ENVIRONMENTAL AND OUTDOOR EDUCATION

A. COURSE RATIONALE AND PHILOSOPHY

"The aim of education is to develop the knowledge, the skills and the positive attitudes of individuals, so that they will be self-confident, capable and committed to setting goals, making informed choices and acting in ways that will improve their own lives and the life of their community" (*Secondary Education in Alberta: Policy Statement,* 1985).

The Junior High Environmental and Outdoor Education Course supports this program aim. The course design reflects an integrated approach that addresses the special needs of adolescents. It can be offered to students over one, two or three years.

NEEDS OF THE ADOLESCENT

The adolescent years are a time of learning and adjustment. Junior high students need to make sense of the world in a personal way, establishing a sense of self through personal challenges, and establishing new relationships with peers, others and the environment. The junior high years are the time for students to lay solid foundations, explore new horizons and apply new-found knowledge, skills and values to the world around them.

Within their experience as adolescents, junior high students actively strive to develop a sense of identity by establishing and extending personal competencies. Physical skills that are clearly and immediately recognizable are of tremendous importance to students at this level. In many instances they are motivated not only by the personal pride that comes with accomplishment, but also by the feeling of social belonging that comes from taking part in enjoyable and meaningful activities with others. The quest for personal identity and wholeness is of utmost importance to the adolescent.

The holistic nature of the Junior High Environmental and Outdoor Education Course provides an opportunity for lifelong learning and for meeting the immediate needs of adolescents.

NEED FOR ENVIRONMENTAL AND OUTDOOR EDUCATION

At the same time as the adolescent learner is trying to come to terms with the world, the world itself is changing. Local and global environments are undergoing transformation at a rapid pace and at a scale that is unparalleled at any time in human history. It is now apparent that all environments are subject to the actions of humankind; collectively, these actions strain the ability of the earth's systems to maintain themselves in balance.

Students need to understand the consequences of human actions on environments. The effects of lifestyles and technology are in many cases not immediately apparent to students, often because they are too difficult to predict, or are removed from students in time or space. In many instances, students may not be aware of the origin, costs and long-term consequences of the resources we use. Through the study of environments in a variety of urban, rural and natural settings, these effects become evident. Students entering a relatively undisturbed area for study and enjoyment see in a most tangible way the effects of previous users of the area. With some focus of attention, the environmental consequences of collective and individual actions become clear.

This personal awareness and knowledge can be extended through further study of environments, the relationships among them and ways in which we can manage local and global environments for the good of all living things. The Junior High Environmental and Outdoor Education Course provides an opportunity for integrating personal experience and formal learning. The course provides for growth of students as individuals and as responsible citizens. It will assist students in their quest to live harmoniously with others and with the world.

COURSE CHARACTERISTICS

This activity-based course provides opportunities for in-depth practical studies and experiences. This direct approach should appeal to all students, particularly those who learn best from physical involvement. Students will be required to assume many responsibilities for their learning by building personal skills and through assuming responsibility for individual and group welfare.

Decision-making skills will be emphasized. These include personal, group and societal decisions and involve students in examining the personal and interpersonal consequences of their actions, as well as the importance of their relationship with the environment.

B. GENERAL LEARNER EXPECTATIONS

Students will:

- demonstrate basic knowledge, skills and attitudes necessary for safe, comfortable outdoor experiences in all seasons
- demonstrate understanding, respect and appreciation for self, others and their views
- demonstrate awareness and appreciation of living things and understanding of basic ecological processes
- demonstrate skill, judgment, confidence and sensitivity in a wide range of environmentally responsible activities in outdoor settings
- develop knowledge and skills by investigating the effects of human lifestyles on environments
- develop lifestyle strategies that foster contact with the natural world, encourage responsibility for local and global environments and encourage living in harmony with others.

C. SPECIFIC LEARNER EXPECTATIONS

COURSE FRAMEWORK

Junior High Environmental and Outdoor Education (EOE) may be offered as a single course at the Grade 7, 8 or 9 levels, or as a sequential program of up to three years. The course is composed of six elements, each stemming from one of the six general learner expectations. The course elements are:

- Commitment to Action
- Outdoor Expeditions
- Environmental Investigations
- Outdoor Core
- Personal and Group Development
- Environmental Core.

A balanced treatment of these six elements is to be achieved in this course. Each of the elements must be addressed in each year the course is offered. As students progress from the first year to a second and third year of the course, the relative emphasis on each of the elements will change. In the initial year the major emphasis is on course elements at the foundation level; in subsequent years the emphasis is increasingly at the exploration and empowerment levels.

The six elements work together to develop three strands: outdoor recreation, personal and group development, and environmental. Each strand, in turn, is developed over three levels of experience: a foundation level, an exploration level and an empowerment level. The relationship of these strands and levels to the required course elements is illustrated in the diagram below and on the following pages.

COMMITMENT TO ACTION

Students will develop lifestyle strategies that foster contact with the natural world, encourage responsibility for local and global environment and encourage living in harmony with others.

EMPOWERMENT

OUTDOOR EXPEDITIONS

Students will demonstrate skill, judgment, confidence and sensitivity in a wide range of environmentally responsible activities in outdoor settings.

ENVIRONMENTAL INVESTIGATIONS

Students will develop knowledge and skills by investigating the effects of human lifestyles on environments.

EXPLORATION

OUTDOOR CORE

Students will demonstrate basic knowledge, skills and attitudes necessary for safe, comfortable, outdoor experiences in all seasons.

PERSONAL AND GROUP DEVELOPMENT

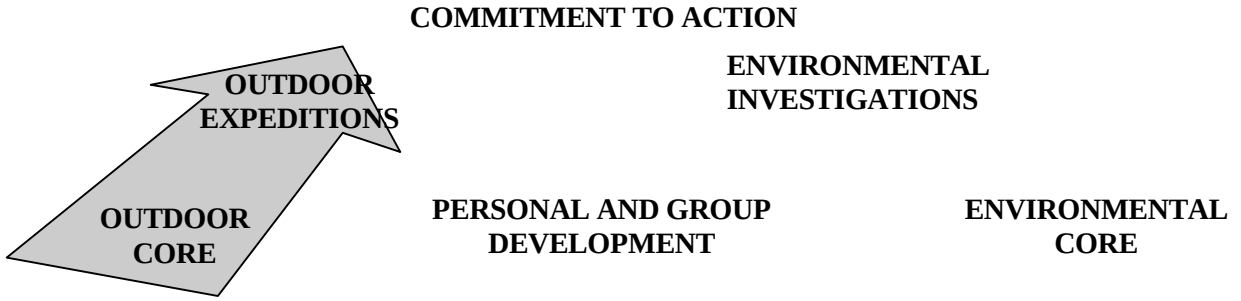
Students will demonstrate understanding, respect and appreciation for self and others.

ENVIRONMENTAL CORE

Students will demonstrate awareness and appreciation of living things and understanding of basic ecological processes.

FOUNDATION

COURSE ARTICULATION



The **outdoor strand** begins by establishing a foundation of knowledge, skills and attitudes through the Outdoor Core. Before any field trip, no matter how short, students must have the basic concepts, skills and attitudes to ensure that the trip will be a safe, enjoyable one. The Outdoor Expeditions element of the model provides students with the opportunity to apply many of the skills acquired in the Outdoor Core. This strand culminates in Commitment to Action, in which students identify and act on plans to incorporate outdoor experiences into their lifestyles.

The **personal and group development strand** follows a pattern similar to the outdoor strand. At the foundation level of experience, the Personal and Group Development element establishes basic awareness and understanding of self and groups. At the exploration level, students will have an opportunity to apply this understanding to problem solving in both the Environmental Investigations and Outdoor Expeditions elements. In the Commitment to Action element, students will build on, or develop as a part of their personal growth, plans identified in exploration.

The **environmental strand** begins with the introduction of material from the Environmental Core. Here, students become aware of and appreciate local environments, and begin to understand the basic ecological principles that apply generally to all environments. Building on these foundations, students are then introduced to Environmental Investigations. In this part of the course, students will apply problem-solving skills to specific environmental investigations. Students investigate current practices and their alternatives, identify advantages, disadvantages and consequences of each, and decide on the best option. At the empowerment level, students work toward a personal Commitment to Action. Here, students are encouraged to establish a personal plan of action, act on it and evaluate it.

INTEGRATION OF STRANDS

The integrative nature of the Junior High Environmental and Outdoor Education Course provides for the development of several learner outcomes in one activity. For example, the development of environment awareness and appreciation, which is part of the Environmental Core, can be achieved in combination with the Outdoor Expeditions element of the course. Concrete experiences in outdoor skill development can complement the ecological concepts that are required as part of the Environmental Core. The Outdoor Expeditions element further complements the environmental strand by providing students with the opportunity to see concrete examples of the effects of humans on environments. The outdoor strand supports the environmental strand by providing students with basic self-care skills that enable them to appreciate their environment rather than being preoccupied with the cold or lack of food.

Development of the empowerment level of the course grows out of previous work in exploration and foundation. As a culmination of the outdoor strand, the course encourages students to maintain their skills so that they can continue having contact with the natural world. Such contact leads students to greater awareness and appreciation of their environment, thereby increasing the likelihood that they will act responsibly on its behalf. The environmental strand leads students to look at the effect their lifestyle has on the environment and leads to positive personal action. Through their awareness and appreciation of environments and their understanding of ecological principles, students can act with sensitivity to environmental concerns within their communities. The personal and group development strand encourages students to live in harmony with themselves and others. In doing so, their outdoor activities will be enriched and their environmental actions will be more effective.

REQUIRED/ELECTIVE COMPONENTS

The course has a required component and an elective component, defined as follows:

- The **required** component encompasses the knowledge, skills and attitudes that all students are expected to acquire.

- The **elective** component provides opportunities to adapt and enhance instruction to meet the diverse needs, abilities and interests of individual students. It provides enrichment and additional assistance to individual students as necessary.

COURSE CONTENT

Outdoor Core

Students will demonstrate basic knowledge, skills and attitudes necessary for safe, comfortable, outdoor experiences in all seasons.

1. Students will approach the planning of outdoor activities with a positive regard for themselves, for others and for the environment.

    a. Students will recognize the role of outdoor activities as part of a healthy personal lifestyle.

    b. Students will approach outdoor activities aware of personal and group skill levels, abilities and limitations.

    c. Students will recognize the potential impact of their activities on environments they might enter and use.

    d. Students will recognize:
        - the role of planning in enhancing safety and enjoyment of outdoor activities
        - the importance of planning for the needs and expectations of group members and all others affected
        - the scope of planning appropriate to different kinds of outdoor activities.

2. Students will develop competence in trip preparation and safety.

    a. Students will develop the knowledge, skills and attitudes necessary to prepare for outdoor expeditions in ways that will ensure the safety and well-being of those involved.
        - Students will develop the skills to recognize and assess physical hazards imposed by:
            – particular terrain and conditions (e.g., avalanche, lake and river ice, and bush travel)
            – wildlife and plants that may be encountered in outdoor expeditions (e.g., bears, bees, ticks, non-edible wild plants)
            – changes in weather conditions that may affect personal and group safety.
        - Students will develop the skills to recognize and assess the physiological hazards associated with being outdoors (e.g., hypothermia, dehydration, fatigue).
        - Students will develop understanding of the precautions necessary to avoid or respond to these hazards.

    b. Students will be aware of, list and take the steps necessary to anticipate emergencies and survival situations.
        - Students will understand what to do if lost or separated from a group.
        - Students will develop the knowledge, skills and attitudes necessary to respond to an emergency situation, including:
            – first aid training
            – emergency response planning.

    c. Students will develop understanding of the importance of en route organization in the outdoors (e.g., lead and sweep, regrouping procedures, pacing).

3. Students will demonstrate the knowledge and skills required for safe, comfortable, outdoor living.

    a. Students will select personal and group gear for outdoor activities.
        - Students will select personal equipment for outdoor expeditions, with particular consideration to maintaining body temperature and protection from injury.
        - Students will select group equipment for outdoor expeditions to meet requirements for food, shelter, travel, emergencies.
        - Students will demonstrate the proper care and maintenance of outdoor equipment.

    b. Students will make preparations to meet food needs during extended outdoor activities by demonstrating understanding of:
        - nutrition requirements
        - portability and preservation
        - food preparation techniques (e.g., cooking, fires and stoves).

    c. Students will demonstrate knowledge of the techniques required for maintaining hygiene in outdoor settings in the following areas:
        - water purification
        - personal cleanliness
        - group hygiene.

4. Students will demonstrate skills in researching, interpreting and applying the information necessary for safe route planning.

    a. Students will demonstrate advance planning skills in researching and interpreting route information by developing skills in:
        - researching information from a variety of sources (e.g., maps, aerial photographs, guidebooks, journals and local experts)
        - interpreting route information (e.g., selecting reasonable destinations, estimating travel time, anticipating obstacles).

b. Students will develop the skills necessary to interpret and apply route information while en route, including:
   - map reading skills
   - compass skills
   - terrain interpretation and route selection skills.

5. Students will develop skill in environmentally responsible outdoor activities appropriate to different seasons.

   a. Students will develop skill in a variety of outdoor activities and modes of travel (e.g., hiking, cross-country skiing, canoeing and bird-watching).

   b. Students will acquire and practise minimum impact outdoor living and travelling skills in the following areas:
      - trail maintenance techniques (e.g., avoidance of trail widening)
      - campsite care (e.g., fires vs. stoves, tent site selection, firewood selection)
      - waste disposal techniques (e.g., latrines, waste water disposal, garbage).

6. Students will recognize the need for and develop an appropriate level of physical fitness for outdoor activities.

Personal and Group Development

Students will demonstrate understanding, respect and appreciation for self, others and their views.

1. Students will develop respect and appreciation for self and others.

   a. Students will recognize themselves as individuals and as members of a group.

   b. Students will recognize that individuals have personal lifestyles and beliefs that help define who they are.

   c. Students will recognize personal competencies and growth in personal competencies (e.g., physical, interpersonal, and problem-solving skills).

2. Students will demonstrate skill at setting realistic goals.

   a. Students will demonstrate willingness to expend effort to achieve personal and group goals.

   b. Students will demonstrate adaptability and flexibility in responding to unanticipated events.

3. Students' personal communication skills will be enhanced.

   a. Students will demonstrate skills in communicating intents and ideas both verbally and non-verbally.

   b. Students will recognize the effects of their communication and actions on others.
      - Students will recognize and accept that the reactions of others may reflect a different perspective than their own.
      - Students will demonstrate sensitivity to others.

4. Students will demonstrate awareness of the relationship of individuals to groups.

   a. Students will demonstrate awareness of human needs for contact and acceptance by others.

   b. Students will demonstrate awareness of the need for personal space and privacy.

   c. Students will demonstrate awareness of different roles that individuals play within groups and the interdependency of those roles.

   d. Students will recognize the nature of groups as defined in particular situations by enduring relationships (e.g., within Native society, the extended kinship relationship of individuals to family, tribe and the environment).

5. Students will demonstrate understanding of group process and develop skills in group process.

a. Students will demonstrate awareness and responsibility for their actions as members of a group.

b. Students will demonstrate ability to assume different roles within a group.

Environmental Core

Students will demonstrate awareness and appreciation of living things and understanding of basic ecological processes.

1. Students will demonstrate knowledge, skills and attitudes regarding the diversity of environments and life forms within those environments.

   a. Students will demonstrate awareness of local and global environments by developing:
      - skill in observing and describing an environment based on first-hand observations
      - knowledge of some distinguishing features of local and global environments
      - knowledge of the diversity of life found within these environments
      - a caring attitude for environments and for the diversity of life forms found within them
      - an ability to describe the value of these environments to themselves and to others.

   b. Students will recognize that they as individuals are part of a complex global environment and that they both affect and are affected by their environment.
      - Human life and lifestyles are dependent on environmental resources.
      - Humans influence environments through direct and indirect means.

2. Students will demonstrate awareness of the interactions within environments and understanding of the interconnectedness of the earth's systems.

   a. Students will demonstrate skill in identifying interactions and ongoing changes within an environment by:
      - interpreting evidence of interaction of a living thing and its environment
      - interpreting evidence of human effects.

   b. Students will demonstrate awareness of linkages between human actions and the earth's systems by recognizing that:
      - natural systems cause materials generated by humans to be spread throughout the environment
      - some materials released into the environment may be concentrated through food chains and by other natural processes
      - many technologies and materials developed by humans are new and their effects are not fully known
      - the effects of materials on ecosystems and on particular living things are often difficult to detect.

3. Students will demonstrate the understanding that environments change over time, by identifying and describing examples of the following concepts:

   a. Students will recognize natural changes in environments (e.g., seasonal changes, geological changes, succession, extinction).

   b. Students will recognize changes that result from human use of environments, including:
      - changes due to individual and group activity in the environment
      - changes that result from human construction (e.g., roads, buildings)
      - changes that result from extraction or harvesting of natural resources
      - changes that result from addition of materials to environments.

4. Students will demonstrate understanding of the air, water and soil cycles by identifying and describing examples of the following concepts:

a. The materials that make up living things are recycled continuously.
   - All living things eventually die and are recycled.
   - All living things produce wastes.
   - These wastes become part of the environment.
   - Humans play a major role in the generation of wastes.
     – The explosive growth of human-generated wastes has resulted from application of recent technologies and lifestyles.
     – The ability of natural systems to recycle human-generated wastes is limited by the form of these wastes, by their quantity and by the rates at which natural systems can recycle materials.

b. Air, water and soil are important media for the exchange of materials between living and non-living systems.
   - Soil plays a major role in recycling materials.
   - The water cycle provides a source of water for living things and a medium for exchange of materials and gases.
   - The balance of carbon dioxide and oxygen in the atmosphere is linked to the life processes of plants and animals.

5. Students will demonstrate the understanding that the sun is the primary source of energy on earth, by identifying and describing examples of the following concepts:

   a. The sun is the source of energy for all biological processes.
      - Plants have the ability to capture and convert the sun's energy into biologically useful materials.
      - Sunlight energy is stored by living things.
      - Sunlight energy flows through food chains from producers to consumers to decomposers.

   b. Sunlight energy powers non-living processes on the earth, including the air, water and soil cycles.

Outdoor Expeditions

Students will demonstrate skill, judgment, confidence and sensitivity through participation in a wide range of environmentally responsible activities in outdoor settings.

1. Students will demonstrate skill and judgment while participating in outdoor expeditions.

   a. Students will apply trip preparation skills developed in the Outdoor Core to the level required for their outdoor expeditions by applying skills such as en route organization, hazard evaluation, emergency response, and personal and group hygiene.

   b. Students will apply environmentally responsible outdoor living and travelling skills in an expedition setting by demonstrating use of personal and group gear, food preparation skills, route finding skills, travelling skills required for an expedition (e.g., canoeing, cycling, skiing) and minimum impact camping skills.

   c. Students will make use of their skills and make reasonable judgments in selecting and carrying out activities relative to their skill levels and the hazards involved.
      - Students will consider physical hazards such as terrain, plants and animals, and weather.
      - Students will consider physiological hazards such as hypothermia, frostbite and dehydration.

2. Students will demonstrate a positive self-concept and an appropriate regard for others in outdoor activities by:

   a. Establishing and addressing personal goals and challenges within the context of an outdoor expedition.

   b. Being aware of their feelings, beliefs and expectations regarding their outdoor experiences.

c. Being aware of and concerned about the needs, wants and welfare of others.

3. Students will demonstrate the development of skills in group problem solving, group living and group activities.

   a. Students will demonstrate the development of skills in group decision making and problem solving.
      - Students will participate and contribute to group decision making.
      - Students will lend support to the consensus-finding process within group decision making.
      - Students will demonstrate an ability to recognize decisions that must be based on expertise or on designated group rules.

   b. Students will demonstrate skills in group activities in an outdoor setting.
      - Students will demonstrate skill in co-operative outdoor living activities (e.g., activities related to food and shelter).
      - Students will demonstrate skill in co-operative group recreational activities (e.g., group action in overcoming obstacles, and cooperative action with a partner).

4. Students will demonstrate positive regard for environments and demonstrate environmentally responsible outdoor judgment and skill in carrying out activities.

   a. Students will develop an esthetic appreciation for the environments they visit.

   b. Students will identify potential impacts of their activities on environments.

   c. Students will select environmentally appropriate approaches to carrying out outdoor activities.

Environmental Investigations

Students will develop knowledge and skills by investigating the effects of human lifestyles on environments.

1. Students will develop skill in environmental investigations.

   a. Students will demonstrate initiative and insight in identifying questions for investigation, by:
      - asking questions
      - identifying problems and issues.

   b. Students will identify alternatives associated with environmental problems and issues studied.

   c. Students will demonstrate skill in researching questions, problems and issues, by:
      - examining background information
      - identifying perspectives on each alternative
      - identifying consequences of each alternative.

2. Students will identify strategies for responding to environmental concerns at the local, regional and global level.

   a. Students will recognize the needs for co-operative action and decision making.

   b. Students will be aware of public policy, practices and regulations in Alberta that may help support conservation of the province's resources.

   c. Students will be aware of public policy, practices and regulations in the global community that may help support conservation of the earth's resources.

   d. Students will understand the following principles of conservation:
      - sustained yield
      - maintenance of life-supporting environments
      - maintenance of species diversity.

Commitment to Action

Students will develop lifestyle strategies that foster contact with the natural world, demonstrate responsibility for local and global environments and encourage living in harmony with others.

1. Students will incorporate outdoor recreation activities as part of a healthy personal lifestyle.

2. Students will demonstrate appreciation of environments through respectful and considerate use of those environments.

3. Students will develop and act on plans that demonstrate responsibility for local and global environments.

    a. Students will recognize and reflect on the impact of their lifestyles on environments.

    b. Students will make responsible choices in selecting from alternative actions that may affect environments.

    c. Students will develop and act on plans to minimize their negative impact on environments.

    d. Students will identify and act on opportunities in their communities to take action that may lead to positive impacts on local, regional, national or global environments.

    e. Students will develop skills necessary to implement effective action (e.g., researching, listening, speaking and presentation skills).

4. Students will develop and act on plans that will make personal growth a lifelong process.

    a. Students will make realistic assessments of their outdoor skills and strive to improve those skills in areas of personal interest and enjoyment.

    b. Students will recognize limitations in their knowledge of environments and actively strive to improve that knowledge.

    c. Students will develop and act on plans to improve themselves as part of an expanding, harmonious relationship with the world.

    d. Students will evaluate their actions within environments and plan future actions based on their past and present experience.