New Brunswick

Grades 9/10 Companion Document

Curriculum Development Branch
Department of Education
PO Box 6000
Fredericton, NB
E3B 5H1

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This document has been prepared in response to a request by high school principals (Memramcook, November 1999) for clarification of the features of the 9/10 program and for an increased level of communication of the philosophical and practical matters involving 9/10. The document consists of three sections: the first section offers an explanation of the characteristics associated with 9/10, the second section provides a curriculum continuum (G8 – G12), and the third section supplies information on the background to the four-year high school.

Characteristics of the 9/10 program

The thinking that has led to our current high school program has centered around one crucial belief about education: the primacy of the learner. The *Report of the High School Foundation Program Task Group* expressed this very well by saying, "Effective teaching facilitates student learning when school is organized around student learning rather than the delivery of instruction." (p. 6)

The five principal characteristics of the 9/10 program, which are ultimately derived from the work of the Commission on Excellence in Education, all support the belief in the primacy of the learner. These characteristics present challenges to teachers and administrators, and a firm understanding of them is essential to the development of a rich and vital 9/10 program. They cannot be isolated and developed individually; rather, they represent facets of an approach which must be developed together. Within that approach, the individual characteristics will have a greater or lesser presence depending upon the nature of the school. The 9/10 program is student-centered, outcome-directed, has a common curriculum, a flexible structure, and encourages teaming.

None of these characteristics is peculiar to the 9/10 program. The discussions which follow will demonstrate that each can be applied to any learning environment from kindergarten to grade twelve. The recent addition of grade nine to the high school has provided us with an opportunity to apply these characteristics within the context of a four-year high school.

When we say that the 9/10 program is ***student-centered***, we address most directly the concept that education has the learner as its prime focus. The *High School Framework* document (1995) called for teaching and learning to reflect a student-centered philosophy. What is that philosophy?

Its essence resides in the acceptance of the idea that, rather than being "good" or "poor" learners, everyone can learn given sufficient time and proper assistance. All of the research done in recent years shows that what can be predicted about learners is their rate of learning. As well, this research shows that we as educators can impede or promote this rate by the choices we make in presenting learning opportunities to our students.

Thus, in presenting these learning opportunities, the teacher takes into account the following:

➢ Student learning is the central concern and reference point for decisions regarding teaching, management, assessment, and reporting.

➢ The role of the teacher is as an educational analyst and a facilitator, helping all students to achieve the outcomes presented. One of the chief functions of the teacher should be designing appropriate learning activities.

➢ The emphasis of the teacher's program should be on identifying the strengths, weaknesses, interests, and learning styles of students, and on delivering and assessing learning activities based on knowledge about how students learn.

➢ The learning activities given should be developmentally appropriate.

➢ Students should be actively and vitally engaged in their learning.

The *Task Group Report* noted that teachers have always known that the use of clearly identified goals greatly aids in effective learning. Outcomes are a "careful articulation of statements regarding what knowledge, skills, and attitudes students are expected to acquire in each of the subject areas of school" (p.9). Outcomes are what students learn, not what teachers teach. If the teacher has student learning as an aim, then an *outcome-directed program* will help considerably in achieving that aim.

Much work has already been done in New Brunswick and in collaboration with the other Atlantic Provinces in English language arts, Mathematics, Science, Social Studies, French, and the Arts. The Science curriculum is also currently being revised in the Pan-Canadian project. New, outcome-oriented curriculum documents exist in these areas, and they are focused on the outcomes expected both at specific grade levels and at key stages throughout a student's career.

Outcomes thus play an important role in developing curriculum documents. When teachers use the guides to help organize the learning activities in the classroom, they can be assured that they are assisting students to attain the learning expectations. As teachers continue to use the curriculum guides, they will become much more aware of the outcomes directing them, and of a variety of activities, assessment techniques, and resources designed to assist them in their facilitation of student learning.

Outcomes in each subject area have been grouped into strands. These strands can be useful in helping teachers to plan their activities, and can also be useful in identifying more precisely the strengths and weaknesses of students. The second section of this document provides a considerable amount of information on both the subjects, and their strands.

The focus of public education from kindergarten to grade ten is to provide a basic core of skills, knowledge, competencies, and experiences. The 9/10 program, by continuing this common focus, allows students to prepare themselves to take advantage of the opportunity to explore and concentrate on individual areas of interest and talent in the 11/12 program. Thus, the 9/10 program features a ***common curriculum***, which emphasizes that learning is a continuum, an ongoing process of consolidation, extension, and refinement. The breadth and balance of the common curriculum contributes to the achievement of the Atlantic Canada Essential Graduation Learnings: aesthetic expression, citizenship, communication, personal development, problem solving and technological competence.

This common curriculum is a balance of the traditional core subjects and those areas regarded as specialties. Together, they exhibit "a common emphasis on relevance to a functional working and civil life and the higher thinking skills." (*High School Framework Document, p. iii*). It responds to the idea that students should have equal opportunity and access to curriculum that does not limit their opportunities. As these students move forward to the 11/12 program, the five-credit semester now being researched may provide them with the opportunities for the choices they need to pursue their specific interests.

The common curriculum also encourages the notion of learning as a continuum of experience, not a series of isolated "subjects". The possibilities for inter-disciplinary learning are large and should be developed. The idea of the unity of learning is promoted when teachers make references to the outcomes of one subject area within the context of another.

The concept of a common curriculum is intimately tied to the primary notion of a student-centered educational program. Teachers must build into their learning experiences and assessment strategies a recognition of the varied learning styles and ability levels that are present in a classroom.

Individual students may approach these experiences in different ways, take a greater or lesser amount of time to deal with them, and be able to demonstrate their accomplishment of the various outcomes expected of them in different ways.

One of the concerns about the common curriculum is the lack of flexibility or subject choice at grade ten. By identifying minimum time requirements for all common curriculum subject areas, a school can organize a schedule to allow up to 180 hours for choice in year ten. These options could include further study in the common curriculum areas, remediation opportunities, or credits from 11/12. The following are the minimum

time requirements for the common curriculum over the two years of 9 and 10: English language arts- 360 hours; Mathematics – 360 hours; French – 180 hours; Social Studies – 180 hours; Science – 180 hours; Visual Arts, Music, Physical Education and Health, Broad Based Technology – 360 hours total. The areas of Personal Development and Career Planning and Human Ecology (Family Studies) could require approximately forty hours each over the two year period.

Students can meet the minimum time requirements for Visual Arts, Music, Physical Education and Health and Broad Based Technology (360 hours) through 90 hours in each of the areas. The other way in which the requirements can be met is through 90 hours in two of the areas, 45 hours in one of the others, and 135 hours in the fourth. This second option, if viable in terms of staffing and scheduling, provides some student choice. Within either 360 hour configuration, students must have a minimum of 45 hours in all four areas; this should preferably be at grade nine.

The discussion to this point has dealt with the concept of student-centeredness in our learning environment. The remainder of this section addresses how we can make this happen.

Without a *flexible structure*, concentrating on the individual student would be difficult indeed. The *Report on Excellence*, in addressing several problems with the semestering system, states "… the commission believes that [these problems] can be ameliorated through flexible and creative deployment of staff and scheduling…" (p. 40)

The *High School Framework* document includes flexibility as one of the guiding principles that should support change in the educational setting. It defines the principle as "The encouragement of the development of systems of learning organizations that take into account the strengths, constraints, and realities of staff, school size, and location, and that cooperate with partners including the family and community." (p. 7). This document later goes on to refer to the necessity to relate to the specific student population at the 9/10 level by stating, "The characteristics and needs of grades 11 and 12 have driven the high school organization system. An examination of the developmental stage of grade 9 and 10's would indicate … there should be a better fit between their stage of development and the structure and environment of the school." (p. 11).

A scheduling format which accommodates the specific needs of the 9/10 program, the absence of a rigidly-defined examination process, and the ability to expand or collapse time periods for specific purposes, are examples of flexibility in structure. Experience has shown that it is possible to have a 'common' structure, 9 through 12, without unduly limiting the flexibility desired at 9/10.

This section, describing the characteristics of the 9/10 program, began with the statement that a school should be organized around student learning rather than the delivery of instruction. Flexibility addresses this concept. Each school must answer the question of how it can best serve the students it has with the resources it has available to it. The notion of "best practice" has to be thoroughly defined in the context of student-centeredness. Flexibility of approach in serving those needs is necessary. For example, a school may find that flexible timetables and teaching arrangements may provide them with increased opportunities to acknowledge student strengths and to address student needs. Scheduling several sections of the same course at the same time, for example all grade 10 mathematics classes, allows an opportunity for grouping and regrouping to address student needs and strengths. Allowing a team of teachers to determine activities within a block of time (be it a full day or a shorter period of time) may be another way of increasing flexibility.

A concept that grows from this desire for a flexible structure is the use of **teaming**. The *High School Framework* document provides a thorough discussion of the possibilities inherent in a teamed approach. "[A] possible organizational arrangement would see teams of teachers working with groups of students. Each team would be composed of teachers representing the various subjects/disciplines and through planning and reflective practice, the delivery of instruction and the managing of learning will take place in a variety of situations best determined by the teaching team. In essence, the groups of teachers and students would arrange and schedule instructional time to best achieve curriculum outcomes and graduation learnings. Remediation and enrichment can therefore be targeted without requiring students to be in different levels for the whole year. In addition to providing students with a secure home base, that is, a group of other students and teachers within the school with whom they spend most of their time, this new flexible arrangement offers opportunities for different styles of teaching and coaching, can accommodate different learning styles, and encourages different-sized group work." (p. 33).

The teaming model, while it depends on and supports flexibility, also can encourage the type of student-centered approach the 9/10 program advocates. It does this by increasing the communication between students and teachers and allowing the teachers to more easily make arrangements that suit individual students and cross-curricular experiences.

Teaming allows for greater teacher contact with students, and more information about students to parents, supports professional co-operation, and makes students feel less isolated. The NBTA survey of teachers in the Foundation Program in April 1998 indicated "an overwhelming number of teachers enjoyed the opportunity for teaming, 94% in level (year) one (g9) and 91% in level (year) two (g10)." (p. 7).

Flexibility is important in making teaming a reality. The team structure varies, of necessity, from school to school. There can be teams of two to teams including all teachers of a group of students. A team of two or three teachers may be much easier to accommodate in a schedule than a larger team. The team should be defined in terms of the body of students they teach, not by the subject taught, i.e. team members teach the same students.

Teams of teachers can take on many roles because of their close and on-going connection to the students for whom they are responsible. The diversity of subject backgrounds brought by the team members creates a situation in which interdisciplinary units may be more easily planned. They may also be capable of capable of assuming a large role in the discipline of their students. Teams may be actively involved in the construction of flexible student schedules within a block of time.

Teaming is considered valuable for both students and teachers. In schools, where staffing permits, teaming is the preferred scheduling model, especially for grade nine where heterogeneous grouping is a requirement. Choice in grade ten, both in curriculum options and opportunities to ability group (in Mathematics and English language arts only), can create obstacles to teaming at this grade.

The 9/10 program is premised on the best ideas and information about teaching and learning available to the educational community. The challenge is to convert best theory into best practice.

Curriculum Continuums

English Language Arts
Mathematics
Science
Social Studies
French
Visual Arts, Music, Physical Education and Health, Broad Based Technology
Human Ecology
Personal Development and Career Planning

Note: A number of co and extra-curricular activities occur in our schools, forming what is sometimes referred to as a 'third curriculum'. Co and extra-curricular activities are dependent on the interest of voluntary coaches and advisors, the interests of the students, the money available within a school and the resources at hand. Teachers spend countless hours enhancing the physical and mental skills of the students involved in athletic and non-athletic activities, and students are able to hone those skills as they move from middle school to high school.

English Language Arts

English language arts is much more than a subject or body of content for students to learn. Rather, it is a focus on the language processes of speaking, listening, reading, viewing, writing and representing. The application of these interrelated processes, in a variety of situations, is critical to the students' development as effective communicators. The curriculum is designed to help students increase their control over using language, use and respond to language effectively and purposefully and understand why language and literacy are so central to their lives. To this end, a common emphasis throughout the strands in the 9/10 program is understanding the social context of a range of text forms. Students are engaged in selecting, responding to and creating text forms for a variety of purposes, situations and audiences. The general curriculum outcomes for English language arts are organized around three strands: speaking and listening, reading and viewing, and writing and representing. The learnings within each of these strands are:

Speaking and Listening (outcomes 1-3)

Students will be expected to:
- speak and listen in order to form and express their thoughts
- communicate information and ideas to others
- choose language appropriate to the audience, situation, and purpose

Reading and Viewing (outcomes 4-7)

Students will be expected to:
- select and demonstrate understanding of a wide range of print and visual materials
- use a variety of resources and methods to research topics
- express reactions to and opinions about print and visual material
- understand the effect of language, style, and format on print and visual material

Writing and Representing (outcomes 8-10)

Students will be expected to:
- write and use other means (such as drama, multi-media) to express thoughts and feelings
- produce written and other types of creative work individually and in groups
- use effective style and format (including spelling, grammar and punctuation) in writing and other forms of expression

Students are to receive a minimum of 360 hours over the two-year period (9/10) in English language arts.

Subject: **English Language Arts**

Strand	Grades 6-8	9/10 Program	11/12 Program

Speaking and Listening	Group Discussion (brainstorming, conversation)
	
	Oral Interpretation (choral speaking, Readers Theatre, storytelling)
	
	Oral Presentations (booktalks, persuasive talks, oral reports)
		Emphasizes formal and informal conventions of oral communication through:
		    Communicating ideas, considering audience, purpose and form, emphasizing social responsibilities of reader and writer
		
		Through a variety of text forms:
		    Plays, Readers Theatre, significant social texts, debates, discussions, seminars, reports, interviews
			Emphasizes examination and application of a variety of styles and forms.
			English 111/112/113
			English 121/122/123
			Journalism 120
			Writing 110
			Media Studies 120
			Canadian Literature 120
			Reading Tutor 120
			Theatre Arts 120 *

Reading and Viewing	Traditional Literature (folk tales, myths)
	Modern Fantasy (talking animals, sci-fiction)
	Contemporary Realistic Fiction (mysteries, sports, animals, survival)
	Historical Fiction
	Plays
	Poetry
	Autobiography and Biography
	Information Texts
	Technological Resources (CD-Roms, software)
	Mass Media / Visual Texts (films, newspapers)
	Significant Social Texts (speeches, editorials)
	Every day Texts (letters, signs, memos)
	Class Produced Material (individual and group)
		Emphasizes social implications of texts by selecting text to :
		    Communicate ideas, consider audience, purpose and form, emphasize social responsibilities of reader and writer
		
		Through a variety of text forms (with particular attention to regional and cultural texts):
		    Mythology, short stories, novels, plays, poetry, biographies, articles, journals, reports, essays, research papers, editorials, business and public letters
			Emphasizes exposure to and use of a wide variety of styles and forms from various places and periods.
			
			English 111/112/113
			English 121/122/123
			Journalism 120
			Writing 110
			Media Studies 120
			Canadian Literature 120
			Reading Tutor 120
			Theatre Arts 120 *

Writing and Representing	Expressive Writing and Representing (journals, letters, response logs) Transactional Writing and Representing (reports, directions, advertisements, summaries) Poetic Writing and Representing (stories, poems, plays)	Emphasizes social implications of texts by creating text to: Communicate ideas, consider audience, purpose and form, emphasize social responsibilities of reader and writer Through a variety of text forms as listed in Listening and Speaking/Reading and Viewing	Emphasizes examination and application of a variety of styles and forms. English 111/112/113 English 121/122/123 Journalism 120 Writing 110 Media Studies 120 Canadian Literature 120 Reading Tutor 120 Theatre Arts 120 *

* Theatre Arts 120 contributes to student learning in all three of the English language arts strands. However, Theatre Arts 120 is included in the Fine Arts / Life Role Development cluster of courses required for high school graduation.

Mathematics

Mathematics education is changing. The evolution of our society has led to some changes of emphasis with respect to what mathematical skills, knowledge, concepts and processes are particularly valuable to public school graduates. More importantly, research examining how children learn, and specifically how children learn mathematical skills and concepts, indicates that a change in instructional pedagogy is also in order.

The mathematics curriculum is focusing to a greater extent on helping students to become mathematical problem solvers, to learn to reason and communicate mathematically, and to make connections within mathematics and between mathematics and other disciplines and the world around them. While the curriculum outline on the following page is organized in term of content strands, it is a given that problem solving, reasoning, communication and connections must underlie and infuse all aspects of the mathematics curriculum and instructional practice.

The mathematics classroom should be a dynamic environment; students must be actively involved in the "doing" of mathematics. In this environment students will explore mathematical situations and construct new ideas. They will frequently communicate their mathematical understanding and explain their reasoning. They will learn mathematics within the context of solving problems that are relevant, interesting and/or connect to potential career paths. As well, students will work with appropriate technology and appreciate its role as a mathematical tool. Ultimately, all mathematics education should increase students' mathematical power and confidence as developers and users of mathematics.

The general curriculum outcomes for Mathematics are organized around four strands: number and operations, patterns and relations, shape and space, and data and probability. The learnings within each of these strands are:

Number and Operations (outcomes 1 and 2)
Students will be expected to:
- demonstrate number sense and apply number theory concepts
- demonstrate operation sense and apply operation principles and procedures in both numeric and algebraic situations

Patterns and Relations (outcomes 3)
Students will be expected to:
- explore, recognize, represent and apply patterns and relationships, both informally and formally.

Shape and Space (outcomes 4 and 5)
Students will be expected to:
- demonstrate an understanding of and apply concepts and skills associated with measurement
- demonstrate spatial sense and apply geometric concepts, properties, and relationships

Data and Probability (outcomes 6 and 7)
Students will be expected to:
- solve problems involving the collection, display and analysis of data
- represent and solve problems involving uncertainty

Students are to receive a minimum of 360 hours over the two-year period (9/10) in Mathematics.

Subject: **Mathematics**

Strand	Grade 8	9/10 Program	11/12 Program
Number and operations	Rational numbers (especially fractions) Exponents Percent Proportions Algebraic expressions	Number system (especially real numbers) Number meaning & number theory concepts Multiple representations of numbers Modeling problems using numeric & algebraic procedures	M111/112 radicals, exponents M113 real numbers, exponents M121/122 matrices M123 powers, radicals, polynomials Calculus 120 complex numbers
Patterns and relations	Representing relations Constructions & analyzing tables and graphs Slope (rate of change) Simple linear equations	Linear relations (including slope) Analyzing functional relationships Representing relations in multiple ways Applying algebraic methods in a variety of context (linear & non-linear, equations & inequalities)	M111/112 coordinate geometry, systems of equations, quadratic functions M113/123 coordinate geometry, equations and formulas M121/122 sequences, series Calculus 120 conics, calculus AdvM120 functions
Shape and space	Indirect measurements Perimeter, area, volume and surface area Pythagorean relationship 3-D transformations Dilations	Right triangle trigonometry Measurement concepts & formula Applying geometric properties and relationships Properties of transformations Inference and deduction	M111/112/113 coordinate geometry, trigonometry M121/122 vectors, geometry of circle M123 coordinate geometry, trigonometry, perimeter, area, volume Calculus 120 conics
Data and probability	Data variation Scatterplots, lines of best fit, box-and-whisker plots Extrapolation & interpolation Simulations Single & complementary events	Constructing a wide variety of data displays Evaluation statistical argument Measures of central tendency Experiments and simulations Theoretical probability	M121/122 data collection & display, statistical measure, lines of best fit, independent & dependent events

Science

Science outcomes in the 9/10 program have a significant role to play in our curriculum structure and have been affected by the history of events. In September 1995, the course Science 102 was introduced to "adjust the compaction" required in elective science courses at grades 11/12. The outcomes articulated by strands in the 9/10 program are just as important. Any student planning to elect biology, chemistry and/or physics courses in grades 11/12 must have a good understanding of the stated outcomes, there are no options. Senior science courses are predicated on this, no time is available for re-teaching. Students planning to take the minimum graduation requirement of one science course at level three in grades 11/12 may not share the same requirement.

Teachers are asked to consider the science strands in 9-10 as an important bridging experience between discovery learning in elementary/middle school and a more concentrated practical and conceptual approach in elective science courses. At all levels, students are encouraged to construct conceptual understanding based on prior experience. This becomes even more evident as we adopt regional curriculum for science based on a pan-Canadian framework that organizes learning kindergarten through grade twelve.

The general curriculum outcomes for Science are organized around three strands: life science, physical science and earth and space science. The learnings within each of these strands are:

Life Science (Outcomes 1, 9, 10)

Students will be expected to:
- demonstrate an understanding of the properties of living things including structures, composition, processes and functions unique to life
- use the microscope to examine cells and develop an understanding of cellular structure and function
- investigate ways in which cells interact with their environment

Physical Science (Outcomes 2, 3, 5, 6, 7, 8)

Students will be expected to:
- demonstrate an understanding of the physical property of density
- recognize and apply the principles of particle movement
- investigate quantitatively motion, forces and work
- demonstrate an understanding of energy, and the laws governing its transfer, transformation and conversion
- develop an understanding of matter, the periodic table, and the structure of atoms
- write formulas for ionic and molecular compounds and use them in writing chemical equations

Earth and Space Science (Outcome 4)

Students will be expected to:
- develop an understanding of the concept of pressure and its application to the Earth's atmosphere

Students are to receive a minimum of 180 hours over the two-year period (9/10) in Science.

Subject: **Science**

Strand	Grade 8	9/10 Program	11/12 Program
Life Science	Diversity of living things & interactions	Life processes Matter & energy in living systems	Bio 112/113, 120 Environmental Science 122/123
Physics	Heat travel	Pressure floating & sinking, light or sound Energy, change, & conservation	Physics 112 Physics 122
Chemistry	Chemical change	Particles Chemical changes	Chemistry 112 Chemistry 122
Earth Science	Face lifting the planet	Weather	Physics 112 Physics 122 Physical Geography 110 Env. Sc. 122/123

Social Studies

The Social Studies curriculum is designed to enable and encourage students to examine issues, respond critically and creatively, and make informed decisions as individuals and as citizens of Canada and of an increasingly interdependent world. It provides opportunities for students to explore multiple approaches that may be used to analyse and interpret their own world and the world of others. The *Foundation for Atlantic Canada Social Studies Curriculum*, published in 1999, establishes that future social studies curriculum, at all levels, will satisfy outcomes in economics, geography and history as well as for the strands of citizenship, culture and interdependence. It will also satisfy the outcomes identified in the processes of communication, inquiry and participation. Work has begun to develop new curriculum for grades K-9 to identify what students are expected to know and be able to do at each of these grade levels. This will mean a new scope and sequence for social studies K-9 that is being developed around a conceptual organizer for each grade. At a later date the program for grades 10-12 will be reviewed in light of changes at K-9.

The general curriculum outcomes for Social Studies are organized around: economics, geography and history; citizenship, culture and interdependence; and communication, inquiry and participation. The following information is provided based on the curriculum at this time with proposed directions for the new curriculum in italics.

Students are to receive a minimum of 180 hours over the two-year period (9/10) in Social Studies

Subject : **Social Studies**

Strand / Organizer	Grade 8	9/10 Program	11/12 Program
Economics, geography and history **Citizenship, culture and interdependence** **Communication, inquiry and participation**	Interdependence - Atlantic Canada in the Global Community Students examine and reflect on major issues that affect them as individuals, Atlantic Canadians, and global citizens. This course is designed around the units of physical geography, culture, economics, technology and interdependence.	Global Perspective – the goal is to enhance the student's global perspective through a greater appreciation of the cultural diversity that characterizes our world. *Canadian Identity – students will examine issues related to Canadian identity (post WWI to the present).* Ancient/Medieval History – focuses on the roots of western civilization , the interplay of civilizations and the cultural borrowing that has characterized history.	Modern History 112/113 (required course) Physical Geography 110 Canadian Geography 120 Canadian History 121/122 Economics 120 Political Science 120 World Issues 120

French Second Language Programs

Second language education has always been an important aspect of education. In New Brunswick, emphasis has been placed on the development of second language skills in French, which is one of the official languages of the province.

French programs are divided into two categories : core and immersion. While the exit outcomes are similar in both programs, there is a difference in some of the attainments which lead to each outcome, depending on the program. These attainments, especially in the area of Communication, reflect the degree of communicative competence, which can realistically be expected of students enrolled in these programs.

A multidimensional approach to language teaching has been adopted in all French Second Language programs. This approach ensures that students are exposed to a variety of experiences in French which reflect both their needs and life experiences as individuals. Students learn French by engaging in meaningful activities which invite their participation in the learning process. A multidimensional approach implies that there are connections to be made between the outcomes for French Second Language programs and the outcomes of other curricular areas. Many of the FSL outcomes are generic; the only difference being that students attain the outcomes by accomplishing tasks in their second language, through activities which offer them opportunities to develop knowledge and attitudes which will lead to a better understanding of the multicultural nature of Canada and its place in the global economy.

The general curriculum outcomes for French Second Language programs are organized around three strands: listening and reading, speaking and writing, and listening, reading, speaking and writing. The learnings within each of these strands are:

Listening and Reading (core)
Students will be expected to:
- understand directions
- extract information globally from a text

Speaking and Writing (core)
Students will be expected to:
- share information (orally) about daily activities or past experiences
- create sentences using vocabulary related to needs and interests; indicate preferences and provide opinions on daily topics

Listening, Reading, Speaking and Writing (core)
Students will be expected to:
- share likes and dislikes
- provide directions, autobiographical information
- participate, in French, in classroom activities

Listening and Reading (immersion)
- be able to provide alternative interpretations of a text
- extract meaning from various contents
- evaluate and monitor
- be able to select, group, infer and summarise information

Speaking and Writing (immersion)
- respond to a wide variety of media and demonstrate understanding
- articulate and support own ideas, thought, feelings and opinions
- demonstrate the ability to communicate persuasively on topics of personal relevance
- choose the appropriate form to express experiences, thoughts, feelings and supported opinions

Listening, Reading, Speaking and Writing (immersion)
- participate in formal and informal conversations on practical, social and professional topics
- demonstrate the ability to use their linguistic, sociolinguistic and discursive knowledge to foster comprehension and communication; demonstrate the ability to use strategies to improve their communication skills
- demonstrate a knowledge of the mechanics of the language

Students are to receive a minimum of 180 hours over the two year period (9/10) in Core French.

Students are to receive sufficient time to respect the spirit of Policy 309.

French Second Language programs offer a continuum of language learning. Thus, most outcomes will have been reached by the end of Grade 8; the Grades 9 – 12 build upon the outcomes to provide opportunities for students to increase their performance levels. In the case of students in French Immersion programs, courses in addition to French Language Arts are considered essential for achieving hoped-for performance levels.

Subject : **Core French**

Strand	Grades 6-8	9/10 Program	11/12 Program
Listening and Reading	Common program for all children: participating in a number of projects which call upon the use of authentic documents (recordings, interviews, newspaper articles, films, etc) to achieve the project end.	Understand directions Extract information globally from a text	Grade 11: French 111/112/113 Grade 12: French 121/122
Speaking and Writing	Common program for all children: participating in a number of projects which call upon the use of authentic documents (recordings, interviews, newspaper articles, films, etc) to achieve the project end.	Share information about daily activities or past experiences Create sentences using vocabulary related to needs and interests Indicate preferences and provide opinions on daily topics)	Grade 11: French 111/112/113
Listening, Reading, Speaking and Writing	Common program for all children : participating in a number of projects which call upon the use of authentic documents (recordings, interviews, newspaper articles, films, etc) to achieve the project end.	Share likes and dislikes Provide directions, autobiographical information Participate in classroom activities	Grade 11: French 111/112/113 Grade 12: French 121/122

Subject : **French Immersion**

Strand	Grades 6-8	9/10 Program	11/12 Program
Listening and Reading	Most subject areas are taught in French, thus allowing students to hone their skills by : preparing oral presentations, writing (all genres), viewing, debates, interviews etc...	Be able to provide alternative interpretations of a text Extract meaning from various contents evaluate and monitor Be able to select, group, infer and summarise information FI Language Arts FI Social Studies FI Mathematics FI Science	Grade 11 : FI Language Arts 110 FI Social Studies FI Mathematics FI Science Grade 12 : FI Language Arts 120 FI Social Studies FI Mathematics FI Science
Speaking and Writing	Most subject areas are taught in French, thus allowing students to hone their skills by : preparing oral presentations, writing (all genres), viewing, debates, interviews etc...	Respond to a wide variety of media and demonstrate understanding Articulate and support own ideas, thought, feelings and opinions Demonstrate the ability to communicate persuasively on topics of personal relevance Choose the appropriate form to express experiences, thoughts, feelings and supported opinions FI Language Arts FI Social Studies FI Mathematics FI Science	Grade 11 : FI Language Arts 110 FI Social Studies FI Mathematics FI Science Grade 12 : FI Language Arts 120 FI Social Studies FI Mathematics FI Science
Listening, Reading, Speaking and Writing	Most subject areas are taught in French, thus allowing students to hone their skills by : preparing oral presentations, writing (all genres), viewing, debates, interviews etc...	Participate in formal and informal conversations on practical, social and professional topics Demonstrate the ability to use their linguistic, sociolinguistic and discursive knowledge to foster comprehension and communication Demonstrate the ability to use strategies to improve their communication skills Demonstrate a knowledge of the mechanics of the language FI Language Arts FI Social Studies FI Mathematics FI Science	Grade 11 : FI Language Arts 110 FI Social Studies FI Mathematics FI Science Grade 12 : FI Language Arts 120 FI Social Studies FI Mathematics FI Science

Visual Arts, Music, Physical Education and Health, and Broad Based Technology
Arts Education (Visual Arts, Music)

The Essential Graduation Learnings describe the knowledge, skills, and attitudes that students are expected to demonstrate by the end of grade 12. They are cross-curricular and serve as a basis for curriculum development at all grade levels.

Arts education is closely connected to the first Essential Graduation Learning - aesthetic expression, making a compelling and unique contribution to learning in this area. In an important sense, aesthetic expression is a rationale for arts education.

In addition, music, art and drama contribute significantly to student learning in communication, problem solving and personal development. The curriculum at 9 to 12 also provides for learning about citizenship through an exploration of the arts and also in the creative use of technology. Curriculum in the arts addresses the learning outcomes by grouping them according to the following types of understandings and processes that are common to all arts disciplines.

The general curriculum outcomes for arts education are organized around three strands:

Creating, Making and Presenting (Music, Art, Drama Production*)
Students will be expected to:
- Explore challenge, develop, and express ideas using the skills, language, techniques and processes of the arts
- Create and/or present, collaboratively and independently, expressive products in the arts for a range of audiences and purposes

Understanding and Connecting Contexts of Time, Place and Community (Cultures & History)
Students will be expected to:
- Demonstrate critical awareness of and value for the role of the arts in creating and reflecting culture
- Respect the contributions of individuals and cultural groups to the arts in local and global contents and value the arts as a record of human experience and expression
- Examine the relationship among the arts, societies and environments

Perceiving, Reflecting and Responding (Responding to Music, Art, Drama*)
Students will be expected to:
- Apply critical thinking and problem-solving strategies to reflect on and respond to their own and others' expressive work
- Understand the role of technologies in creating and responding to expressive works
- Analyze the relationship between artistic intent and the expressive work

*Drama outcomes and activities are currently in the English language arts program

Physical Education and Health

Physical Education and Health programs have many broad outcomes relating to healthy lifestyle, personal development, aesthetic expression, citizenship, solving problems and communication. These outcomes extend the traditional focus on the benefits of physical activity from a purely fitness perspective to a more encompassing rationale.

A physically educated person is one who has acquired skills that facilitate effective movement in a personal fitness context, incorporates participation in physical activity into daily life, and who understands and values lifelong opportunity for enjoyment, self expression and social interaction. The interaction and connection among knowledge, feelings, attitudes and skills will bring meaning into action. A personal-global orientation to physical education requires a connection among personal healthy lifestyles, its connection to the world of work, and the impact of physical activity on the community.

The Physical Education and Health program provides for both class instruction and application through intramural participation and recreational club activity. It is reinforced in extra-curricular and inter-scholastic activities and is transferable to community involvement. A school to community relationship reinforces the student's personal plan. Students will learn and demonstrate key behaviors relating to planning, performing, evaluating, adapting and revising activities for themselves and others.

The general curriculum outcomes for Physical Education and Health are organized around three strands: healthy life style planning, application of physical and perceptual skills, and safety practices and procedures. The learnings within each of these strands are:

Healthy Life Style Planning
Students will be expected to:
- Demonstrate an understanding of the impact of nutrition, self-esteem, personal fitness, stress management and substance abuse on a healthy lifestyle
- Demonstrate a knowledge of human growth and development

Application of Physical and Perceptual Skills
Students will be expected to:
- Demonstrate, through participation, a knowledge of rules and proper use of equipment in a variety of sports
- Develop and apply the components of a personal fitness plan
- Co-operate to achieve personal goals, assist others to reach their goals and work with others to reach group goals

Safety Practices and Procedures
Students will be expected to:
- Recognize and evaluate basic safety rules and procedures
- Demonstrate basic knowledge of first aid and injury management

<center>**Broad Based Technology**</center>

Technology Education prepares students for the challenges of participating in our increasingly technological society. The use and application of technology has become so pervasive in work, education, and leisure time, that technological competence is now a basic life skill for all students. Technology is a uniquely human process, where 'solutions' are sought by determining how to combine knowledge and available resources to produce desired results.

While most curricular areas of study consist of content and processes which are relatively stable, Technology Education is somewhat unique in this regard. There is a core of knowledge that needs to be learned, but this core is constantly evolving, and being added to. Also, the processes are often re-invented or discarded in favour of new ones. Technology Education is, therefore, dynamic and not tied to content or processes as much as it is to the technological problem solving approach.

Key-stage outcomes have been identified. The outcomes at the four key stages reflect a continuum of learning, with an increase in expectations for students at the various stages. The document *Curriculum Outcomes for Technology Education: Entry – Grade 12* will be available for the 2000-2001 school year. General curriculum outcomes for Technology Education are organized around five strands: technological problem solving, technological systems, history and evolution of technology, technology and careers, and responsibility. The learnings within each of these strands are:

Technological Problem Solving
Students will be expected to design, develop, evaluate, and articulate technological solutions.
Technological Systems
Students will be expected to evaluate and manage technological systems.
History and Evolution of Technology
Students will be expected to demonstrate an understanding of the history and evolution of technology, and of its social and cultural implications.
Technology and Careers
Students will be expected to demonstrate an understanding of current and evolving careers and of the influence of technology on the nature of work.
Responsibility
Students will be expected to demonstrate an understanding of the history and evolution of technology, and of its social and cultural implications.

Minimum time allocations for Visual Arts, Music, Health and Physical Education and Health, Broad Based Technology

Students are to receive a minimum of 360 hours over the two year period (9/10) in the 'specialties' (Visual Arts, Music, Health and Physical Education and Health, Broad Based Technology). Students can meet the specialty area requirements through 90 hours in each of the four areas listed, or through 90 hours in two of the specialty areas, 45 hours in one of the others, and 135 hours in the fourth. Students must have a minimum of 45 hours in all four specialty areas; this should preferably be done at grade nine.

Subject : **Visual Arts**

Strand	Grades 6/8	9/10 Program	11/12 Program
Production	Creative use of design Variety of media including 3 – dimensional and technologies	Development of technical and expressive skills Compositional challenges Development of a personal style	Visual Arts 110, 120 Graphic Art & Design 110
Responding	Stylistic characteristics Personal preference versus critical judgement Purposes of art	Interpretation and critique of works of art Language of art	Visual Arts 110, 120 Graphic Art & Design 110
History and Cultures	Units on the Renaissance, Impressionism, Surrealism, etc.	Historical, cultural and contemporary issues Influences of art on society	Visual Arts 110, 120 Graphic Art & Design 110

Subject : **Music**

Strand	Grades 6/8	9/10 Program	11/12 Program
Production	Reading and playing simple rhythms and melodies Understanding of basic symbols Time signatures	Technical skills development Simple compositions Key signatures and other musical symbols	Music 111/2 Music 113 Music 120
Responding	Simple forms and genres Understanding of musical elements Identifying orchestral and other instruments	More complex musical forms and style, listening skills, critiquing music and musical performances Relationship of music to other art forms	Music 111/2 Music 113 Music 120
History and Cultures	The role of music in Canada and description and beginning understanding of musical historical eras	Local, regional and national music and musicians	Music 111/2 Music 113 Music 120

Subject : **Physical Education and Health**

Strand	Grade 8	9/10 Program	11/12 Program
Healthy Lifestyle Planning	Human growth and development	Nutrition, self-esteem, personal fitness, stress management, substance abuse Human growth and development	Outdoor Pursuits 110 Physical Education and Health 120
Physical and Perceptual Skills	Individual skills development Teamwork skills	Proper use of equipment Personal fitness plan Individual / team skills development	Outdoor Pursuits 110 Physical Education and Health 120
Safety Practices and Procedures	Safety rules	Safety rules and procedures First aid, injury management	Outdoor Pursuits 110 Physical Education and Health 120

Subject **Broad Based Technology**

Note: the following chart contains only one sample outcome for each strand; please see the curriculum document for the complete list of outcomes.
The list of 11/12 Advanced Technology Studies courses will vary from school to school.

Strand	Grades K-8 Technology Education	9/10 Program Broad Based Technology Education	11/12 Advanced Technology Studies
Technology problem solving	Identify, describe and examine problem situations, describe influencing factors, construct simple design briefs.	Assess diverse needs and opportunities, construct detailed design briefs.	Tech Support 110 Framing & Sheathing 110 Information Processing 120 Information Tech 110
Technological systems	Use basic, simple and complex systems safely and effectively.	Use a variety of complex systems safely and effectively.	Fashion Technology 110 Computer Aided Design110 Nutrition 120
History and evolution of technology	Explore reasons why the rate of technological change has increased, evaluate the effects of change on people.	Critically evaluate the effects of accelerated rates of technological change on self and society.	Hospitality & Tourism 110 Computer Application 110 Data Pro 110 Computer Aided Graphics 120
Technology and careers	Identify skills and capabilities needed to achieve goals, develop strategies to assess technological literacy/capability.	Envision their future and develop a plan for acquiring the technological literacy/capability required.	Culinary Arts 110/120 Computer Science 110 Graphic Arts 110 Mill & Cabinet 120
Responsibility	Demonstrate an awareness of and respect for the rights and responsibilities of others and self when using technological resources.	Demonstrate responsible leadership in employing legal and ethical rules and principles.	Power Train and Chassis110 Electrical Wiring 110 Micro Electronics 120 Control Technology 120

Human Ecology (Family Studies)

Human Ecology is the study of interpersonal relationships among individuals within the family, at the varying stages of the life cycle. Its purpose is to have students develop an understanding of our basic needs, the family life cycle, family dynamics, communication skills, and the developmental tasks and responsibilities of individuals. From this students will enhance their ability to cope with societal changes thus enabling them to be healthy individuals who will contribute to healthy families and a functional society. Students need these family management and personal skills so they can adapt positively, in a complex world. Some of these skills have been introduced in Middle Level Technology. The components on Children and You, Relationships, Family Living I and Foods and Lifestyles are closely related to the 9/10 program.

Students are to receive a minimum of 40 hours over the two-year period (9/10) in Human Ecology.

Subject : **Human Ecology**

Strand	Grade 6-8	9/10 Program	11/12 Program
Family living	Food and lifestyles Clothing decisions Children and you	Family dynamics and family life cycle Maslow's Hierarchy of needs and its relationship to the family Family forms and the effects of societal changes Communication skills to promote nurturing parents	Human Services 110 Hospitality and Tourism 110 Early Childhood Services 110/120 Fashion Technology 110/120 Child Studies 120 Family Living 120 Nutrition for Healthy Living 120 Culinary Technology 120 Fashion Design 120 Housing and Interior Design 120

Personal Development and Career Planning (Guidance)

The Personal Development and Career Planning curriculum consists of structured developmental experiences presented systematically through classroom and group activities kindergarten through grade twelve. The purpose of the curriculum is to provide all students at all levels with knowledge of normal growth and development, to promote their positive mental-health and to assist them in acquiring and using life-skills. While counsellors' responsibilities include the organization and facilitation of the Guidance Curriculum, the cooperation and support of the entire staff are necessary for its successful implementation.

Counsellors should not have sole responsibility for the delivery of the Personal Development and Career Planning Curriculum. They act as consultants to the teachers who are responsible for the delivery and may be involved in direct delivery as members of a team. The curriculum may be delivered through both classroom and group activities.

Individual planning consists of activities that help the students plan, monitor, and manage their own learning as well as their personal and career development. Within this component, students evaluate their educational, occupational, and personal goals. The activities in this component are planned and directed. These activities are generally delivered by working with individuals in classes, small groups, advisement groups or on an individual basis. Individual planning is implemented through such strategies as individual appraisal, individual advisement, placement, and portfolios.

The outcomes for Personal Development and Career Planning are organized around three strands: personal development, life-long learning, and career exploration and planning.

Students are to receive a minimum of 40 hours over the two-year period (9/10) in Personal Development and Career Planning. Many of the expectations of these areas can be met through curriculum integration, while others must be addressed separately.

Subject : **Personal Development and Career Planning**

Strand	Grade 8	9/10 Program	11/12 Program
Personal Development	Develop an understanding of themselves and others; an understanding of the necessity for assuming responsibility for personal behaviours; an acceptance of the similarities and differences among people and an understanding of the behaviours necessary for maintaining responsible interpersonal relationships.	Demonstrate knowledge of the influence of a positive self-concept; an ability to communicate and interact positively with others; knowledge of the importance of individual growth for oneself and others and demonstrate responsible decision making skills.	Acquisition of an appropriate sense of personal worth, potential and autonomy; acquired ability to plan, select and practice skills that promote growth for self and others.
Life Long Learning	Describe how they learn and the skills that lead to becoming a life long learner. Describe effective problem-solving and decisions making skills for personal and educational issues.	Identify what motivates them to learn, including identifying the skills that lead to becoming a life-long learner. Identify effective problem-solving and decision making skills for personal and educational issues.	Participate in life long learning endeavours.
Career Exploration and Planning	Explore a personal transition plan.	Actively participate in the development of a personal transition plan.	Review, revise and implement personal transition plan.

Background

The *Commission on Excellence in Education* was established in November 1991 to help foster excellence in education, training, and human resource development in New Brunswick. Following widespread consultation, the Commission produced its report : *Schools for a New Century: The Report on the Commission on Excellence in Education* (May 1992). The report contained a number of recommendations with direct implications for high school education in New Brunswick, including

➢ "a physical and philosophical reordering of the current grade structure … the extension of high school … to include grade 9" (Rec 23),
➢ "the curriculum reflect a commitment to provide for the development of the whole child … study of the humanities, mathematics and sciences, fine arts, and practical arts." (Rec 24a), and
➢ "the high school program (grades 9-12) should consist of a broad common core, with a limited number of options relating to the intended career goals and interests of the students." (Rec 24b).

Extensive discussion followed the release of the Commission's report. As a result of The *High School Issues Paper* (April 1994), educators from around the province attended the High School Issues Conference in Moncton in order to examine issues related to high schools. The *High School Framework* document (1995) offered a description of the four year program (9/10 Foundation Program, 11/12 Graduation Years Program). The Department of Education conducted a review to look at the state of the implementation of the High School Foundation Program in May 1997. The Department, in consultation with the New Brunswick Teachers' Association, hired two educators to conduct the review. They found that there was a wide acceptance of the program, and indicated in the *High School Foundation Program Status Report* (June 1997) that they "found many things in praise of the High School Foundation Program", but they also learned "there is misinformation and illusions that cloud the implementation" (p.2). The New Brunswick Teachers' Association indicated in its Report (*Foundation Program - A Survey of Teachers, 1998)* that it felt a crisis situation existed at the 9/10-grade level.

The Minister of Education announced the formation of the High School Foundation Program Task Group on April 15, 1998. The Task Group consisted of thirteen members: seven nominated by the New Brunswick Teachers' Association, and six nominated by the Department of Education. The Task Group presented its report, which contains twenty-four recommendations, to the Minister on April 30, 1998. Each of the recommendations has been acted upon.

Following a series of meetings, in January 1999, involving the Deputy Minister and the principals of all schools involved at the 9-12 level, an ad hoc committee was identified and charged with the responsibility of recommending the fine tuning necessary. *The Four Year High School* identified the principles guiding the 9/10 program, and described a structure for the 11/12 program that would see a move from four credits per semester to one that would involve five credits. Sixteen schools are currently involved in research in this area.

The Deputy Minister met again with the high school principals in November 1999. The issues for the meeting were solicited from the principals prior to the meeting. The principals asked for a clarification of the features of the 9/10 program, and for an increased level of communication of the philosophical and practical matters involving 9/10.

In response to the questions and issues raised about the 9/10 program at the November Principals' Meeting, input was sought from Superintendents and members of the Provincial Board. The Minister's Advisory Committee *(* on 9/10 was convened to clarify the direction for those two years of the four-year high school.

The four years of high school, referred to as "The High School Program", consists of two basic units, the 9/10 program and the 11/12 program. The basic core of skills, knowledge, competencies and experiences necessary for future learnings in the 11/12 program and beyond is the central focus of public education from kindergarten to grade ten. The distinguishing features of grade nine are the common curriculum, heterogeneous grouping, scheduling by classes or teams and student promotion decided by teachers/the teaching team on an all or nothing basis. Grade ten is defined by the opportunity for some curriculum choice, heterogeneous grouping with the option to ability group in Mathematics and English language arts, teaming where possible, and promotion by subject. Students in the 11/12 program are then encouraged to concentrate on areas of interest and talent through an array of compulsory and elective courses.

Our education system in New Brunswick has been organized into groupings of students who share fundamental developmental features (early years/elementary, middle level and high school), which, in turn, have an impact on the organization of the school, and on the delivery of curriculum. Within the four years of high school, an examination of the developmental stages in such areas as physical, social/emotional, cognitive and language development, may indicate that the needs of grade 9/10 students would be better met using different organizational systems and different pedagogies than those more appropriate for their older colleagues *(High School Framework Document)*. In addition, the expectations of post-secondary institutions

and employers more keenly impact the content and processes of the grade 11/12 experience, but should not be the major concern of the 9/10 curriculum.

The Atlantic Provinces Education Foundation has identified for graduating students the required skills and knowledge, referred to as the Essential Graduation Learnings (EGLs). These EGLs have an important influence on the choice of subjects and the content of subjects at all levels. Subjects must be offered and taught in a manner that will contribute to the achievement of the Essential Graduation Learnings which are listed under the headings of aesthetic expression, citizenship, communication, personal development, problem solving and technological competence. These Learnings describe expectations in terms of knowledge, skills, and attitudes, not in terms of individual subjects. They confirm that students need to make connections and develop abilities across subject boundaries if they are to be ready to meet the shifting and ongoing demands of life, work and study today and in the future.

The developments at the high school level are consistent with New Brunswick's *Mission Statement:* to have each student develop the attributes necessary to be a lifelong learner, to achieve personal fulfillment, and to contribute to a productive, just, and democratic society. The goal of the New Brunswick public education system: to have each student reach full potential by nurturing intellectual, personal, and social and career development, is also reflected in the developments.