

# SOME OPPORTUNITIES FOR STUDENT ACTION IN THE ALBERTA CURRICULUM

The following text is extracted directly from existing documents of the Alberta government (Programs of Studies, etc.). these selections are meant to be examples of what is possible, and not a comprehensive list.

## Mission of Alberta Education

Alberta Learning, through its leadership and work with stakeholders, ensures that learners are prepared for lifelong learning, work and citizenship so they are able to contribute to a democratic, knowledge-based and prosperous society.

Student learning outcomes include:

- Research an issue thoroughly, and evaluate the credibility and reliability of information sources
- Demonstrate critical and creative thinking skills in problem solving and decision making
- Know how to work independently and as part of a team

## Elementary Science

From the introductory section:

Curriculum's emphasis is on science inquiry and problem solving using technology. The following attitudes are prescribed for all grades:

- Appreciation of the benefits gained from shared effort and cooperation
- A sense of responsibility for personal and group actions
- Respect for living things and environments, and commitment for their care.

Knowledge: Some specific learner expectations:

### **Grade 3, Topic E: Animal Life Cycles**

*Students will:*

8. Identify examples of environmental conditions that may threaten animal survival, and identify examples of extinct animals

9. Recognize that habitat preservation can help maintain animal populations, and identify ways that student actions can assist habitat preservation
10. Demonstrate knowledge of the needs of animals studied, and demonstrate skills for their care.

#### ***Grade 4, Topic A: Waste and our World***

*Students will:*

11. Identify actions that individuals and groups can take to minimize the production of wastes, to recycle or reuse wastes and to ensure the safe handling and disposal of wastes.
12. Develop and implement a plan to reduce waste, and monitor what happens over a period of time.

#### ***Grade 5, Topic D: Weather Watch***

*Students will:*

12. Recognize that human actions can affect climate, and identify human actions that have been linked to the greenhouse effect

#### ***Grade 5, Topic E: Wetland Ecosystems***

*Students will:*

9. Identify human actions that can threaten the abundance or survival of living things in wetland ecosystems; eg. adding pollutants, changing the flow of water, trapping or hunting pond wildlife
10. Identify individual and group actions that can be taken to preserve and enhance wetland habitats.

#### ***Grade 6, Topic E: Trees and Forests***

*Students will:*

9. Identify human actions that enhance or threaten the existence of forests.
10. Identify an issue regarding forest use, identify different perspectives on that issue, and identify actions that might be taken.

## **Junior High Science**

From the introductory sections:

All four Science foundations support action activities:

***Foundation 1: Science, Technology and Society (STS)*** – Students will develop an understanding of the nature of science and technology, the relationships between science and technology, and the social and environmental contexts of science and technology.

**Foundation 2: Knowledge** – Students will construct knowledge and understandings of concepts in life science, physical science and Earth and space science, and apply these understandings to interpret, integrate and extend their knowledge.

**Foundation 3: Skills** – Students will develop the skills required for scientific and technological inquiry, for solving problems, for communicating scientific ideas and results, for working collaboratively and for making informed decisions.

**Foundation 4: Attitudes** – Students will be encouraged to develop attitudes that support the responsible acquisition and application of scientific and technological knowledge to the mutual benefit of self, society and the environment.

**Skills:** Each grade contains a unit that focuses on Developing a Social and Environmental Emphasis (Grades 7-9). Skills (which focus on research and inquiry skills to inform the decision-making process) include:

*Initiating and Planning:*

- Identify science-related issues
- Identify questions to investigate arising from science-related issues.

*Communication and Teamwork:*

- Work cooperatively with team members to develop and carry out a plan and troubleshoot problems as they arise
- Defend a given position on an issue, based on findings
- Evaluate processes used to investigate an issue and evaluate alternative decisions.

**Knowledge:** Some specific learner outcomes

The following Specific Learner Outcomes can be found in this curriculum:

**Grade 7, Unit A: Interactions and Ecosystems**

*Students will:*

4. Describe the relationships among knowledge, decisions and actions in maintaining life-supporting environments.

**Grade 8, Unit E: Freshwater and Saltwater Systems**

*Students will:*

4. Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues

## **Grade 9, Unit A: Biological Diversity**

*Students will:*

4. Identify impacts of human action on species survival and variation within species, and analyze related issues for personal and public decision making

## **High School Science**

### **Example: Bio 20-30**

**Goals:** Biology 20-30 is an academic program that...develops in students the knowledge, skills and attitudes to help them become capable of, and committed to, setting goals, making informed choices and acting in ways that will improve their own lives and life in their communities.

*Students will be expected to demonstrate an understanding of...*

- The ability and responsibility of society, through science and technology, to protect the environment and use natural resources judiciously to ensure quality of life for future generations.

## **Social Studies, K-12**

The Social Studies curriculum is replete with support for education about, through, and for action...

### **Values and Attitudes**

Students will demonstrate a consciousness for the limits of the natural environment, stewardship for the land and an understanding of the principles of sustainability relationships with the natural environment.

### **Knowledge and Understanding**

Social studies provides learning opportunities for students to:

- Understand their rights and responsibilities in order to make informed decisions and participate fully in society
- Apply historical and geographic skills to bring meaning to issues and events.

### **Skills and Processes**

Social studies provides learning opportunities for students to:

- Engage in active inquiry and critical and creative thinking
- Engage in problem-solving and conflict resolution with an awareness of the ethical consequences of decision-making.

### **Core concepts of Citizenship**

The goal of social studies is to provide learning opportunities for students to:

- Understand the principles underlying a democratic society
- Demonstrate a critical understanding of individual and collective rights
- Understand the commitment required to ensure the vitality and sustainability of their changing communities at the local, provincial, and national levels.

### **An Issues-focused approach to teaching Social Studies: Controversial Issues**

Opportunities to deal with controversial issues are an integral part of social studies education in Alberta. Studying controversial issues is important in preparing students to participate responsibly in a democratic and pluralistic society. Such study provides opportunities to develop the ability to think clearly, to reason logically, to open-mindedly and respectfully examine different points of view and to make sound judgments. Controversial issues...should be used by the teacher to promote critical inquiry rather than advocacy and to teach students how to think rather than what to think.

### **Power, Authority and Decision Making (one of the six strands of Social Studies)**

Examining the concepts of power, authority and decision making from multiple perspectives helps students consider how these concepts impact individuals, relationships, communities and nations...A critical examination of the distribution, exercise and implications of power and authority is the focus of this strand. Students will examine governmental and political structures, justice and laws, fairness and equity, conflict and cooperation, decision-making processes, leadership and governance. This examination develops a student's understanding of the individual's capacity in decision-making processes and promotes active and responsible citizenship.