limiting factors and their affects on wildlife populations.

Suggested Reference(s):

- *Ecosystems*
- *The Nature of Canada: A Primer on Spaces and Species*
- *Project Wild*

STANDARD: Respond to a standard of 1 on the rating scale

Rating Scale

The student:

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
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- 0 does not complete the task, or is unable to provide a suitable response.

N/A Not applicable

Background Information

Limiting factors are the essential substances required for growth. Examples of limiting factors are food, water, shelter, space, temperature and appropriate habitat. When a factor is lacking, this factor often limits a population size. For example, food is usually the most important limiting factor for animal populations.

Limiting factors can be both biotic and abiotic and are continually changing. For example, a climatic change may result in a greater-than-normal production of the vegetation that supports a deer mouse population, causing the mouse population to increase. A return to normal vegetation would lower the number of mice that could be supported. Less food available means fewer mice.

Wildlife populations fluctuate naturally around a level, which is called the **carrying capacity**. Carrying capacity means the number of living things any area or environment can support at any one time. In the example with mice, when the vegetation was increased the carrying capacity increased.

Some examples of limiting factors for wildlife populations include:

- | | |
|--------------------|---------------------|
| food | shelter |
| predation | space or habitat |
| disease | low productive rate |
| climate | species competition |
| human intervention | |

Sample Questions/Activities

- Use the preceding examples to identify limiting factors that affect wildlife populations in each of the following situations:**
 - Salmon, a major food item of some grizzly bear populations in the spring and summer, are decreasing. It is believed their decrease is caused by the contamination of salmon spawning areas by pulp mills.
 - The peregrine falcon population is endangered because of the use of DDT, a pesticide used in the past. DDT causes the eggshells of the falcon to become extremely weak.
 - Humans like to put up nest boxes for birds.
 - Owing to the rapid increase in the deer population of an area, there is an increase of starvation and predation.
 - A decrease in the number of wolves by a predator control program causes an increase in the local moose population.
- Define carrying capacity and limiting factor in your own words.**
- Choose a specific animal or plant. Describe three factors that may limit its population size.**
- Describe three ways a farmer or rancher could increase the carrying capacity of an area.**
- Describe three ways a farmer or rancher could decrease the carrying capacity of an area.**

TASK	OBSERVATION/RATING					
Management	4	2	3	1	0	N/A
Teamwork	4	3	2	1	0	N/A
Equipment and Materials	4	3	2	1	0	N/A
Investigative Techniques	4	3	2	1	0	N/A

STANDARD IS 1 IN EACH APPLICABLE TASK

Rating Scale

The student:

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

TASK CHECKLIST

The student:

Management

- prepares self for task
- organizes and works in an orderly manner
- carries out instructions accurately
- uses time effectively

Teamwork

- cooperates with group members
- shares work appropriately among group members

Equipment and Materials

- selects and uses appropriate equipment/materials
- follows safe procedures/techniques
- weighs and measures accurately
- returns clean equipment/materials to storage areas

Investigative Techniques

- gathers and applies information from at least one source regarding a particular population and its limiting/environmental factors
- makes predictions about the effects of environmental changes that can be tested
- considers and establishes ethical guidelines for the investigation of wildlife
- sets up and conducts experiments to test a prediction
- distinguishes between changing (environmental) variables and responding (population) variables
- obtains results that can be used to determine if some aspect of the prediction is accurate
- summarizes important experimental outcomes regarding the effects of environmental factors on a population
- _____
- _____

REFLECTIONS/COMMENTS

Sample Lab Investigations:

- fruitfly/mosquito populations
- planted seedlings
- tropisms (e.g., meal worms)

Sample Field Investigations:

- sampling aquatic invertebrate
- criteria for release/relocation sites (e.g., pheasants, foxes)
- create a birdhouse trail

RESOURCES:

*Aquatic Invertebrate Monitoring Program, FEESA
Ecosystems, LRDC
Ecosystems, Calgary Board of Education
Project Wild, Alberta Environmental Protection*

SAMPLE ASSESSMENT ITEMS: Ecosystem Concepts**WLD1010-5**

Column A consists of 16 definitions that can be matched with the terms in column B. Choose the capital letter of the appropriate term in the parenthesis in column A. Each term can only be used once.

Column A

- () 1. a community of living organisms and their local physical environment
- () 2. an organism that feeds on the tissue of animals
- () 3. a distinctive combination of plants and animals in a climax community
- () 4. the study of ecosystems
- () 5. a collection of populations of different species within a specific area
- () 6. the process where a new species is born
- () 7. a species whose progress is monitored as an indication of what is happening to an ecosystem or the environment as a whole
- () 8. a group of organisms capable of producing fertile offspring or a group that has similarities in anatomy
- () 9. the Earth's thin veil that contains and supports life
- () 10. a species dies out for a number of reasons
- () 11. genetic variation in a species that allows some individuals a greater chance of surviving
- () 12. a transition zone between two structurally different communities
- () 13. an organism that feeds on either vegetative or animal matter for sustenance
- () 14. an organism that feeds on vegetative matter
- () 15. interbreeding members of one species living in a specific area
- () 16. a representative species dies out in a certain location but can be found in other areas.

Column B

- A. extinction
- B. natural selection
- C. autotroph
- D. detritivores
- E. population
- F. extirpation
- G. species
- H. biosphere
- I. herbivores
- J. community
- K. omnivores
- L. speciation
- M. ecosystem
- N. ecotone
- O. biome
- P. ecology
- Q. carnivores
- R. indicator species



The meanings of the terms conservation and preservation are often not clearly understood. The purpose of this assignment is to explore the meaning of these terms.

In this project you will:

- reflect upon what conservation and preservation mean to you now
- research the meaning of conservation and preservation as they relate to wildlife
- conduct interviews with three or more people regarding their views on wildlife conservation and preservation.
- present the results of interviews to the class, discussing similarities and differences between the terms, and misconceptions commonly held regarding the terms.

What do the terms conservation and preservation mean?

There are two functions of wildlife management—conservation and preservation. They are what biologists, park wardens, naturalists, agriculturists and farmers do. Wildlife management encompasses the application of knowledge and technical skills to protect, preserve, conserve, limit, enhance or extend the value of wildlife and its habitat.

The major objective of conservation is to USE “safe” wildlife populations wisely for the benefit of man. “Safe” refers to healthy plant and animal populations that are not threatened or endangered. “Wise use” means to use in such a manner as natural ecological processes are not disrupted.

The major objective of preservation is to PROTECT “unsafe” wildlife populations FROM HARM so as to make them “safe.” “Unsafe” refers to unhealthy populations that are threatened or endangered. When this objective has been achieved, the population would move to the realm of conservation.



Sample Interview Questions: (It is important to note that there are no right or wrong answers.)

- What do the terms wildlife conservation and wildlife preservation mean?
- What is the difference between the terms?
- Can you provide an actual example of wildlife conservation? wildlife preservation?
- What do you believe to be the most critical problem facing wildlife today?
- Can you give one example of an endangered species in Canada?
- Do you know why this species is endangered?
- Can you give one example of an endangered or threatened habitat in the world?
- Do you know why this habitat is endangered or threatened?
- How do people try to “save” endangered species?
- Do you consider humans more important than other wildlife species? Why or why not?
- What is the difference between hunting and poaching?
- Can you name one place/habitat that has changed in your lifetime? How has it changed? How does this make you feel?
- Do you consider national parks important? Why or why not?
- Do you think we need more (or fewer) “protected spaces” in Alberta? Why or why not?
- Whose responsibility is wildlife?

References Used

Project Wild Activity Guide. 1990. Western Regional Environmental Education Council. Ottawa, Ontario.

Thomson, R. *The Wildlife Game*. 1992. The Nyala Wildlife Publications Trust. Westville, South Africa. p. 71.

Assessment Criteria and Conditions:

- describing diversity among:
 - major groups of Canadian wildlife, including plants, insects, fish, amphibians, reptiles, birds and mammals
 - species within each major group of Canadian wildlife
 - the distribution and habitats of Canadian wildlife.

Suggested Reference(s):

- *Ecosystems*
- *The Nature of Canada: A Primer on Spaces and Species*
- *Alberta Wildlife Viewing Guide*
- *Nature Alberta: An Illustrated Guide to Common Plants and Animals*

STANDARD: Respond to a minimum standard of 1 on the rating scale

Rating Scale:

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- 0 does not complete task, or is unable to provide a suitable response.

N/A Not applicable

G.44/ Wildlife, CTS
(1997)

Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 2 (Wildlife):</p> <ul style="list-style-type: none"> • Q20: What is “wildlife”? • Q21: How many species of wildlife are there on Earth? • Q22: How many species of wildlife do we have in Canada? • Q23: What is “wildlife habitat”? • Q24: How much space do wild species need to survive? • Q25: Do species tolerate changes to their habitat? • Q26: Can species survive destruction of their habitat? 	<ol style="list-style-type: none"> 1. Identify the distinguishing characteristics of major groups of wildlife found in Canada; e.g.: <ul style="list-style-type: none"> • plants • micro-organisms • insects • fish • amphibians • reptile • birds • mammals. 2. Identify 50 or more Canadian wildlife species, including species representative of each of the major groups. 3. Select one of the major groups of wildlife found in Canada, and compare the distribution and habitats of five species within that group. 4. Provide a comprehensive list of wildlife species representative of each of three biomes of Canada; e.g.: <ul style="list-style-type: none"> • arctic • boreal forest • mountain • grasslands • Canadian Shield • temperate deciduous forest

TASK	OBSERVATION/RATING					
Preparation and Planning	4	3	2	1	0	N/A
Information Gathering and Processing	4	3	2	1	0	N/A
Content	4	3	2	1	0	N/A
Collaboration and Teamwork	4	3	2	1	0	N/A
Information Sharing	4	3	2	1	0	N/A

STANDARD IS 1 IN EACH APPLICABLE TASK

Rating Scale

The student:

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- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

TASK CHECKLIST

The student:

Preparation and Planning

- sets goals and follows instructions accurately
- adheres to established timelines
- responds to directed questions and follow necessary steps to find answers
- uses time effectively

Information Gathering and Processing

- accesses basic school/community information sources
- uses one or more information-gathering techniques
- interprets and organizes information in a logical sequence
- records information accurately using correct technical terms
- distinguishes between fact and fiction/opinion/theory
- responds to feedback when current approach is not working

Content

- provides a general description of the wildlife species with respect to structure, size/weight and coloration
- provides an illustration or picture of the wildlife species
- describes special characteristics/adaptations of the wildlife species; e.g.:
 - habitat/range
 - activity patterns
 - feeding habits/diet
 - hibernation/migration

Content (continued)

- provides a map that outlines species distribution and range
- describes species interactions; e.g.:
 - predation
 - interaction with humans
- provides information relevant to life cycle; e.g.:
 - reproductive cycle
 - mating habits
 - care of young
 - lifespan
- provides information relevant to social organization; e.g.:
 - solitary/gregarious
 - seasonal change in social structure
- describes the current status of the wildlife species and recent research conducted regarding the species
- _____
- _____
- _____

Collaboration and Teamwork

- cooperates with group members
- shares work appropriately among group members

Information Sharing

- demonstrates effective use of one or more communication media:
 - e.g., written, oral, audio-visual*
- communicates information in a logical sequence
- uses correct grammatical convention and technical terms
- cites three or more basic information sources

REFLECTIONS/COMMENTS:

Rating	PROJECT CHECKLIST
	<i>The student:</i>
4	Planning and Research
3	<input type="checkbox"/> sets goals for the project and follow instructions accurately
2	<input type="checkbox"/> accesses relevant in-school/community information sources
1	<input type="checkbox"/> records accurate information regarding an ecoregion in Alberta (e.g., temperature, climate, topography, indicator species)
0	<input type="checkbox"/> interprets and explains structural, physiological and behavioural adaptation
	<input type="checkbox"/> responds to feedback when current approach to project is not working
	<input type="checkbox"/> adheres to established timelines and use time effectively
	<input type="checkbox"/> _____
4	Design and Technical Quality
3	<input type="checkbox"/> designs a “critter” that illustrates examples of:
2	– structural adaptation
1	– physiological adaptation
0	– behavioural adaptation
4	<input type="checkbox"/> selects appropriate equipment/materials and constructs a two- or three-dimensional model of the “critter”
	<input type="checkbox"/> demonstrates elements of originality and creativity throughout the design and construction process
	<input type="checkbox"/> maintains technical quality throughout the layout, construction and finishing phases of the project
	<input type="checkbox"/> cooperates with, and shares work appropriately among group members
	<input type="checkbox"/> _____
4	Presentation and Critique
3	<input type="checkbox"/> demonstrates effective use of at least one medium of communication (e.g., oral, written, visual)
2	<input type="checkbox"/> uses appropriate labelling techniques to identify structural, physiological and behavioural adaptations
1	<input type="checkbox"/> provides a rationale for the “critter” by relating each adaptation to environmental factors
0	<input type="checkbox"/> cites three or more relevant information sources
	<input type="checkbox"/> makes summary statements regarding the goals of the project and how they were achieved
	<input type="checkbox"/> reflects on the strengths and limitations of project outcomes, and suggests refinements to the process and/or product
	<input type="checkbox"/> _____

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N/A Not applicable

REFLECTIONS/COMMENTS

Assessment Criteria and Conditions:

- defining biodiversity, and suggesting possible reasons for differences within and among wildlife species/spaces in Alberta as compared to those in other parts of the world.

Suggested Reference(s):

- *Ecosystems*
- *The Nature of Canada: A Primer on Spaces and Species*

STANDARD: Respond to a minimum standard of 1 on the rating scale

Rating Scale

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N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 2 (Biodiversity):</p> <ul style="list-style-type: none"> • Q35: What is “biodiversity”? • Q36: Why is biodiversity important? • Q37: With so many species, why should we worry if some disappear? • Q38: Is there a link between biodiversity and cultural diversity? 	<ol style="list-style-type: none"> 1. Provide a definition for “biodiversity”. Explain three main types of biodiversity; e.g.: <ul style="list-style-type: none"> • species diversity • genetic diversity • ecosystem diversity 2. Compare the diversity among living organisms in Alberta and other parts of the world; e.g.: <ul style="list-style-type: none"> • temperate to temperate • temperate to tropic • temperate to arctic 3. Suggest reasons for differences in diversity among living organisms in Alberta and other parts of the world; e.g.: <ul style="list-style-type: none"> • Earth history • evolution • extinction • number of niches • biotic and abiotic factors • human influences

Safety Guidelines

1. For each of the following outdoor situations, clearly describe the primary hazard(s) you would expect to encounter, and the **precautions** you would take to avoid serious problems:
 - a) a cross-country ski day-trip in the foothills in early winter
 - b) a cross-country ski day-trip in the mountains in late spring
 - c) a three-day spring canoe trip down a Class II river section
 - d) a one-day mountain climbing trip in mid-summer
 - e) a week-long hunting trip in the northern bush in early fall
 - f) a two-day summer horseback trip in the southern grasslands.
2. You are the leader of a hiking party, on a five-day backpacking trip in the Willmore Wilderness. On the third day a member of your party has fallen and appears to be seriously injured. It's getting late in the day, but you are still about an hour away from your planned campsite for the night. Clearly explain:
 - a) the **precautions** you would have taken and the plans you would have made before the trip to prepare for such an emergency
 - b) the **immediate steps** you would take to tackle this problem
 - c) the **contingencies** you would need to consider.
3. Explain the precautions you need to take **before, during and after** an outdoor trip in western Alberta to avoid problems arising from encounters with:
 - a) black bears
 - b) grizzly bears
 - c) bees
 - d) snakes
 - e) ticks
 - f) mosquitoes.
4. You are in charge of planning for a mid-winter, two-day overnight cross-country ski trip in Kananaskis Park for a group of five experienced skiers. Prepare a complete a:
 - a) personal equipment list
 - b) group equipment list.
5. You are on a one-day hiking trip in Jasper National Park with some friends. You go off on your own to fish some "good spots" around the corner. Later you discover that you are completely lost, and now it's starting to get dark.
 - a) What should be your first priority?
 - b) What actions should you take immediately?
 - c) What should you do about food, water, shelter and animals?
 - d) What steps should you take to expedite your rescue?
6. You are one of the "friends" in question #5. What steps should you and the rest of the group take when you discover that your friend is missing?
7. Describe the early symptoms of hypothermia.
8. What steps should be immediately taken if you suspect
 - a) a member of your party is showing signs of hypothermia?
 - b) you are beginning to suffer from hypothermia?
9. List the minimum equipment which should be included in a survival kit.

Safety Guidelines (continued)

10. Describe the primary exposure hazard(s) in each of the following situations:
 - a) hiking in the “badlands” at Dinosaur Provincial Park in mid-summer
 - b) horseback riding in the northern bush country in early spring
 - c) canoeing on the North Saskatchewan River in late fall
 - d) mountain climbing in Banff National Park in mid-summer.
11. List four sources of “tinder” generally available in the wilderness to start a survival fire.
- 12 List and describe three Alberta wild plants that are poisonous, and three that are edible.

Survival Techniques

1. After experiencing an emergency and identifying the nature of the situation, name five steps that might be taken to assure safety of your guests.
2. Survival and first-aid kits must be available at all times. Describe/list five or more requirements for these kits.
3. An emergency shelter may often be set up using materials and natural structures. Identify four types of shelters.
4. When selecting a location for an emergency shelter, list four factors that should be considered.
5. Name eight methods that may be used for signalling for help in a survival situation.

6. List eight steps in the use of a two-way radio.
7. As dehydration affects mental and physical performance, water is necessary for survival. List five methods of obtaining water in a survival situation.
8. List three means of ensuring safe supply of food.

Ecotourism and Capacity

1. Define:
 - a) ecotourism
 - b) carrying capacity
 - c) minimum impact/no-trace land use
2. Identify five stakeholder groups that may use the outdoor wilderness.
3. Explain when carrying capacity would be at its lowest in a specific wilderness area.
4. Name six factors that determine carrying capacity for a specific wilderness area.
5. Some of the best wildlife habitats have “an abundance of edge” (i.e., occur in areas where two ecosystems overlap). Explain what this means and give examples.

GUIDELINES FOR SAFE TRAVEL	
<i>The student:</i>	
<input type="checkbox"/>	prepares and follows a schedule for travel
<input type="checkbox"/>	informs responsible person(s) of destination, route, expected date of return and number in party
<input type="checkbox"/>	selects and prepares appropriate food and equipment for trip
<input type="checkbox"/>	uses orientation and navigation skills; e.g.: <input type="checkbox"/> interprets natural signs <input type="checkbox"/> uses compass and map
<input type="checkbox"/>	avoids dangerous situations with wildlife; e.g.: <input type="checkbox"/> monitors activities of wildlife in area <input type="checkbox"/> disposes of garbage properly <input type="checkbox"/> stores food safely <input type="checkbox"/> maintains safe distance from wildlife
<input type="checkbox"/>	prepares for weather and seasonal conditions; e.g.: <input type="checkbox"/> identifies hazards particular to the area <input type="checkbox"/> listens to weather/news forecasts <input type="checkbox"/> watches for changes in current conditions <input type="checkbox"/> dresses according to season, weather and activity <input type="checkbox"/> carries survival equipment

GUIDELINES FOR SAFE TRAVEL (continued)	
<input type="checkbox"/>	follows safe procedures for the use of tools and equipment; e.g.: <input type="checkbox"/> ensures good condition prior to use <input type="checkbox"/> demonstrates safe use/appropriate care <input type="checkbox"/> follows safe procedures for storing and carrying
<input type="checkbox"/>	follows safety guidelines for the use of fuels; e.g.: <input type="checkbox"/> adheres to legislation regarding fuel storage and use <input type="checkbox"/> filters fuel before use <input type="checkbox"/> adds fuel in ventilated area away from open flame <input type="checkbox"/> stores fuel using safe methods
<input type="checkbox"/>	conducts self-assessment of personal performance and identifies strengths and areas that need improvement
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

SETTING UP EMERGENCY SHELTER	
<i>The student:</i>	
<input type="checkbox"/>	identifies type of shelter that will best protect from the elements
<input type="checkbox"/>	selects an appropriate location for shelter, considering water, fire and signalling needs
<input type="checkbox"/>	demonstrates two or more basic shelter-building techniques that involve the use of materials and/or natural structures available in the outdoors; e.g.: <input type="checkbox"/> fallen tree shelter <input type="checkbox"/> lean-to shelter <input type="checkbox"/> snow cave shelter
<input type="checkbox"/>	demonstrates appropriate use of tools, equipment and safety devices
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

SIGNALLING FOR HELP	
<i>The student:</i>	
<input type="checkbox"/>	explains applications of the international signal for help
<input type="checkbox"/>	demonstrates three or more methods of sending rescue signals in the outdoors; e.g.: <ul style="list-style-type: none"> <input type="checkbox"/> flare signals <input type="checkbox"/> fire signals <input type="checkbox"/> mirror signals <input type="checkbox"/> sound signals <input type="checkbox"/> information signals
<input type="checkbox"/>	demonstrates methods for sending ground to air signals; e.g.: <ul style="list-style-type: none"> <input type="checkbox"/> evergreen boughs <input type="checkbox"/> tramped snow <input type="checkbox"/> use of contrasting materials
<input type="checkbox"/>	

MINIMUM IMPACT LAND USE	
<i>The student:</i>	
<input type="checkbox"/>	constructs a shelter demonstrating the least possible impact on the environment
<input type="checkbox"/>	uses environmentally friendly materials, and limits the use/disposal of petroleum products

MINIMUM IMPACT LAND USE (continued)	
<input type="checkbox"/>	picks up other people's garbage, and carries out everything carried into the camp site
<input type="checkbox"/>	demonstrates techniques for protecting and managing natural water supply; e.g.: <ul style="list-style-type: none"> <input type="checkbox"/> establishment of wash area <input type="checkbox"/> disposal techniques for waste water
<input type="checkbox"/>	adheres to local fire restrictions
<input type="checkbox"/>	uses existing fire box/pit whenever possible, and guards against flying embers
<input type="checkbox"/>	builds fire away from roots and branches, and uses driftwood or deadfall for fire fuel whenever possible.
<input type="checkbox"/>	follows marked paths and avoids ecologically sensitive areas
<input type="checkbox"/>	considers carrying capacity of the area, and avoids nesting/spawning areas and young animals
<input type="checkbox"/>	avoids removing plants and wildflowers, and disturbing sediment in streams
<input type="checkbox"/>	critically examines outdoor procedures and suggests future refinements to land use practices
<input type="checkbox"/>	

STANDARD IS 1 IN EACH APPLICABLE TASK AREA

Rating Scale

The student:

- 4 Exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 Meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 Meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 Meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 Has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

RELECTIONS/COMMENTS

Assessment Criteria and Conditions:

- identifying and explaining six or more scenarios where wildlife:
 - is important in social and cultural contexts
 - has economic value
 - is important in environmental contexts.

Suggested Reference(s):

- *The Nature of Canada: A Primer on Spaces and Species*
- *Project Wild*
- *A Primer on Environmental Citizenship*

STANDARD: Respond to a minimum standard of 1 on the rating scale

Rating Scale

The student:

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- 0 does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 4 (The Importance of Spaces and Species):</p> <ul style="list-style-type: none"> • Q56: Why should we value the natural environment? • Q59: How does the health of wildlife relate to our own health? • Q60: How do plants and animals help us stay healthy? • Q61: Do spaces and species contribute to our psychological and emotional health? • Q62: How do spaces and species contribute to our economic well-being? • Q63: Why does agriculture need a healthy natural environment? • Q64: How does forestry depend on the natural environment? • Q65: In what ways does tourism rely on spaces and species? • Q66: What is wildlife worth in dollars and cents? • Q67: How have spaces and species contributed to human knowledge? • Q69: How will the preservation of spaces and species benefit us in the future? 	<ol style="list-style-type: none"> 1. Identify and describe six or more scenarios where wildlife is important in social and/or cultural contexts; e.g.: <ul style="list-style-type: none"> • recreation • spiritual/aesthetic uses • medicine • use of indigenous peoples • mythology/astrology • literature/art/drama. 2. Identify and describe six or more scenarios where wildlife has economic value; e.g.: <ul style="list-style-type: none"> • subsistence • tourism • commercial trade. 3. Identify and describe six or more scenarios where wildlife is important in environmental contexts; e.g.: <ul style="list-style-type: none"> • water, air and soil quality • diversity of life forms • maintenance of ecosystems. 4. Summarize the results of interviews with 10 or more different people regarding the social/cultural, economic and/or environment significance of wildlife (see WLD105-2).

Directions:

1. Create a survey including at least 10 questions that will address the environmental significance of wildlife. (Some sample questions are provided, but think of at least two questions of your own.)
2. Summarize the survey results with a graph. The graph should include:
 - a) the percentage of those surveyed who participate indirectly in wildlife-related activities (e.g., watching films or TV programs on wildlife, reading about wildlife, visiting zoos, game farms or natural science museums, purchasing wildlife posters, arts or crafts, member of wildlife organizations)
 - b) the percentage of those surveyed who participate in non-consumptive wildlife-related activities (e.g., hiking, camping, watching wildlife, photographing wildlife, feeding wildlife, studying wildlife)
 - c) the percentage of those surveyed who participate in consumptive wildlife-related activities (e.g., hunting of mammals and/or birds, fishing, trapping).
2. Present the results of the survey. Presentation to include:
 - a) a visual display of graphed results (overhead, poster, etc.)
 - b) a clear explanation of summarized results
 - c) a summary of the most interesting thing you learned from doing this assignment.

Sample Survey Questions:

- Are wildlife/wilderness areas important to you? Why or why not?
- Can you describe at least two benefits of wildlife to society?
- Describe two activities that you participate in that allow you to interact with wildlife/wilderness areas.
- How many times in one year have you encountered wildlife during trips/outings?
- Do you watch wildlife programs on TV?
- Do you buy birdfeed on an annual basis? Do you like to watch birds? Why?
- Do you read magazines/books about wildlife?
- Do you visit zoos, game farms or natural science museums?
- Do you purchase wildlife posters, arts, or crafts?
- Do you hunt, fish or trap?
- Are you a member of a wildlife organization?
- How often do you participate in wildlife-related activities in one year?
- If you hunt, fish or camp, approximately how much money do you spend on licences, ammunition, gas, food, park permits, film, etc., in one year?
- If wildlife/wilderness areas were in serious trouble, would you be willing to pay a wildlife “tax” to help protect and conserve them? Why or why not?
- What do you do to “escape” the hustle and bustle of city life?

Reference: *The Importance of Wildlife to Canadians* (Highlights of the 1981 National Survey, p. 40). Ottawa, Ontario: Minister of Supply and Services Canada, 1985.

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	N/A
Information Gathering and Processing	4	3	2	1	N/A
Content	4	3	2	1	N/A
Collaboration and Teamwork	4	3	2	1	N/A
Information Sharing	4	3	2	1	N/A

STANDARD IS 1 IN EACH APPLICABLE TASK

Rating Scale

The student:

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

G.54/ Wildlife, CTS
(1997)

TASK CHECKLIST

The student:

Preparation and Planning

- sets goals and follows instructions accurately
- adheres to established timelines
- responds to directed questions and follows necessary steps to find answers
- uses time effectively

Information Gathering and Processing

- accesses basic school/community information sources
- uses one or more information-gathering techniques
- interprets and organizes information in a logical sequence
- records information accurately using correct technical terms
- distinguishes between fact and fiction/opinion/theory
- responds to feedback when current approaches are not working

Content

- describes at least three significant personal impacts on wildlife and the environment
- describes specific ways in which the growth of human populations may affect wildlife and its habitat; e.g.:
 - deforestation
 - urban sprawl
 - energy use practices

Content (continued)

- describes specific ways in which technological and/or economic development may affect wildlife and its habitat; e.g.:
 - transportation
 - energy and mineral development
 - agricultural and forestry practices
- describes specific ways in which resource development may affect wildlife and its habitat; e.g.:
 - resource extraction
 - patterns/levels of consumption
 - land use practices

Collaboration and Teamwork

- cooperates with group members
- shares work appropriately among group members

Information Sharing

- demonstrates effective use of one or more communication media:
e.g., written, oral, audio-visual
- communicates information in a logical sequence
- uses correct grammatical convention and technical terms
- cites three or more basic information sources

REFLECTIONS/COMMENTS

Assessment Criteria and Conditions:

- identifying and explaining basic principles of wildlife management and the role of regulated hunting in game management.

Suggested Reference(s):

- *Alberta Conservation and Hunter Education*
- *Project Wild*
- *A Wildlife Policy for Canada*
- *The Status of Wildlife in Alberta*

STANDARD: Respond to a minimum standard of 1 on the rating scale

Rating Scale

The student:

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- 0 does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information

See the *Alberta Conservation and Hunter Education Manual*:

- Hunting Ethics
 - Definition of Ethics and Laws
 - Personal Code of Ethics
 - Ethics for Consideration
 - Importance of Ethics
- Role of the Hunter
- Wildlife Management:
 - Basic Principle of Ecology
 - Game Management and Conservation
 - Predators and Problem Wildlife

Sample Questions/Activities

- 1. Identify the goals of game management and agencies responsible for managing Alberta’s game animals.**
- 2. Identify and describe components/techniques of a game management plan; e.g.:**
 - biological research
 - inventory
 - habitat manipulation
 - management of wildlife populations
- 3. Explain the role of regulated hunting in game management and conservation.**
- 4. Describe 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
- 5. Identify ethical considerations that provide a social standard for conduct when hunting; e.g.:**
 - hunter-landowner relations
 - regard for other land users
 - respect for self
 - respect for wildlife
 - respect for laws and enforcement officers

TASK	OBSERVATION/RATING					
Preparation and Planning	4	3	2	1	0	N/A
Content	4	3	2	1	0	N/A
Presenting/ Reporting	4	3	2	1	0	N/A

STANDARD IS 1 IN EACH APPLICABLE TASK

Rating Scale

The student:

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

TASK CHECKLIST

The student:

Preparation and Planning

- sets goals and follows instructions accurately
- responds to directed questions and follows necessary steps to find answers
- accesses basic in-school/community information sources
- interprets and organizes information into a logical sequence
- records information accurately using correct technical terms
- uses time effectively

Content

- provides a clear and concise statement of an issue regarding hunting ethics
- examines social, political, scientific, ethical, economic and/or environmental perspectives related to the issue
- provides detailed examples of the consequences of previous human activities relevant to the issue
- develops a logical argument and conclusion regarding the issue, and provides a rationale for the position taken

Content (continued)

- develops a plan of action for dealing with the issue at local and/or global levels
- provides a glossary of terms relevant to the issue
- _____
- _____

Presenting/Reporting

- demonstrates effective use of one or more communication media
e.g., Written: spelling, punctuation, grammar basic format
- Oral: voice projection, body language*
- Audio-Visual: techniques, tools*
- uses correct grammatical convention and technical terms through proofreading/editing
- provides an introduction that describes the purpose of the project
- communicates information in a logical sequence
- states a conclusion based on a summary of facts
- provides a reference list of three or more basic information sources

REFLECTIONS/COMMENTS

BIG GAME UNGULATES

	Common Name	Characteristics/ Habits	Habitat/ Range
Horned Ungulates			
Bighorn Sheep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mountain Goat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pronghorn Antelope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antlered Ungulates			
Moose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
White-tailed Deer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mule Deer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Caribou	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BIG GAME CARNIVORES

	Common Name	Characteristics/ Habits	Habitat/ Range
Cougar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wolf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coyote	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grizzly Bear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Black Bear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

UPLAND GAME BIRDS

	Common Name	Characteristics/ Habits	Habitat/ Range
Willow Ptarmigan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
White-tailed Ptarmigan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sage Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sharp-tail Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ruffed Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spruce Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blue Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ring-necked Pheasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hungarian Partridge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WATERFOWL

	Common Name	Characteristics/ Habits	Habitat/ Range
Puddle Ducks			
Mallard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pintail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Green-winged Teal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blue-winged Teal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shoveller	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gadwall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wigeon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diving Ducks			
Bufflehead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Red Head	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Canvasback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lesser Scaup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ring-Necked Duck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common Goldeneye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geese			
Canada Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
White-Fronted Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snow Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ross's Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STANDARD: The student is able to identify by common name, characteristics/habits and habitat/range:

- eight big game ungulates (including horned and antlered animals)
- five big game carnivores
- eight upland game birds
- 16 waterfowl (including puddle ducks, diving ducks and geese)

REFERENCE GUIDES (available from Alberta Fish and Wildlife)

- Alberta Conservation and Hunter Education Manual
- Horn, Fur and Slide Kits.

FIRST AID AND SURVIVAL

(PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)

The student:

- identifies factors that affect ability to cope in emergency situations in the outdoors; e.g.:
 - pain and cold
 - thirst and hunger
 - fatigue, boredom and loneliness
 - fear

- describes the basic objectives of first aid

- demonstrates general procedures for examining someone who is hurt or suddenly becomes ill in the outdoors

- identifies and assembles essential items to include in first-aid and survival kits

- demonstrates basic emergency techniques for artificial respiration

- demonstrates basic emergency techniques to control bleeding from cuts

- demonstrates basic emergency techniques to provide care for victims of shock or concussion

- demonstrates basic emergency techniques for the care of sprains, fractures and dislocations

demonstrates basic emergency techniques for the treatment of burns, blisters and frostbite

demonstrates basic emergency techniques for the care of animal and insect bites

describes personal responsibilities after administering emergency first aid, and other actions that may need to be considered:

- _____
- _____
- _____

explains strategies for dealing with hypothermia in specific situations; e.g.:

- symptoms
- treatment
- prevention

demonstrates basic fire-building techniques in the outdoors; e.g.:

- fire location
- fuel
- ignition

explains different shelter-building techniques appropriate to specific outdoor environments; e.g.:

- fallen tree shelter
- lean-to shelter
- snow cave shelter

explains different methods of signalling and their application in specific situations; e.g.:

- flare signals
- fire signals
- mirror signals
- sound signals
- information signals

explains basic methods of securing water and food in outdoor survival situations; e.g.:

- purifying water
- avoiding poisonous plants
- shooting, spearing, snaring, trapping or hooking animals

OUTDOOR EQUIPMENT (PERFORMANCE STANDARD IS 1 ON EACH TASK AREA)	
<i>The student:</i>	
<input type="checkbox"/>	describes the function and characteristics of suitable outdoor clothing; e.g.: <input type="checkbox"/> underwear <input type="checkbox"/> shirt, pants and coat <input type="checkbox"/> boots and socks <input type="checkbox"/> gloves, mitts and headgear
<input type="checkbox"/>	describes the function and characteristics of suitable outdoor bedding; e.g.: <input type="checkbox"/> sleeping bag <input type="checkbox"/> pillow <input type="checkbox"/> mattress
<input type="checkbox"/>	explains different types and styles of tents appropriate to specific outdoor situations; e.g.: <input type="checkbox"/> wall tent <input type="checkbox"/> forester's tent <input type="checkbox"/> mountaineer's tent <input type="checkbox"/> lean-to tent
<input type="checkbox"/>	identifies important features of manufactured tents; e.g.: <input type="checkbox"/> sod cloth <input type="checkbox"/> mosquito screen <input type="checkbox"/> tent colour <input type="checkbox"/> waterproofing <input type="checkbox"/> vestibule
<input type="checkbox"/>	demonstrates proper storage procedures for tents
<input type="checkbox"/>	demonstrates fabric repair techniques for tents

<input type="checkbox"/>	explains applications of different types of knives and axes in outdoor situations
<input type="checkbox"/>	explains techniques for safely selecting, handling and using knives and axes
<input type="checkbox"/>	explains techniques for the safe storage of knives and axes
<input type="checkbox"/>	explains techniques for safely sharpening knives and axes
<input type="checkbox"/>	demonstrates the use of the compass in outdoor navigation
<input type="checkbox"/>	demonstrates use of maps in outdoor navigation
<input type="checkbox"/>	describes desirable characteristics and applications of different types of backpacking equipment in outdoor excursions; e.g.: <input type="checkbox"/> packboards <input type="checkbox"/> packsacks
<input type="checkbox"/>	demonstrates techniques for putting on, carrying and taking off a loaded backpack
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

Rating Scale

The student:

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

REFLECTIONS/COMMENTS

Assessment Criteria and Conditions:

- identifying and explaining:
 - principles of fisheries management and the role of recreational fishing in managing fish resources
 - ethical and legal responsibilities of individuals involved in game fishing.

Suggested Reference(s):

- *Alberta Fishing Education Program*
- *Project Wild*
- *A Wildlife Policy for Canada*
- *The Status of Wildlife in Alberta*
- *Alberta Guide to Sportfishing*

STANDARD: Respond to a minimum standard of 1 on the rating scale

Rating Scale

The student:

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- 0 does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See the <i>Alberta Fishing Education Program Manual</i>:</p> <ul style="list-style-type: none"> • Management: <ul style="list-style-type: none"> – Fishing Regulations – Size Limits/Bait Restrictions – Daily Catch and Possession Limits – Fish Stocking – Aquatic Habitat Development and Improvement – Commercial/Domestic Fishing • Ethical Behaviour: <ul style="list-style-type: none"> – Definition of Ethics – Personal Code of Ethics – Fisherman – Landowner Relations – Relationship with other Fishermen – Self-Respect – Catch and Release Fishing – Respect of Laws – Importance of Ethics • Legal Responsibilities: <ul style="list-style-type: none"> – Legal Process – The Purpose of Fishing Laws – Laws to Protect and Conserve Fish – Small Vessel Regulations – Criminal Code – <i>Litter Act</i> – Creating or Changing Laws – Interpretation of the Law – Access to Public and Private Lands 	<ol style="list-style-type: none"> 1. Identify the goals of fisheries management and the agencies responsible for managing Alberta’s fish resources. 2. Identify and describe components/techniques of a fish management plan; e.g.: <ul style="list-style-type: none"> – biological research – inventory – habitat improvement and manipulation – law enforcement/public information 3. Explain the role of recreational fishing in the management and conservation of fish resources. 4. Identify ethical considerations that provide a social standard of conduct for sport fishing; e.g.: <ul style="list-style-type: none"> – fisherman – landowner relations – regard for other people – respect for the fisheries resource – respect for laws and law enforcement – catch-and-release fishing 5. Describe fishing regulations and related legislation that provide a legal standard of conduct for sport fishing; e.g.: <ul style="list-style-type: none"> – laws to protect and conserve fish stocks – laws to govern activities of the fisherman – boating restrictions – litter control.

TASK	OBSERVATION/RATING					
Preparation and Planning	4	3	2	1	0	N/A
Content	4	3	2	1	0	N/A
Presenting/ Reporting	4	3	2	1	0	N/A

STANDARD IS 1 IN EACH APPLICABLE TASK

Rating Scale

The student:

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

TASK CHECKLIST

The student:

Preparation and Planning

- sets goals and follows instructions accurately
- responds to directed questions and follows necessary steps to find answers
- accesses basic in-school/community information sources
- interprets and organizes information into a logical sequence
- records information accurately using correct technical terms
- uses time effectively

Content

- provides a clear and concise statement of an issue regarding fishing ethics
- examines social, political, scientific, ethical, economic and/or environmental perspectives related to the issue
- provides detailed examples of the consequences of previous human activities relevant to the issue
- develops a logical argument and conclusion regarding the issue, and provides a rationale for the position taken

Content (continued)

- develops a plan of action for dealing with the issue at local and/or global levels
- provides a glossary of terms relevant to the issue.
- _____
- _____

Presenting/Reporting

- demonstrates effective use of one or more communication media:
*e.g., Written: spelling, punctuation, grammar
basic format*
- Oral: voice projection, body language*
- Audio-Visual: techniques, tools*
- uses correct grammatical convention and technical terms through proofreading/editing
- provides an introduction that describes the purpose of the project
- communicates information in a logical sequence
- states a conclusion based on a summary of facts
- provides a reference list of three or more basic information sources

REFLECTIONS/COMMENTS:

SALMONIDS

	Common Name	Physical Characteristics	Habitat/Range	Spawning/Feeding Habits
Rainbow Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cutthroat Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brown Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bull Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brook Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Golden Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arctic Grayling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mountain Whitefish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Whitefish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cisco (Tullibee)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PERCIDS

	Common Name	Physical Characteristics	Habitat/Range	Spawning/Feeding Habits
Yellow Perch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walleye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sauger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

OTHER GAME FISH

	Common Name	Physical Characteristics	Habitat/Range	Spawning/Feeding Habits
Northern Pike	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Sturgeon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Burbot (Ling)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goldeye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sucker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STANDARD: The student is able to identify by common name, physical characteristics, habitat/range and spawning/feeding habits:

- 10 species of salmonids
- 3 species of percids
- 4 other species of game fish.

REFERENCE GUIDES:

- *Alberta Fishing Education Manual*
- *Alberta Fishing Regulations*
- *Slide Kits: Identification of Alberta Fish*
(available from Alberta Fish and Wildlife)

FISHING EQUIPMENT
<p><i>The student:</i></p> <p><input type="checkbox"/> describes the characteristics, use and care of common types of fishing equipment:</p> <ul style="list-style-type: none"> <input type="checkbox"/> fishing rods and reels <input type="checkbox"/> lines and knots <input type="checkbox"/> hooks and artificial lures <input type="checkbox"/> snap swivels and wire leaders <input type="checkbox"/> sinkers, down riggers and floats <input type="checkbox"/> creels and nets <input type="checkbox"/> tackle boxes <input type="checkbox"/> survival and first-aid kits
FIELD TECHNIQUES
<p><i>The student:</i></p> <p><input type="checkbox"/> describes the nature and purpose of different angling techniques:</p> <ul style="list-style-type: none"> <input type="checkbox"/> spin fishing/spin casting <input type="checkbox"/> bait fishing/bait casting <input type="checkbox"/> fly fishing <input type="checkbox"/> trolling <input type="checkbox"/> ice fishing <input type="checkbox"/> bow fishing <input type="checkbox"/> catch-and-release fishing
FIELD CARE OF FISH
<p><i>The student:</i></p> <p><input type="checkbox"/> explains techniques for the care of:</p> <ul style="list-style-type: none"> <input type="checkbox"/> table fish <input type="checkbox"/> trophy fish

HANDLING/COOKING TABLE FISH
<p><i>The student:</i></p> <p><input type="checkbox"/> demonstrates/explains techniques for handling table fish:</p> <ul style="list-style-type: none"> <input type="checkbox"/> cleaning/dressing <input type="checkbox"/> scaling <input type="checkbox"/> skinning and filleting <input type="checkbox"/> freezing and canning <hr/> <p><input type="checkbox"/> demonstrates/explains techniques for cooking table fish</p> <hr/> <p><input type="checkbox"/></p>
SAFETY PRACTICES
<p><i>The student:</i></p> <p><input type="checkbox"/> identifies general safety considerations relevant to fishing (e.g., wading, hook safety, storms, currents)</p> <hr/> <p><input type="checkbox"/> explains specific safety practices relevant to fishing:</p> <ul style="list-style-type: none"> <input type="checkbox"/> boat safety <input type="checkbox"/> ice safety <input type="checkbox"/> bear safety <hr/> <p><input type="checkbox"/> describes emergency first-aid and survival techniques:</p> <ul style="list-style-type: none"> <input type="checkbox"/> items to include in first-aid and survival kits <input type="checkbox"/> basic first-aid and survival techniques <hr/> <p><input type="checkbox"/></p>

STANDARD IS 2 FOR EACH TASK IDENTIFIED ON THE CHECKLIST

Rating Scale

The student:

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

<p>REFLECTION/COMMENTS</p>
