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Noting that parents are vital partners in the educational system, this handbook provides parents with information about the Grade 4 curriculum in Alberta, Canada. Based on the Alberta Learning "Programs of Study: Elementary Schools," the handbook describes the knowledge, skills, and attitudes students in Alberta are expected to demonstrate upon completion of the Grade 4 curriculum. Following introductory material that includes information on Aboriginal education, supports for learning, and assessment, the handbook's sections are: (1) "Overview of Grade 4"; (2) "English Language Arts"; (3) "Mathematics"; (4) "Science"; (5) "Social Studies"; (6) "Information and Communication Technology"; (7) "Physical Education"; (8) "Health and Life Skills"; (9) "Art and Music"; (10) "Drama"; and (11) "Languages Other Than English." Each section includes samples of what students are expected to learn in each subject. The handbook concludes with a one-page questionnaire requesting feedback on the handbook. (HTH)
This document, along with most Alberta Learning documents, can be found on the Web site at http://www.learning.gov.ab.ca.

Parent documents referenced in this handbook, along with most Alberta Learning documents, are available for purchase from:

Learning Resources Centre
12360 – 142 Street
Edmonton, Alberta, Canada, T5L 4X9
Telephone: 780-427-5775
Fax: 780-422-9750
Internet: http://www.lrc.learning.gov.ab.ca

Telephone numbers of branches referred to in this handbook can be reached, toll free inside Alberta, by dialing 310-0000.

Aboriginal Services Branch
Telephone: 780-415-9300
Fax: 780-415-9306
E-mail: asb@gov.ab.ca

Curriculum Branch
Telephone: 780-427-2984
Fax: 780-422-3745
E-mail: curric.contact@learning.gov.ab.ca

French Language Services Branch
Telephone: 780-427-2940
Fax: 780-422-1947
E-mail: LSB@learning.gov.ab.ca

Learning and Teaching Resources Branch
Telephone: 780-427-2984
Fax: 780-422-0576
E-mail: curric.contact@learning.gov.ab.ca

Learning Technologies Branch
Telephone: 780-674-5350
Fax: 780-674-6561
E-mail: ltbgeneral@gov.ab.ca

Special Programs Branch
Telephone: 780-422-6326
Fax: 780-422-2039
E-mail: SpecialEd@learning.gov.ab.ca

Learner Assessment Branch
Telephone: 780-427-0010
Fax: 780-422-4200
E-mail: assess.contact@learning.gov.ab.ca

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Curriculum Handbook

for Parents

2003–2004

GRADE 4

This Curriculum Handbook provides parents with information about the Grade 4 curriculum. It includes:

- selected learning outcomes for each subject area from the provincial curriculum
- links to the Alberta Learning Web site where more information can be found
- a feedback form.
# Table of Contents

Message from the Minister of Learning ........................................ iii
Information for Parents .......................................................... iv
  Schooling in Alberta ......................................................... iv
  Helping Your Child at Home ............................................... v
  School Councils .................................................................. v
  School Fees and Fundraising .............................................. v
  Alternative Programs ............................................................ vi
Information about Curriculum ................................................ vi
  Accessing Information ........................................................ vi
  Curriculum Content—Deciding What Students Should Learn ...... vii
  Curriculum Development—Who Is Involved in the Process? ...... vii
  Ensuring Curriculum Is Current ........................................ vii
  Revising Curriculum ........................................................ viii
  Implementing Curriculum ................................................... viii
Aboriginal Education .............................................................. ix
Personal and Career Development ........................................... ix
Supports for Learning ............................................................ x
  English as a Second Language ........................................... x
  Special Needs ................................................................ x
  Distance and Online Learning .......................................... xi
Assessment ......................................................................... xii
  Assessing Student Achievement ...................................... xii
Overview of Grade 4 .............................................................. 1
Required Subject Areas ........................................................ 2
  English Language Arts ...................................................... 2
  Mathematics ................................................................ 4
  Science ........................................................................ 5
  Social Studies ............................................................... 6
  Information and Communication Technology .................. 7
  Physical Education .......................................................... 8
  Health and Life Skills ....................................................... 10
  Art and Music ................................................................ 11
Optional Subject Areas ........................................................ 12
  Drama .......................................................................... 12
  Languages Other than English ........................................ 12
Feedback Form ..................................................................... 15
Message from the
Minister of Learning

Excellence in education is of primary importance to Albertans. Parents, students, teachers and community members have demonstrated their passion for maintaining our outstanding education system for the benefit of today's students and future generations.

The Government of Alberta is committed to continuing to provide Alberta's students with a first-class education. One of the many ways of ensuring Alberta's students succeed in our global community is through our high quality curriculum. Alberta's curriculum is innovative and responsive to the learning needs of students. It ensures that students have the opportunity to acquire the knowledge, skills and attitudes needed to be self-reliant, responsible, caring and contributing members of society.

As a parent, you play a vital role in the education of your child. When you know what your child is learning in school, you are able to reinforce that learning at home. In order to help support parents in this process, Alberta Learning has published the Curriculum Handbook for Parents series. As partners in education, this resource provides you with valuable information about the learning goals that have been set for students. I encourage you to discuss the contents of the Curriculum Handbook for Parents with your child's teacher, who can provide further information and guidance.

It is vital that all partners in education—including parents, teachers, principals, superintendents, trustees and other members of our community—work collaboratively to ensure we continually meet the needs of students in our ever-changing world. Together, we can continue to ensure that every student has a solid foundation from which to learn, grow and succeed.

Dr. Lyle Oberg
Minister of Learning
Information for Parents

Web site links for further information are provided throughout the handbook.

Schooling in Alberta

Students learn in a variety of environments—in their homes, schools and communities. Parents, teachers and community members form a partnership to assist this learning.

When parents know what children are studying at school, they can provide better home support for their children’s learning. The Curriculum Handbooks for Parents have been designed to assist parents in participating in their child’s education by fostering an understanding of what students learn at each grade level.

Schools provide students with a broad educational program that helps them:
- develop knowledge, skills and attitudes in a variety of subject areas
- demonstrate critical and creative thinking skills in problem solving and decision making
- demonstrate competence in using information technologies
- know how to learn and work independently and as part of a team
- develop desirable personal characteristics and the ability to make ethical decisions
- demonstrate initiative, leadership, flexibility and persistence
- have the desire and realize the need for lifelong learning.

Schools also prepare students to make positive contributions to society through communities, the workplace and/or post-secondary studies.

Teachers make a number of decisions when planning for classroom instruction. Within any group of students, there is a range of individual differences. Teachers use the learning outcomes of the provincial curriculum to meet the needs and interests of their students and to make connections across subject areas. They choose resources, equipment and materials to help students achieve the learning outcomes. Teaching methods and schedules vary from school to school and from class to class to meet the diverse learning needs of students.

Alberta Learning assists teachers by reviewing and selecting the best possible resources, such as textbooks, videotapes and computer software, for all subject areas. Authorization of resources by Alberta Learning indicates that the resources meet high standards and can help students achieve the learning outcomes. Teachers can choose other resources, as long as they follow school board policy.

Authorized resources are available for purchase from the Learning Resources Centre (LRC).

http://www.lrc.learning.gov.ab.ca
Helping Your Child at Home

Here are some important pointers for you to help your child learn.

- Be positive and encouraging in your approach to learning. It will help your child feel confident and enthusiastic about success.
- Talk to your child about schoolwork, and help with homework when you can.
- Help your child set realistic goals, and discuss progress in an encouraging way.
- Connect your child's schoolwork with everyday life, and use these opportunities for problem solving in everyday situations.
- Keep in touch with teachers about your child's progress, including successes and achievements, not just concerns.

The following resources may help you. Check your child's school for availability.

- **The Parent Advantage**—Tips and strategies for helping with homework in grades 1 through 9.
- **Working Together in Mathematics Education**—Ways parents can support student learning in mathematics.
- **LearnAlberta.ca** Web site—Online multimedia learning resources that directly relate to the Alberta programs of study.
- **TELUS 2Learn** Web site—An education-business partnership that provides Internet inservice, support and information for Alberta teachers, students and parents.

School Councils

Schools, parents and communities all play an important role in education. School councils are designed to give parents, students, teachers and other community members meaningful involvement in decisions about policies, programs and services and the allocation of funds to support them within their schools. Each school council determines its own level of involvement, depending on local needs. Parents can get more information on how to get involved by contacting their local school or the Alberta Home and School Councils Association (AHSCA).

School Fees and Fundraising

Decisions regarding school fees and fundraising are made by the local board or by the school principal in consultation with the school council within policy guidelines established by the school board. In September 2000, the Alberta School Boards Association (ASBA) developed and provided guidelines to school boards to assist boards in establishing appropriate local policy.

**School Fees**

A primary objective is to ensure that fees are not being charged for core items. Fees may be charged for supplies and materials provided for the student's personal use or consumption; this may include such things as calculators, locker rentals, student planners and computer diskettes. The fees charged are on a cost recovery basis.

Local policies may include a provision to waive fees or extend payment allowances where parents are experiencing financial difficulties.
Fundraising

The guidelines state fundraising should not be done for core items such as textbooks. Some fundraising is appropriate for things like athletics uniforms, field trips, and other extras that staff and parents want for their schools. Participation in fundraising activities should be voluntary. No student should be excluded from an event or program because the parents did not contribute.

Alternative Programs

Choice is one of the important principles Alberta's education system is built on. When it comes to selecting a school, parents and students can choose from a wide range of options. They can select from public schools, Catholic schools, Francophone schools, private schools, and charter schools. They can also access a number of unique and innovative programs—including virtual schools. Parents can also opt to home school their children.

Information about Curriculum

Alberta has one of the best education systems in the world. One of the many reasons is a centralized, high quality curriculum that outlines what students are expected to learn and be able to do, in all subjects and grades. Alberta's curriculum is designed to help students achieve their individual potential and create a positive future for themselves, their families and their communities.

Accessing Information

Parents can access information about the curriculum and learning resources in a number of ways:

- Contact teachers or school administrators.
- Curriculum Handbooks contain selected outcomes for each subject area from the Alberta programs of study. They provide a more detailed picture of each year. This Curriculum Handbook is one of a set from Kindergarten to senior high school produced in general and Catholic versions, and in French. They are available on the Alberta Learning Web site or for purchase from the LRC.
- Curriculum Summaries for each grade level provide a brief overview of each year. The summaries are available on the Alberta Learning Web site.
- In Alberta, the provincial curriculum is organized into Programs of Study. They contain learning outcomes for each subject area from Kindergarten to Grade 12. They are legal documents that outline why the educational program is offered, what students are expected to learn and the basic principles about how students are to achieve the required knowledge, skills and attitudes. School jurisdictions use the Programs of Study to ensure that students meet provincial standards of achievement. However, they have flexibility to decide how to teach the curriculum and the order in which it is taught. They are available on the Alberta Learning Web site or for purchase from the LRC.
The Authorized Resources Database on the Alberta Learning Web site lists Alberta authorized student and teacher resources, most of which are available for purchase from the LRC.

The Alberta Learning Web site contains information on learning from the early years to adulthood.

Curriculum Content—Deciding What Students Should Learn

The Alberta curriculum strives to:

- reflect the essential knowledge, skills and attitudes that Alberta students need to be well prepared for future learning and the world of work
- anticipate and plan for the needs of the future by considering the changes and developments in society such as trends in employment, globalization and advances in technology
- incorporate values of good citizenship and respect for different languages and cultures
- consider students' needs and abilities—intellectual, social, emotional and physical—at different ages and stages of growth
- ensure that each grade provides a foundation of knowledge for successful learning in subsequent years
- incorporate new discoveries and theories that are generally accepted by experts in subject areas
- develop skills that are necessary for success in learning a subject
- consider new research on proven teaching methods and how students learn best
- reflect the most appropriate level at which the skills are to be acquired
- integrate how the study of a subject contributes to student personal growth and development
- accommodate learning in different environments
- consider various ways of delivering a program to students, including new technologies and use of community resources such as distance learning and workplace learning.

Curriculum Development—Who Is Involved in the Process?

Alberta Learning takes a lead role in developing and revising provincial curriculum. However, many others, including teachers, principals, parents, education experts, post-secondary institutions and community members, play a vital role in the process. Input from various stakeholders ensures that curriculum continually meets the needs of students and that there are smooth transitions from grade to grade and to post-secondary education and the world of work.

Ensuring Curriculum Is Current

Curriculum must provide students with the knowledge and skills needed for the present and future. It is reviewed regularly and changes are made to keep it current and relevant. Curriculum revisions occur only after extensive consultations with education stakeholders.

Alberta Learning plans any curriculum changes well in advance to minimize any impact on schools, teachers and students. This ensures that school jurisdictions have sufficient time to prepare for the changes and purchase any needed resources.
Revising Curriculum

If it is determined through the regular review process that there is a need to make minor or major revisions to a subject area in the curriculum, education stakeholders play a major role in the process. Alberta Learning conducts initial consultations and prepares a draft Program of Studies for that subject area. The draft is shared with a wide variety of education stakeholders through advisory committees, online feedback forms, conferences and presentations to teacher specialist councils. Teachers play a vital role in the process. They use their practical knowledge about a subject and about students' needs at specific age levels to provide input and feedback during the process.

Implementing Curriculum

The draft Program of Studies, developed in consultation with education stakeholders, is referred to the Minister of Learning for approval. Once approved, school jurisdictions take primary responsibility for curriculum implementation. Schools may have the opportunity to pilot the program for one year prior to full provincial implementation. This transition year gives schools time to prepare for the new curriculum. When a curriculum is implemented province-wide, all schools must teach the new curriculum.

Alberta Learning supports school jurisdictions by producing teacher resources that provide ideas for lesson planning, instructional strategies and student assessment. Also, it provides orientation for school jurisdiction leaders and lead teachers about curriculum changes and shares updates at professional conferences and in-services.

Professional development funds are provided to six Alberta Regional Professional Development Consortia. Each Regional Consortium organizes and provides activities to respond to in-service needs identified locally. This may include information and orientation sessions related to curriculum revisions.

Alberta Learning also provides funding to help schools purchase learning and teaching resources through the Learning Resources Centre. These resources are designed specifically to support the provincial curriculum.
Aboriginal Education

Aboriginal peoples throughout the province have indicated that they want their children to complete regular school requirements and achieve the same standards as set for all students in Alberta.

http://www.learning.gov.ab.c.../aborigindefault.asp

The term "Aboriginal" refers to First Nations, Métis and Inuit. To support the learning of Aboriginal students, schools are encouraged to use learning resources that give attention to Aboriginal heritage perspectives. In addition, all students in Alberta should understand and be aware of Aboriginal cultures, lifestyles and heritage. Student and teacher resources have been developed by Alberta Learning to assist teachers.

Both provincially and locally authorized Blackfoot and Cree language and culture courses are offered in the province.

Personal and Career Development

Preparing for life and work is a complex process that begins in the early years of schooling and continues throughout our lives. Alberta schools are taking an active role—along with parents and the community—in helping students move successfully from basic education to further studies and the workplace.

In the elementary grades, students explore their personal interests and values, and learn about different roles and career areas. They also begin to develop life skills, such as cooperating with others and being reliable.

Personal and career development activities and outcomes are integrated into all elementary courses and programs. In particular, the elementary health program focuses specifically on these topics.
Supports for Learning

In every classroom and every school, students have individual needs. Teachers ensure that all students are involved in activities that help them build on their own level of learning.

Alberta students learn in a variety of ways—in schools, in the community, in small and large groups, and independently. Schools, supported by Alberta Learning, provide a variety of programs and services.

English as a Second Language


Many children born in Canada have a first language other than English, and many students move here from non-English speaking countries. Schools provide additional assistance for English as a Second Language (ESL) students in Grade 1 to Grade 12. This helps them acquire sufficient fluency in English so they can integrate into the regular classroom as quickly as possible.

Special Needs

http://www.learning.gov.ab.ca/k_12/curriculum/subject/Special_needs/

The School Act specifies that school boards are responsible for determining if a child is in need of a special education program. Children with special needs, including those with mild, moderate and severe disabilities, and those who are gifted and talented, require specialized learning opportunities in order to receive an education that is consistent with their identified learning needs. School boards must provide programming for all school-age children, including children with special needs, who live in their district.

Children with special needs may require changes to: instruction, assessment strategies, materials and resources, classroom environment, equipment and/or the regular curriculum. In addition, some students may require referral to specialized health-care services.

For more information on a Review by the Minister, contact the Disputes Management Team Leader at 780-427-7235 or see Policy 3.51—Review by the Minister


Most children with special needs are placed in regular classrooms in their neighbourhood or local schools, and are provided with programming, supports and services to meet their individual needs throughout the school day. There are a range of placement options possible; different children need different kinds of support. Deciding on the educational placement for an individual child is a collaborative process, and in most instances, parents and school staff agree on appropriate placements. If there is a disagreement, parents can appeal a decision at the district level. The school principal can provide information on the appeal procedure in your district. If parents do not agree with the decision of an appeal to the school board, they may write to the Minister of Learning and ask for a review of the board decision.

All students with identified special needs require an individualized program plan (IPP). An IPP is a plan of action with measurable goals. It shows what your child knows and what he or she can do. The IPP also explains what your child will be learning and how he or she will be learning. The IPP is a flexible tool that is updated regularly. Parents, school staff and the student need to work together as a learning team to ensure that the IPP is implemented.
School staff will likely identify if your child is having learning difficulties and will have discussed with you what might be causing these difficulties. If you feel your child is having difficulty learning, you should talk to the classroom teacher to share knowledge about your child that could assist in determining the cause of these difficulties and in deciding if there are any small changes that can be made that would improve the situation. School-based staff can use a number of informal ways to identify learning needs. If it is apparent that school-based strategies are not enough, the teacher, in consultation with parents, will make a referral for a specialized assessment. Your child's teacher or the school principal will have information on the assessment procedures for your area.

The following resources provide additional information.

- **Standards for Special Education** (2002)—Information on the requirements for school boards regarding delivery of education programs and services to students with special needs in grades 1–12
- **A Handbook for Aboriginal Parents of Children with Special Needs** (2000)—Information for Aboriginal parents about rights and responsibilities regarding the education of their children with special needs
- **The Parent Advantage: Helping Children Become More Successful Learners at Home and School, Grades 1–9** (1998)—Strategies for teaching organizational, reading, writing, spelling, mathematical, test taking and project skills at the grades 1–9 levels
- **Make School Work for You: A Resource for Junior and Senior High Students Who Want to be More Successful Learners** (2001)—Information on knowing yourself, getting organized, making every class count, test taking, presenting learning, getting along with others and staying motivated

**Distance and Online Learning**

The Learning Technologies Branch (LTB) develops course materials and learning objects for distance and online learning.

For information about purchasing distance learning print and CD materials, contact the Learning Resources Centre.

For a listing of all print distance learning courses available for purchase or study, visit the LTB Print Resources Web page.

To see the electronic products available, visit the Electronic Resources Web page.
LearnAlberta.ca provides exciting new online educational content to students, parents and teachers. Check out multimedia material for courses, such as Grade 6 Mathematics. Access the Online Reference Centre for a wide variety of research tools, such as encyclopedias, dictionaries and other reference works for all grade levels.

For information about registering in a distance learning course, contact a distance learning school, an online school, or your local school jurisdiction.

The French Language Services Branch develops distance learning courses for French language instruction. For courses available in French, contact the French Language Services Branch.

Assessment

Assessing Student Achievement

In the classroom, a teacher uses a variety of means to assess students' learning throughout the school year. These assessments are based on the instruction being provided, in order to inform the teacher's planning from day to day. Classroom assessment may serve a diagnostic purpose, indicating students' strengths and weaknesses in specific skill areas. At other times it may be formative, indicating how well students have achieved in a unit of study or how well they have achieved to a particular point in the course. At the end of a school year, a teacher also assesses how well the students have achieved the expected learning outcomes in the curriculum for that grade. This summative type of assessment is designed primarily for reporting purposes. All these classroom assessments are integral to instruction, and they are complemented by the provincial achievement tests.
Overview of Grade 4

In Grade 4, students study required subject areas. Optional subject areas may be available at the local school. Students have access to 950 hours of instruction during a school year.

The Grade 4 Alberta program of studies for each subject area sets out general outcomes or topics that provide an overview of the important learnings students accomplish. Specific outcomes are included for each general outcome or topic and state in detail the knowledge, skills and attitudes students are working towards achieving.

This handbook contains:
- the general outcomes or topics for each subject area
- selected specific outcomes for most subject areas.

The programs of study, which include all the general and specific outcomes, are available on the Alberta Learning Web site or from the LRC.

<table>
<thead>
<tr>
<th>Required Subject Areas. Students take:</th>
</tr>
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<tbody>
<tr>
<td>English Language Arts</td>
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<td>Information and Communication Technology (ICT) is integrated throughout English Language Arts, Mathematics, Science and Social Studies.</td>
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</table>

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<tr>
<th>Optional Subject Areas. Schools may offer:</th>
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<tbody>
<tr>
<td>Drama</td>
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* Students in French immersion programs and bilingual programs in other languages take English language arts as well as language arts in the target language.

Students in immersion and bilingual programs also take a number of subjects in the target language.

New programs for the 2003-2004 school year:
- Ukrainian Language Arts

Programs under development:
- Cree Language and Culture
- French as a Second Language
- German Language Arts
- Italian Language and Culture
- Social Studies
**Required Subject Areas**

The required subject areas are the foundation of the elementary program.

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</table>

**English Language Arts**

The aim of the English language arts program is to enable students to understand and appreciate language, and to use it confidently and competently in a variety of situations for communication, personal satisfaction and learning.

From Kindergarten to Grade 12, students are developing knowledge, skills and attitudes in six language arts: Listening and Speaking; Reading and Writing; Viewing and Representing. Students learn to compose, comprehend and respond to oral, print and other media texts. They experience a variety of texts from many cultural traditions.

The following learning outcomes are selected from the Grade 4 English Language Arts Program of Studies.

**Explore thoughts, ideas, feelings and experiences**

- ask questions, paraphrase and discuss to explore ideas and understand new concepts
- identify areas of personal accomplishment and areas for enhancement in language learning and use
- identify other perspectives by exploring a variety of ideas, opinions, responses and oral, print and other media texts
- use talk, notes, personal writing and representing to record and reflect on ideas, information and experiences

**Comprehend and respond personally and critically to oral, print and other media texts**

- use ideas and concepts, developed through personal interests, experiences and discussion, to understand new ideas and information
- extend sight vocabulary to include words frequently used in other subject areas
- integrate knowledge of phonics and sight vocabulary with knowledge of language and context clues to read unfamiliar words in context
- identify the main events in oral, print and other media texts; explain their causes, and describe how they influence subsequent events
- identify and explain connections among events, setting and main characters in oral, print and other media texts
- produce oral, print and other media texts that follow a logical sequence, and demonstrate clear relationships between character and plot
Manage ideas and information

- use organizational patterns of expository texts to understand ideas and information
- ask relevant questions, and respond to questions related to particular topics
- identify information sources that inform, persuade or entertain, and use such sources appropriately
- make notes of key words, phrases and images by subtopics; cite titles and authors of sources alphabetically
- communicate ideas and information in a variety of oral, print and other media texts, such as short reports, talks and posters
- identify strengths and areas for improvement in research process

Enhance the clarity and artistry of communication

- revise to ensure an understandable progression of ideas and information
- write legibly, using a style that demonstrates awareness of alignment, shape and slant
- use special features of software when composing, formatting and revising texts
- identify past, present and future action
- identify and apply common spelling generalizations in own writing
- present to peers ideas and information on a topic of interest, in a well-organized form
- add interest to presentations through the use of props, such as pictures, overheads and artifacts
- give constructive feedback, ask relevant questions, and express related opinions in response to oral and visual presentations

Respect, support and collaborate with others

- identify and discuss main characters, plots, settings and illustrations in oral, print and other media texts from diverse cultures and communities
- identify and discuss differences in language use in a variety of school and community contexts
- ask for and provide information and assistance, as appropriate, for completing individual and group tasks
- use brainstorming, summarizing and reporting to organize and carry out group projects
- assess group process, using established criteria, and determine areas for improvement
Required Subject Areas. **Students take:**

<table>
<thead>
<tr>
<th>English Language Arts</th>
<th>Mathematics</th>
<th>Science</th>
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</table>

Information and Communication Technology (ICT) is integrated throughout English Language Arts, Mathematics, Science and Social Studies.

**Mathematics**

The aim of the mathematics program is to prepare students to:

- use mathematics confidently to solve problems
- communicate and reason mathematically
- appreciate and value mathematics
- commit themselves to lifelong learning
- become mathematically literate adults, using mathematics to contribute to society.

Students learn to use the following mathematical processes:

- communicate mathematically
- connect mathematical ideas to everyday experiences and to other subject areas
- use estimation and mental mathematics where appropriate
- apply new mathematical knowledge to problem solving
- reason and justify their thinking
- use appropriate technologies
- use visualization to assist in problem solving, processing information and making connections.

The following learning outcomes are selected from the Grade 4 Mathematics Program of Studies.

**Number**

- demonstrate a number sense for whole numbers 0 to 10 000, and explore proper fractions
- apply arithmetic operations on whole numbers, and illustrate their use in creating and solving problems
- use and justify an appropriate calculation strategy or technology to solve problems
- demonstrate an understanding of addition and subtraction of decimals

**Patterns and Relations**

- investigate, establish and communicate rules for, and predictions from, numerical and non-numerical patterns, including those found in the community

**Shape and Space**

- estimate, measure and compare, using decimal numbers and standard units of measure
- describe, classify, construct and relate 3-D objects and 2-D shapes, using mathematical vocabulary
- use numbers and direction words to describe the relative positions of objects in two dimensions, using everyday contexts

**Statistics and Probability**

- collect first- and second-hand data, assess and validate the collection process, and graph the data
- design and use simple probability experiments to explain outcomes
### Science


The aim of the science program is to encourage and stimulate children’s learning by nurturing their sense of wonderment, by developing skill and confidence in investigating their surroundings, and by building a foundation of experience and understanding upon which later learning can be based. In elementary science, students develop their skills of inquiry and problem solving. They are also developing positive attitudes toward the study of science and the application of science in responsible ways.

The following learning outcomes are selected from the Grade 4 Science Program of Studies.

**Waste and Our World**
- identify wastes produced within their community and learn the methods used for disposal
- learn that some waste materials are biodegradable, that some are reusable, and that others are toxic
- recognize that human activity can lead to the production of wastes

**Wheels and Levers**
- examine how simple machines are used to change the speed or force of movement
- demonstrate a practical understanding of wheels, gears and levers by constructing devices in which energy is transferred to produce motion

**Building Devices and Vehicles that Move**
- learn that different forms of energy can be used to propel model devices
- construct a mechanical device for a designated purpose, using materials and design suggestions provided
- learn to evaluate their work, by describing the effectiveness of the device and the appropriateness of materials used

**Light and Shadows**
- discover that light and shadows fall along a predictable path by observing shadows and their motions relative to a light source
- discover that mirrors, prisms and a variety of other materials can affect that path by reflecting and refracting light and by splitting light into colours
- identify sources of light, describe the interaction of light with different materials, and infer the pathway of a light beam

**Plant Growth and Changes**
- learn various ways of starting new plants and the plants’ requirements for growth
- learn that different plants have different needs, and, through hands-on activities, gain skills and attitudes for their care
- demonstrate knowledge and skills for the study, interpretation, propagation and enhancement of plant growth
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### Social Studies

The aim of the social studies program is to help students develop the knowledge, skills and positive attitudes they need to be responsible citizens and contributing members of society. Students learn to acquire and evaluate information and ideas. They learn to interact with others and develop understanding and respect for people in their school, their family and their community.

The focus of the Grade 4 social studies program is Alberta—its geography and people, and the similarities between Alberta and Quebec.

The following learning outcomes are selected from the Grade 4 Social Studies Program of Studies.

#### Alberta: Its Geography and People
- understand that the environment can affect the way people live
- understand that our way of life and our environment are affected by the presence and use of natural resources
- understand that conservation is important to Alberta’s future
- interpret and use aerial photographs and maps of Alberta
- make an outline map of Alberta, accompanied by developed symbols and a legend showing major cities, mountains and main rivers
- demonstrate concern for the needs of future Albertans

#### Alberta: Its People in History
- understand that contact between the Natives, the fur traders and the settlers in Alberta’s history brought changes to their lifestyle
- understand that Albertans have been affected and challenged by historical events
- understand that Albertans, throughout the history of Alberta, have contributed to its development
- use historical maps and map legends to locate the territories occupied by different Aboriginal groups, major fur trading posts and communities under study
- develop appreciation of the contributions made by many people/groups in Alberta’s history

#### Alberta: A Comparative Study with Quebec
- understand that there are similarities and differences in Alberta’s and Quebec’s geography and lifestyle
- understand that Canada is a bilingual country
- understand that Quebecois and Albertans have contributed to the Canadian way of life
- using maps of Canada, find Alberta’s location relative to Quebec and the other provinces
- draw conclusions about the similarities and differences between Alberta and Quebec
- appreciate the many similarities and differences shared by Canadians
Required Subject Areas. **Students take:**

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**Information and Communication Technology (ICT)**

The ICT curriculum is not intended to stand alone as a course, but rather to be infused within English language arts, mathematics, science and social studies. Schools have until June 2003 to phase in the program. The outcomes are organized by divisions; Division 1 is Kindergarten to Grade 3.

Students learn about the nature of technology, how to use and apply a variety of technologies, and the importance of technology to self and society.

The following learning outcomes are selected from the Grade 4 to Grade 6 Information and Communication Technology Program of Studies.

**Communicating, Inquiring, Decision Making and Problem Solving**

- access and retrieve appropriate information from the Internet by using a specific search path or from given uniform resource locations (URLs)
- organize information gathered from the Internet, or an electronic source, by selecting and recording the data in logical files or categories
- organize information, using such tools as a database, spreadsheet or electronic webbing

**Foundational Operations, Knowledge and Concepts**

- examine the environmental issues related to the use of technology
- explain the advantages and limitations of using computers to store, organize, retrieve and select information
- work collaboratively to share limited resources
- identify and apply techniques and tools for communicating, storing, retrieving and selecting information

**Processes for Productivity**

- enter and manipulate data by using such tools as spreadsheets or databases for a specific purpose
- edit and format text to clarify and enhance meaning, using such word processing features as thesaurus, find/change, text alignment, font size and font style
- convert digital text files by opening and saving them as different file types
- access available databases for images to support communication
Physical Education

View the physical education subject page at http://www.learning.gov.ab.ca/k_12/curriculum/bySubject/physed/

The aim of the K–12 physical education program is to enable individuals to develop the knowledge, skills and attitudes necessary to lead an active, healthy lifestyle. Students participate in a variety of physical activities: dance, games, types of gymnastics, individual activities and activities in alternative environments, such as aquatics and outdoor pursuits.

The following learning outcomes are selected from the Grade 4 Physical Education Program of Studies.

Activity

Basic Skills
- select, perform and refine challenging locomotor and nonlocomotor sequences

Application of Basic Skills
- select, perform and refine basic skills in a variety of environments and using various equipment; e.g., water safety, skating, swimming
- demonstrate a creative process to develop dance sequences alone and with others
- demonstrate critical thinking and problem-solving skills to modify games and achieve activity outcomes
- select, perform and refine basic skills in individual activities; e.g., cross-country running

Benefits Health

Functional Fitness
- identify the nutritional needs related to physical activity
- experience movement, involving components of fitness

Body Image
- recognize and personally acknowledge individual and other attributes that contribute to physical activity

Well-being
- demonstrate changes that take place in the body during physical activity

Cooperation

Communication
- articulate and demonstrate respectful communication skills appropriate to context

Fair Play
- identify and demonstrate etiquette and fair play
Leadership
- select and demonstrate responsibility for assigned roles while participating in physical activity; and, accept ideas from others that relate to changing/adapting, movement experiences

Teamwork
- participate cooperatively in group activities

Do It Daily ... for Life!

Effort
- demonstrate a willingness to participate regularly in physical education class
- demonstrate factors that encourage movement

Safety
- participate in, and identify the benefits of, safe warm-up and cool-down activities
- describe how to move safely in various environments; e.g., skating rink

Goal Setting/Personal Challenge
- set and achieve a long-term goal to increase effort and participation in one area of physical activity

Active Living in the Community
- identify how people, facilities and communities influence physical activity
- make decisions to be active within group activities or individually

Exemptions from Physical Education
Exemptions from participation in physical education may be given for medical conditions, when accompanied by a medical certification from a doctor to the principal; for religious beliefs, when accompanied by a statement in writing from the parent to the principal; and where access to facilities is prohibitive. When exemption is granted, activities consistent with the program outcomes should be substituted where appropriate.

Physical Education Online
The Physical Education Online Web site provides a wealth of information to support student learning of the K–12 physical education program of studies. The site is organized into three major sections:
- Program of Studies
- Teacher Resources
- Home Education
Required Subject Areas. Students take:

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**Health and Life Skills**

The aim of the health and life skills program is to enable students to make well-informed, healthy choices and to develop behaviours that contribute to the well-being of self and others. A comprehensive health program involves a partnership among home, school and community.

The following learning outcomes are selected from the Grade 4 Health and Life Skills Program of Studies.

**Wellness Choices**

Personal Health
- explore the connections among physical activity, emotional wellness and social wellness
- examine the impact of environmental factors on personal health, and develop positive environmental health habits; e.g., exposure to the sun, second-hand smoke, noise, extreme cold/heat

Safety and Responsibility
- describe and demonstrate passive, aggressive and assertive behaviours; e.g., assertive strategies for use in dealing with bullies

**Relationship Choices**

Understanding and Expressing Feelings
- identify and use short-term strategies for managing feelings—your own and others; e.g., dealing with excitement, anger, sadness, jealousy

Interactions
- identify changes that may occur in friendships, and explore strategies to deal with changes

Group Roles and Processes
- assess how to act as important role models for others

**Life Learning Choices**

Learning Strategies
- demonstrate effective decision making focusing on careful information gathering; e.g., evaluating information, taking action and evaluating results

Life Roles and Career Development
- recognize that personal roles will change over time and circumstances

Volunteerism
- describe the impact of service contributions on self; e.g., increase in self-worth, confidence and understanding of others

**Human Sexuality Education**

Schools are required to offer human sexuality education in Grade 4 to Grade 9. Parents have the right to exempt their child from this instruction. Schools will provide alternative learning experiences for those students who have been exempted from human sexuality instruction.

View the health and life skills subject page at [http://www.learning.gov.ab.ca/k_12/crurriculum/bvSubject/healthpls/](http://www.learning.gov.ab.ca/k_12/crurriculum/bvSubject/healthpls/)
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Information and Communication Technology (ICT) is integrated throughout English Language Arts, Mathematics, Science and Social Studies.

Art and Music

Through art and music, students develop self-awareness and express their creativity in many ways. They respond personally and critically to a variety of art and music styles and forms.

Art

View the fine arts subject page at http://www.learning.gov.ab.ca/k_12/curriculum/bySubject/finearts/

The aim of the art program is to enable students to learn visual arts skills and concepts, to interpret and communicate with visual symbols, to appreciate the cultural aspects of art, and to relate art to everyday life. The art curriculum has four major components: reflection, depiction, composition and expression.

The following learning outcomes are selected from the Grade 4 Art Program of Studies.

- make distinctions within classes of natural objects or forms
- assess the visual qualities of objects
- perfect forms and develop more realistic treatments
- improve compositions by refining, rehearsing and critiquing
- express a feeling or a message
- use media and techniques, with an emphasis on mixing media and perfecting techniques in drawing, painting, print making, sculpture, fabric arts, photography and computer graphics

Music

The aim of the music program is for students to develop an enjoyment of music, an understanding of a variety of music styles and an insight into music through a variety of musical activities. The music program is developed around the concepts of rhythm, melody, harmony, form and expression. These concepts are learned through participating in six skill areas: listening, moving, singing, playing instruments, reading and writing, and creating.

The following learning outcomes are selected from the Grade 4 Music Program of Studies.

- understand that beats may be grouped in 4s
- understand that tuned instruments can combine to make harmony
- understand that musical instruments have distinctive tonal qualities and may be grouped according to families
- identify major and minor chords
- respond to changes in tempo, dynamics and mood while singing
- develop skill in writing rhythm patterns
- notate and perform original compositions (does not have to be formal notation)
Optional Subject Areas

The range of optional subject areas offered by elementary schools varies from school to school depending on such factors as student and parent preferences, facilities and staffing.

<table>
<thead>
<tr>
<th>Optional Subject Areas</th>
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<tbody>
<tr>
<td>Drama</td>
<td>Languages Other than English</td>
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Drama

The aim of the drama program is for students to develop a positive self-concept by assuming other roles and acquiring dramatic skills. Play, dramatic play and structured dramatic play are the foundation for dramatic forms of expression. These include dramatic movement, mime, choral speech, storytelling, dramatization, puppetry, choric drama, readers' theatre, story theatre, playmaking and group drama.

Drama may be taught as a separate subject area or integrated with other subjects.

Languages Other than English

A variety of courses and programs in languages other than English are available throughout Alberta. Some of these include Aboriginal languages, French, German and Ukrainian.

Students registered in an immersion or a bilingual program follow a language arts course in the target language (e.g., French, Ukrainian) in addition to studying English language arts. In these programs, the target language is also used as the language of instruction in other subject areas, such as mathematics, science and social studies.

Aboriginal Languages

Blackfoot and Cree language and culture programs are designed to enable students to learn Aboriginal languages and to increase awareness of Aboriginal cultures.

The following learning outcomes are selected from the Blackfoot and Cree Language and Culture Programs of Study.

- learn basic communication skills in Blackfoot or Cree
- develop cultural sensitivity, and enhance personal development
- develop a desire to extend or improve proficiency in the Blackfoot or Cree language

French Immersion Program

In Alberta, many students have the opportunity to study in a French immersion program. This program, designed for non-French speaking students, offers an effective way for students to become functionally fluent in French while achieving all of the learning outcomes of the regular programs of study. Graduates from French immersion programs achieve a level of fluency in the target language that allows them to pursue their post-secondary studies in French or to accept employment in a workplace where French is the main language of communication.
There are many delivery models for French immersion present in Alberta schools:

- Early immersion—students begin their immersion experience in Kindergarten and continue in the program to Grade 12.
- Late immersion—the entry point is typically Grade 7.

Courses offered in the French language have as their basis a French version of the English program of studies, which is identical or comparable to the one used in the English program. The exception is Grade 1 to Grade 3 Social Studies. However, a program of studies specific to French immersion students was developed for the learning/teaching of French language arts. Some of the main French language arts learning outcomes are presented in the following section, French Language Arts.

http://www.learning.gov.ab.ca/french/YYC/Home.htm

A resource that may be helpful to parents is Yes, You Can Help! Information and Inspiration for French Immersion Parents. It is available on the Alberta Learning Web site or for purchase from the LRC.

French Language Arts

In Division 2, the French language arts program of studies is intended to continue work started in the earlier grades (Division 1), including vocabulary and syntax enrichment, to enable students to engage more actively in their environment. The program of studies also targets the development of the students’ ability to plan and monitor their communication projects, whether they are working individually or with classroom partners. Students also learn to respect the basic rules of language in the oral discussions that take place in the classroom as well as in their writing projects.

The following learning outcomes are selected from the French Language Arts Program of Studies.

### Oral Comprehension
- focus on communicative intent to direct listening
- use life experiences and previous knowledge as a basis for understanding

### Reading Comprehension
- focus on communicative intent to direct reading
- make predictions using meaningful cues

### Oral Production
- use vocabulary to express themselves in various everyday situations
- use verb tenses to express their experiences clearly
- use effective visual supports for presentations

### Writing
- determine choice and organization of ideas
- demonstrate appropriate organization of sentences
- recognize verb tense and agreement of common verbs in the present tense
- develop noun agreement and spelling

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French as a Second Language

In Alberta, French as a Second Language (FSL) is a program in which the French language is taught as a subject, often between 20 and 40 minutes a day, to help students develop communication skills, language knowledge and cultural awareness in French.
Depending upon a school board's language policy, French as a second language may be offered as an optional program or it may be a compulsory program. School boards may begin the program at different grade levels, since the program is based on developing language proficiency over a grade or grades without being grade specific. Many schools start the program in Grade 4, but others may begin earlier or later.

The program is designed to teach students to:
- understand what they hear and read in French
- communicate their ideas orally and in written form, using an approach that is based on concrete and real-life experiences and situations
- acquire knowledge about local, provincial and national Francophone groups to become more aware of their presence and to understand them better
- develop French language vocabulary and grammar through thematic activities and projects that are related to real-life language experiences
- acquire specific language learning strategies that will help them become better second language learners.

The program is organized into three language proficiency levels—Beginning, Intermediate and Advanced. Each level has its own set of experiences. Students in elementary school generally focus on the Beginning level. As students work through this level, they develop their ability to understand and communicate in French.

A resource that may be helpful to parents is *French as a Second Language (FSL) Program: A Guide for Parents*. It is available on the Alberta Learning Web site or for purchase from the LRC.

**Ukrainian Language Arts**

This course is designed as the Ukrainian language learning component for students in the Ukrainian bilingual program.

Students acquire knowledge, skills and attitudes in the areas of listening, speaking, reading, writing, viewing and representing. They learn to use Ukrainian confidently and competently in a variety of situations for communication, personal satisfaction and further learning. They are able to explore, understand and appreciate the Ukrainian culture for personal growth and satisfaction, and to participate in and contribute to an interdependent and multicultural global society.

**Other Languages**

Many school boards have developed their own programs. Locally developed language programs include: Arabic, Chinese, Chipewyan, German, Hebrew, Italian, Polish and Spanish. These locally developed courses are based on local needs and demands, and may not always be available.

For more information on second language instruction offered in your area, please contact your local school board.
Feedback Form

Curriculum Handbook for Parents 2003–2004: Grade 4

Please indicate whether you are a:
☐ Parent  ☐ Teacher  ☐ School Administrator  ☐ District Administrator  ☐ Other (please specify)

Please indicate whether you used:
☐ a print copy  ☐ the online format  ☐ both

Please respond to the following by placing a check mark under Strongly Disagree, Disagree, Agree or Strongly Agree.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tr>
<td>1. The handbook provides useful information.</td>
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<td>5. The links to the Alberta Learning Web site are helpful.</td>
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How can this handbook be made more helpful to parents?

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Thank you for your feedback.  Please send your response to:

Director, Curriculum Branch
Alberta Learning
10044 – 108 Street NW
Edmonton, Alberta, Canada
T5J 5E6
Fax: 780-422-3745
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