



HIGH SCHOOL PROGRAM  
**Course Selection Guide**

Landmark East School  
708 Main Street  
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CANADA

*Canada's Independent School  
for Students with Learning Disabilities*

[www.landmarkeast.org](http://www.landmarkeast.org)

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## INTRODUCTION

In its High School Program, Landmark East provides an educational experience that will allow students with learning disabilities the opportunity to develop their abilities, skills, and self-confidence such that they can become enthusiastic independent learners capable of meeting their full academic, physical, social, and emotional potential.

The Landmark East High School Program offers both required and elective open and university preparatory courses. These courses follow the philosophy, outcomes, content, scope, and sequence of the Nova Scotia Public School Program high school courses through adaptive strategies specifically designed to meet the individual needs of students with learning disabilities in the areas of methods of instruction and methods of evaluation.

It is the goal of the Landmark East High School Program to enable students with learning disabilities to achieve a Nova Scotia High School Graduation Diploma. This is facilitated through the benefit of a small pupil-teacher ratio (approximately 8:1) and adaptive instructional and evaluation strategies designed for students with learning disabilities. Students receiving this Nova Scotia High School Graduation Diploma will be able to continue their studies at post-secondary institutions.



## VARIATIONS TO PUBLIC SCHOOL PROGRAM

As previously mentioned, the Landmark East High School Program courses follow the guidelines of the Nova Scotia Public School Program. It is felt, however, that in order to best meet the needs of students with learning disabilities, the following variations to the Public School Program need to be made.

### **Adaptive Strategies for Students with Learning Disabilities**

#### I. Instructional Strategies

##### A. Organization

1. Establish a daily classroom routine
2. Model an organized desk and classroom
3. Allow class time for students to organize materials
4. Check that students keep hand outs, notes, and materials organized
5. Keep page formats simple (reduce visual distractions)

##### B. Giving Directions

1. Reduce noise level and/or background noise
2. Stand near the student
3. Obtain eye contact
4. Keep directions simple and to the point
5. Avoid multi-step directions
6. Avoid abstract terminology
7. Use visual aids whenever possible
8. Have another student repeat back what is required
9. Repeat essential details again

##### C. Structuring Assignments

1. Give an explanation of the purpose of the assignment
2. Success orient assignments as much as possible
  - a. Limit choice of topics
  - b. Connect assignment topics directly to class content
  - c. Relate long term assignments to student's knowledge and interests



- d. Make directions clear and succinct
    - i) Hand out directions in "step form" and discuss
    - ii) Check that student records directions accurately
    - iii) Combine teacher hand outs and student notes for clarification
  - e. Discuss marking system and expectations
  - f. Keep expectations consistent
  - g. Set specific goals with the student
3. Show students how to structure assignments
- a. Check that student understands assignment  
*What is the teacher asking me to do?*
  - b. Help break assignment/directions into headings or parts  
*What do I need to do/answer to completely finish the assignment?*
  - c. Help break long term assignments into parts and organize dates on a calendar or in a daily planner  
*What steps do I have to go through to complete the assignment?*
4. Frequently check that student understands the assignment and is meeting set due dates
5. Structure reading assignments
- a. Give the purpose or assignment prior to the student actually reading the material
  - b. Reduce the amount of reading required
    - i) Allow student to use books, magazines, etc. on tape
    - ii) Allow a peer or a parent to read to the student
    - iii) Guide student to material that is appropriate to reading level
    - iv) Highlight important paragraph/sections to be read
  - c. Assign reading in advance
  - d. Set deadline dates for chapters or sections to be read
6. Structure writing assignments
- a. Teach the writing process (brainstorming, outlining, first draft, revising/editing/proofreading, final copy)
  - b. Monitor each stage of the writing process
  - c. Allow extra time for brainstorming and outlining
  - d. Help student during revising/editing/proofreading stages
    - i) Proofread first draft with the student
    - ii) Allow a pre-selected peer or parent to proofread first draft with the student
    - iii) Provide a proofreading checklist of important "parts" for the student to look for
7. Structure math assignments



- a. Relate activities/concepts to real life situations
- b. Teach students to understand the set-up and flow of their textbooks
- c. Simplify visual presentation of textbook material
- d. Explain textbook examples
- e. Discuss and show students how concepts are transferred from one area to another
- f. Develop a reference section in class books for students to keep notes, example questions, formulas, sample methods, etc.
- g. Require students to show *all* work (this allows the teacher to find and address problem areas)
- h. Model the process of *finding* a solution rather than just giving answers
- i. Be prepared to provide more practice questions than given in the textbook
- j. Adjust homework expectations
  - i) Give homework to practice concepts
  - ii) Select a limited number of questions that cover the range of problems
  - iii) Set a time limit for homework

8. Provide extra time for reading, writing and math assignments

#### D. Designing Tests and Exams

1. Tests will reflect a balance between factual recall and understanding of processes
2. Emphasis of test will mirror class content
3. Develop clear, easy to follow format
  - a. Well spaced out
  - b. Neatly handwritten or typed
4. Include a variety of activities with an emphasis on visual cues
5. Develop clearly worded questions so directions and expectations are understood by the students
6. Design paragraph and essay questions that can be answered by students at various levels
7. Include visual cues to supplement written answers
8. Avoid surprise questions
9. Start out with questions the student is likely to know



10. Avoid fill-in-the-blank questions for students with word retrieval difficulties unless a word bank is given

E. Studying

- Teach students the process of studying
- Model and encourage the process whenever possible
- Allow students to practice various methods to develop a personalized study routine

1. Discuss the format of a test or exam before studying

- a. Types of questions
- b. Values of each questions
- c. Expectations of answers

2. Assist in study preparation

- a. Provide an outline of topics to be studied  
or  
Develop an outline of topics to be studied with the student or class  
or  
Check an outline of topics developed by the student
- b. Model various active study techniques
  - i) Writing notes/outlines
  - ii) Anticipating test questions
  - iii) Studying with a motivated partner
  - iv) Using visual techniques
  - v) Practising writing answers to questions
  - vi) Re-reading notes/outlines
  - vii) Predicting essay questions
- c. Provide class time to practice study techniques
- d. Assign specific study tasks for homework



3. Prepare students for test taking
  - a. Read entire test before beginning
  - b. Decide on time allotted per question based on point value
  - c. Avoid perseveration - skip question and come back, etc.

## II. Evaluation Strategies

- Base evaluation on student's previous performance rather than in comparison with classmates
- Evaluate at regular intervals through formal procedures
- Evaluate daily through informal procedures
- Match evaluation procedures with student's learning styles and strategies taught
- Discuss criteria for evaluation before, during and after assessment so that the student views evaluation as a learning experience
- Weight marks to reflect individual objectives set for the student
- Place greater emphasis on classwork and homework rather than tests and exams

### A. Written Expression

1. Consider language difficulties
  - a. Spelling errors
  - b. Syntax/grammar
2. Accept outlines for in-class essays/answers
3. Allow another person (teacher, parent, peer) to proofread first draft with student
4. Give points for all parts of writing process (brainstorming/gathering notes, outlining, first draft, editing/revising, second draft, proofreading)
5. Allow students to receive extra credit for redoing or improving assignments



B. Class Participation/Organization

1. Give credit/marks for enthusiasm and willingness to participate
2. Allow student to receive marks for asking questions
3. Mark class notes and homework for organization and completeness

C. Tests/Exams

1. Allow tests and exams to be untimed and encourage student to use this extra time
2. Provide options to written tests/exams
  - a. Oral tests/exams
  - b. Supplement written answers with oral answers
  - c. Read test instructions to student
  - d. Open book tests/exams
  - e. Allow "rule books" to be used
3. Arrange for test/exams to be completed away from distractions
4. Weight tests/exams to student's areas of strength
5. Adapt questions to cue individual students to all parts
6. Monitor amount of time student spends on each question to ensure that time is spent appropriately
7. Include a mark for outlining/organizing longer answers
8. Allow students to receive partial marks if process leading to an answer is correct
9. Allow for processing delays or oral expression difficulties
  - a. Give the occasional clue to stimulate full answers
  - b. Allow hand gestures and "*you know, it's like . . .*"
  - c. Give choices — "*Do you mean \_\_\_\_\_ or \_\_\_\_\_?*"
  - d. Be patient and allow extra time for answers to be processed



## Appropriate Course Selection

It is important for each student to select the proper courses to meet their individual needs and abilities. Choosing the appropriate courses is dependent upon two important considerations:

- (1) Choosing courses which will satisfy entrance requirements at a post-secondary institution
- (2) Choosing courses which will offer intellectual stimulation yet at the same time allow for personal achievement and understanding.

## Graduation Requirements

In order to be able to receive a Nova Scotia High School Graduation Diploma, students within the Landmark East High School Program are required to have a minimum of 18 credit courses to fulfil requirements for graduation although it is recommended that students complete more credits if possible. The following compulsory credit courses must be taken *and passed*:

- 3 English language arts, one at each grade level
- 2 mathematics
- 2 science (one from Science, Biology, Chemistry or Physics; one other approved science course)
- 2 other from technology, science, or mathematics (eligible technology courses include Computer Related Studies)
- Canadian History 11
- 1 global studies (either Global History or Global Geography)
- 1 fine arts
- 1 physical education at the grade 10, 11 or 12 level
- complete a minimum of 5 credits from grade 12
- complete no more than 7 credits from grade 10 towards the 18 credits

## Course Load

A *maximum* of 7 credits at the grade 10 level may be counted towards graduation requirements. A *minimum* of 5 credits must be at the grade 12 level in order to meet graduation requirements.



## Course Identification Coding

Courses offered in the Landmark East High School Program are coded using the Public School Program Course Identification Coding. These courses are identified by course title, grade level (10, 11 or 12), course coding and credit type (academic, open or graduation).

eg: English 10 (academic, 1 credit)  
Course Code: 004084

Child Studies 11 (open, 1 credit)  
Course Code: 005005

Mathematics Foundations 10 (graduation, 1 credit)  
Course Code: 008009

## Course Credit Types

Each course is categorized as one of the following types:

### ***Academic***

These courses are designed for students who expect to enter college, university or other post-secondary institutions.

### ***Open***

None of these courses are designed to meet the specific entrance requirements of any post-secondary institution. These courses will not be accepted by most universities, but will be accepted by community colleges.

### ***Graduation***

These courses are designed for students who wish to obtain a graduation diploma with a view to proceeding to employment or to community college.



## Registration Information

It is important that you select courses which best suit your individual interests, abilities, and goals. Therefore, careful consideration should be given to enrol in courses which satisfy these needs. In order to try and do this, you should do the following:

- Carefully and realistically assess your own strengths, weaknesses, interests, and goals
- Consider how the course fits into your possible career plans after leaving school (work, community college, university, etc.)
- Discuss your ideas with your parents
- Discuss your plans with your Educational Consultant, Guidance Counsellor or the Head of School either during your admissions interview or by phone
- Complete the Landmark East High School Program Preliminary Registration Form. (If you will be entering grade 10, your grade 9 diploma or report card must be submitted along with the Preliminary Registration Form. If you wish to transfer high school credits, a transcript and descriptions of courses completed successfully from your previous high school must be submitted along with the Preliminary Registration Form.)

Once registration of all students is complete, you will be contacted regarding the courses which will be offered in the Fall. If a sufficient number of students have pre-registered in a given course, it will be possible to offer it; if not, then that course may not be offered. If a course which you have selected on the Preliminary Registration Form is not going to be offered, you will be assisted in choosing an alternative course from the list of courses that will be offered which best satisfies your needs.



# Timetabling

## Academic Courses

Academic courses to be offered in the Landmark East High School Program are timetabled into daily 45-minute periods. Once again, it is felt that this best suits the needs of students with learning disabilities. This routine of timetabling will allow for daily reinforcement of concepts and skills, enabling the students to process concepts more readily and to develop their skills on a continual basis. Allowing students to have the same schedule each day of the week will also help to provide the organization and structure that they generally need. Students with learning disabilities often have attentional needs which make it difficult to attend to educational tasks for extended periods of time. Having periods of 45-minute durations will facilitate students' abilities to constructively attend to task during their high school classes.

## Support Period

Students in the Landmark East High School Program are involved in a 25-minute Support Period. During this period students may participate in the following activities:

- Assigned Reading (of literature and/or textbooks associated with courses)
- Assigned Course Work (working independently to complete assignments associated with courses)
- Remedial Help (meeting with teachers for extra help with concepts and/or skills and/or assignments associated with courses)
- Library Research (associated with course assignments)
- Labs or Projects (completion of science labs or other projects associated with courses)
- Computer Lab Activities (word processing assignments and/or practising of computer literacy skills)

## Study Hall

Students in the Landmark East High School Program participate in a Study Hall at the end of each academic day. The objective of the Study Hall Program is to aid each student in acquiring efficient homework and study skills, and to encourage each student to utilize these skills in order to gain greater independence and success in completing homework assignments. The Study Hall Program is a three-level program. As the student demonstrates responsibility and success at each level, he or she is promoted to a new level which, in turn, fosters even greater independence and responsibility.

- Level 1: Supervised Study Hall
- Level 2: Guided Study Hall
- Level 3: Independent Study Hall



# Course Descriptions

## Arts Education

### **Drama 10 (academic, 1 credit)**

Course Code: 004159

This is an introductory drama course designed to focus on the personal, intellectual, and social growth of students. This is accomplished through students exploring and communicating their ideas, experiences, and feelings via a number of dramatic methods. These methods include improvisation, dramatic movement and mime, dramatization, choral speech, choric drama, group drama, and Readers theatre. Drama 10 is composed of four components: foundation, movement, speech, and theatre.

### **Drama 11 (academic, 1 credit)**

Course Code: 004167

Recommended Prerequisite: Drama 10

Drama 11 builds upon that which was learned and experienced in the Drama 10 course. Students in Drama 11 will learn how to create scripts and to bring that script into production. Students will experience script using improvisation and other dramatic methods to facilitate their understanding of the original script and to create a new script for performance. This course also focuses on the various aspects of the presentation and performance of a theatre production including lighting, sound, stage movement and blocking, and costume. The three main components of Drama 11 are: foundation, integrating movement & speech, and theatre.



### **Art 10 (academic, 1 credit)**

Course Code: 001004

This introductory art course focuses upon the development of basic art skills and upon the understanding of the core content of drawing and design, painting, sculpture, printmaking, art history, and mixed media.

### **Art 11 (academic, 1 credit)**

Course Code: 001005

Prerequisite: Art 10

This intermediate year art course builds upon the core content of Art 10. In Art 11 the concentration on drawing/design and art history will be continued with the other core components being painting, printmaking, and sculpture. The goals of this course are to assist students in developing greater skill and ability in and a greater understanding of each of the core component processes.

### **Art 12 (academic, 1 credit)**

Course Code: 001006

Prerequisite: Art 11

In this advanced art course students are given the opportunity to do work in depth in selected areas of the program. Specialization is encouraged. Drawing/design and art history are the two required components at this level with one additional component to be chosen from painting, printing or sculpture and one from the optional units.



## English Language Arts

### **English 10 (academic, 1 credit)**

Course Code: 004084

This course is designed to improve students' abilities to speak, listen, read, write and think. Emphasis is placed on critical thinking, oral and written communication, and collaborative learning skills. In this program, writing and revision are viewed as a learning process using a workshop approach where evaluation is continuous. Through their reading and writing, students will explore diverse forms including poetry, drama, fiction, information texts, reconstruction of information, description, journals, letters, personal and critical responses to literature and media.

### **English 11 (academic, 1 credit)**

Course Code: 004162

Writing in this course includes study and practice in paragraphing and essay writing, book reviewing, letter writing, journal writing, strategies for organizing writing, shorter composition assignments, character analysis papers, interpretive analytical writing and thesis-based writing. Novels, plays and poetry will be both student-selected and teacher-selected. A variety of formal and information speaking activities is required.

### **English 12 (academic, 1 credit)**

Course Code: 004165

Students will develop their own writing style through essays, research papers, descriptive writing, etc. Students will examine a range of styles, including Renaissance drama, and contemporary literature. Short stories will be studied from a thematic and stylistic point of view. Novels will be studied according to the thematic and narrative approach, the writer's background, and the influence of the times.



# Entrepreneurship Education

## **Entrepreneurship 12 (academic, 1 credit)**

Course Code: 002098

This course is designed to help students acquire the knowledge, skills, attitudes, and values they will require, in innovative ways, to meet many of the opportunities and challenges of citizenship as employees, or as independent business people. Entrepreneurship is divided into three sections: a theory component, an action component, and a business planning component, all of which run concurrently.



## Family Studies

Senior high family studies addresses issues of social, political, and economic importance to families. Emphasis is placed on researching issues of social concern, questioning social practices, and being involved in rational argument and debate.

An understanding of community support services for individuals and families enables students to see various issues from a broad perspective. Guest speakers, visits to community agencies and institutions, opportunities to work/volunteer in community settings, or research projects on issues of community concern all help to develop that students' understanding of family issues.

### **Child Studies 11 (open, 1 credit)**

Course Code: 005005

This full-credit course is designed to help students explore the meaning and implications of responsible parenthood, to help them acquire current information regarding reproduction, pregnancy, and childbirth, to help them explore significant issues of early childhood, and to help them apply the understanding of child development to the care and guidance of children. The course is developed around five units:

1. Decisions about Parenthood (the decision to become a parent, parenthood alternatives)
2. The Beginning of Parenthood (human reproduction, pregnancy, childbirth, the newborn)
3. Early Childhood Development (the infant, the toddler, the preschooler, the school-age child)
4. Special Concerns in Child Development (daycare, children with special needs, children in crisis, support services, occupational opportunities with children)
5. Practical Experiences with Children (in-school practicum or out-of-school practicum)

### **Canadian Families 12 (open, 1 credit)**

Course Code: 005065

This full-credit course is designed to develop an understanding of the nature of families in historical, social, and cultural contexts; to promote awareness of the role played by economics, work, and shelter in maintaining successful families; and to examine the physical, social, and emotional dimensions of family health in adopting a preventive approach to family well-being. This course is developed around three units:

1. Images of Families (historical perspective, families today, family law, families of the future)
2. Family Development (relationships, family arrangements, parenting, families in later life, death as a process)
3. Family Well-Being (family health, family economics, family and work, family shelter)



# Mathematics

## Mathematics Foundations 10 (graduation, 1 credit)

Course Code: 008009

The main focus of this course is to provide a means for those who will be entering community college. The course is not acceptable for credit at university and thus students who are not sure if they wish to attend university may be limited as far as the institutions and programs they can select. This course offers a blend of basic computational skills and many practical skills. The purpose of the course is to build a solid foundation of understanding in mathematics.

Students in Mathematics Foundation 10 will explore the following areas:

1. Data Management
2. Networks and Matrices
3. Patterns and Equations
4. Modelling and Functions
5. Trigonometry
6. Geometry of Packaging

## Mathematics 10 (academic, 1 credit)

Course Code: 008008

Prerequisite: Grade 9 Academic Mathematics

This is an academic course offered primarily for those intending to enter university. It is recommended that those students who have experienced trouble with previous math courses and not intending to continue their education at the university level consider enrollment in the *Mathematics Foundations 10* (008009) course.

Students in Mathematics 10 will explore the following areas:

7. Data Management
8. Networks and Matrices
9. Patterns and Equations
10. Modelling and Functions
11. Trigonometry
12. Geometry of Packaging
13. Linear Programming



## **Mathematics Foundations 11 (graduation, 1 credit)**

Course Code: 008011

Prerequisite: Mathematics Foundations 10 or Mathematics 10

Students in Mathematics Foundations 11 will explore the following areas:

1. Making Choices - Linear Programming
2. Identity Study
3. Making Decisions in Consumer Situations
4. Statistics
5. Trigonometry

## **Mathematics Foundations 12 (graduation, 1 credit)**

Course Code: 008013

Prerequisite: Mathematics Foundations 11, Mathematics 11 or Advanced Mathematics 11

This main objective of this course is to provide a solid basis in applied mathematics for those who intend to enter directly into the working world, a community college, or the everyday life of the consumer. Students who are still not sure if they wish to attend university, technical schools, etc. and who are considering this course as the mathematics credit in their senior year may be limited as far as the institutions and programs they can select.

Students in Mathematics Foundations 12 will explore the following areas:

1. Sequences (Patterning)
2. Quadratics
3. Exponential Growth
4. Circle Geometry
5. Probability



**Grades 11 and 12 Mathematics:** Recognizing that there are different needs and interests among the students in the university preparatory program, the Department of Education has approved the division of the mathematics program into two streams at Grades 11 and 12.

The basic difference between the courses is that Advanced Mathematics 11/12 and Pre-Calculus Mathematics 12 are designed for students who will have to take at least a full year Calculus course in their programs at post-secondary institutions whereas the Mathematics 11 and Mathematics 12 students would be enrolled in programs where this is not a requirement. While many of the topics in both courses are the same, students in Advanced Mathematics 11/12 and Pre-Calculus Mathematics 12 are expected to do more work with proofs, derivations and functional analysis. In Mathematics 11 and Mathematics 12 students will be exposed to a more application-based treatment of the topics.

Students in both courses need more than just a content preparation for university. Independent study, daily homework and completion of assignments will be required of all students to prepare them for other aspects of university study. Students must demonstrate a mature attitude toward their studies for the learning process to be the most productive. Students will be required to have a calculator for use in both these courses. Functional requirements will be discussed with students by teachers in the first weeks of the course.

NOTE: Students who are registered in an academic level math course are discouraged from registering also in a graduation level math course.

### **Mathematics 11 and Advanced Mathematics 11 (academic, 1 credit)**

Course Code: 008067 (Mathematics 11), 008145 (Advanced Mathematics 11)

Prerequisite: Mathematics 10

Students in Mathematics 11 and Advanced Mathematics 11 will explore the following subject areas:

1. The Algebra of 3-Space
2. Independent Study
3. Trigonometry
4. Statistics

### **Mathematics 12 and Advanced Mathematics 12 (academic, 1 credit)**

Course Code: 008073 (Mathematics 12), 008015 (Advanced Mathematics 12)

Prerequisite: Mathematics 11 or Advanced Mathematics 11

Students in Mathematics 12 and Advanced Mathematics 12 will explore the following subject areas:

1. Sequences (Patterning)
2. Quadratics
3. Rate of Change
4. Exponential Growth
5. Circle Geometry
6. Probability



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## **Pre-Calculus Mathematics 12 (academic, 1 credit)**

Course Code: 008156

Prerequisite: Mathematics 11 or Advanced Mathematics 11 and Mathematics 12 or Advanced Mathematics 12

Students in Pre-Calculus Mathematics 12 will explore the following subject areas:

1. Sequences and Series
2. Developing and Applying the Function Toolkit
3. Trigonometry
4. Complex Numbers



## Physical Education

Beginning in 2008-2009, students entering grade 10 will be required to earn one (1) physical education credit toward graduation. Therefore, students will need to take one (1) physical education course over three years at high school to meet the requirement. This new requirement will *replace* current requirements for the compulsory half-credit courses, Career and Life Management 11 and Physically Active Lifestyles 11. Students graduating in 2010 may use Career and Life Management 11 and Physically Active Lifestyles 11 credits or a physical education credit to satisfy graduation requirements.

The Physical Education program concentrates on developing in students the need to change sedentary lifestyles through active living, physical fitness, lifetime recreational skills, and leadership. The program is challenging but allows for personal achievement at various levels of participation. The program helps students understand that physical activity is necessary for maintenance of physiological efficiency.

### Physical Education 10 (open, 1 credit)

Course Code: 101028

Physical Education 10 provides students with a variety of fitness and sport experiences to enhance their understanding of personal fitness and growth. The course includes some theory components, coupled with predominately active experiences whereby students will have the opportunity to participate in a variety of indoor and outdoor fitness, sport, and recreational experiences. The emphasis of this curriculum is to provide students with experiences that require them to take, and reflect on their personal responsibility for active, healthy living now and throughout life. The course is divided into four (4) modules: Outdoor Pursuits, Exercise Science, Personal Fitness, and Leadership.

### Physically Active Living 11 (open, 1 credit)

Course Code:

Physically Active Living 11 promotes and engages students in a wide range of physically active experiences, with an overall theme of exploring options and opportunities for being active for life, both in school, and in their community. The course encompasses both an activity component, as well as a theory component, with an emphasis on engagement in physical activity. The activity component of the course is designed to provide opportunities for students in active experiences that promote and engage youth in traditional and non-traditional forms of physical activity. The theoretical component of the course will provide and enhance student understanding of healthy eating, injury prevention, mental and emotional health, and substance use highlighting the connection between healthy living and being physically active.

### Physical Education 12 (open, 1 credit)

Course Code: 101032

Physical Education 12 focuses on personal fitness, nutrition and sport. Activities include most traditional sports as well as life skill sports and activities with an emphasis on fitness training and testing. Theory is taught on personal nutrition, fitness, energy production and issues in sport. Students are expected to participate fully in all physical activities as well as complete basic theory work to meet course outcomes.



# Science

## Science 10 (academic, 1 credit)

Course Code: 011249

The aim of this course is to heighten students' awareness and understanding of the relationships among science, technology and society. The course is designed to provide students with the tools necessary to become scientifically and technologically literate.

The course is comprised of four (4) units:

1. Sustainability of Ecosystems
2. Chemical Reactions
3. Weather Dynamics
4. Motion

The course is designed to be a foundational science program that reflects the integration of biology, chemistry, and physics while emphasizing critical thinking, technological literacy, communication, and numeracy as well as personal and social values and skills.



**Biology:** Biology 11 and Biology 12 emphasize the science themes: change, diversity, energy, equilibrium, matter, and systems. In addition to developing a solid understanding of fundamental science concepts and principles, Biology 11 and Biology 12 have the goal of educating students about the nature of science and technology, and the interaction between biology and technology.

### **Biology 11 (academic, 1 credit)**

Course Code: 011153

Note: Students with a grade 10 Biology credit cannot take this course.

The Biology 11 course is based on the following four units of study:

Unit 1: Biodiversity

Unit 2: Energy Flow and Cellular Matter

Unit 3: Energy and Matter Exchanged by Humans and Other Organisms

Unit 4: Energy and Matter Exchange in Ecosystems

Unit 1 introduces the cell as a basic unit of life, explores the diversity of organisms in the biosphere and the unity among living things by organizational systems.

Unit 2 traces energy flow as it moves from the environment through photosynthetic and cellular respiration systems. Unit 2 also explores the associated cycling of matter in the biosphere.

Unit 3 examines those systems responsible for exchanging energy and matter with the environment, in addition to interacting with pathogenic organisms. The human organism is used as a principle model for this unit.

Unit 4 examines the characteristics of representative ecosystems and the interaction of organisms that mediate the flow of energy and matter through those ecosystems. Unit 4 also explores how organisms change to fill available niches.



## **Biology 12 (academic, 1 credit)**

Course Code: 011156

Recommended Prerequisite: Biology 11

The Biology 12 course is based on the following four units of study:

- Unit 1: Systems Regulating Change in Humans and Other Organisms
- Unit 2: Reproduction and Development
- Unit 3: Chromosomes, Genes and DNA
- Unit 4: Change in Populations, Communities and Species

Unit 1 introduces cells as specialized biochemical units that process various organic compounds. The human organism is used as the principle model during detailed examination of chemical and electrical systems that regulate change to maintain equilibria.

Unit 2 utilizes the human organism as the principle model for detailed examination of how genetic, hormonal, and environmental factors cause change during the reproduction and development of organisms.

Unit 3 explores chromosomes, genes, and DNA and their responsibility for diversity and change in living systems. This topic is examined in detail over a wide range of organizational levels from molecular to organism.

Unit 4 explores equilibrium and change in population gene pools, and the consequences of such change at the community systems and species level including the theory of evolution.



**Chemistry:** The Chemistry program emphasizes the science themes: change, diversity, energy, equilibrium, matter, and systems. The program encourages students to participate in lifelong learning about chemistry and to appreciate it as a scientific endeavour with practical impact on their lives and on society as a whole.

## **Chemistry 11 (academic, 1 credit)**

Course Code: 011149

Prerequisite: Mathematics 10

The Chemistry 11 course builds on the fundamental attitudes, skills, and knowledge acquired in Science 10. The course is based on the following four units of study:

Unit 1: Matter and Energy in Chemical Change

Unit 2: Matter as Solutions and Gases

Unit 3: Quantitative Relationships in Chemical Changes

Unit 4: Chemical Bonding

Unit 1 investigates the changes in matter and energy that occur during chemical reactions.

Unit 2 focuses on the nature of matter, specifically solutions and gases, by examining their properties, identifying patterns, and analysing changes.

Unit 3 explores the quantitative relationships in chemical reactions and provides opportunities for students to predict masses of substances reacted or produced as a chemical change.

Unit 4 extends models of atoms to models of bonding as the properties of matter and theoretical explanations about its behaviour are linked.



## **Chemistry 12 (academic, 1 credit)**

Course Code: 011151

Prerequisite: Chemistry 11

Chemistry 12 provides an in-depth exploration of various topics intended for students pursuing post-secondary chemistry. The course is based on the following four units of study:

Unit 1: The Diversity of Matter: An Introduction to Organic Chemistry

Unit 2: Thermochemical Changes

Unit 3: Equilibrium: Acids and Bases in Chemical Changes

Unit 4: Electrochemical Changes

Unit 1 involves investigations of organic compounds and comparison of organic compounds to inorganic matter. Organic reactions in living and non-living systems are also investigated.

Unit 2 explores how heat, a form of energy, is absorbed or released in chemical reactions. Changes in physical and nuclear systems are explored for comparison.

Unit 3 explains that few chemical reactions proceed in only one direction and investigates chemical systems at equilibrium.

Unit 4 examines electrochemical systems, analyses oxidation-reduction systems, and quantifies the matter and energy involved.

## **Food Science 12 (academic, 1 credit)**

Course Code: 11026

Food Science 12 is based on the following four units of study:

Unit 1: Food Constituents

Unit 2: Preservation Factors

Unit 3: Food Quality and Commodities

Unit 4: Food Packaging

In this course students investigate the chemical and physical properties of food. In addition to notetaking, outlining and writing, emphasis will be placed on project and lab work.



## **Oceans 11 (academic, 1 credit)**

Course Code: 011214

Oceans 11 is an academic course that satisfies the second science credit requirement for high school graduation.

Oceans 11 offers students the opportunity to explore aspects of global and local oceanography and current ocean-related issues. The course is designed to be flexible and meet the needs and interests of Nova Scotian students by connecting the study of oceanography with local economic and community interests. One of the priorities of the course is to increase students' knowledge of emerging new economics and opportunities in such areas as aquaculture and oceans management, which offer new career opportunities.

All students are required to complete two compulsory units:

Unit 1: Oceans—Structure and Motion

Unit 2: The Marine Biome

The remaining two units are selected, based on school and community interest, from:

Unit 3: Aquaculture—Farming and Oceans

Unit 4: The Fisheries Resource

Unit 5: Our Coastal Zones—Managing Their Use

Unit 6: Ocean Industries

Unit 7: Coastal Navigation



**Physics:** The Physics program is designed to challenge and engage students with a wide range of backgrounds to understand concepts and to apply their knowledge to new situations. The program, through its many hands-on and minds-on experiences, enables students to see connections between physics and other sciences, as well as seeing how physical principles underlie many of the seemingly unrelated facets of their everyday world.

## **Physics 11 (academic, 1 credit)**

Course Code: 011150

Prerequisite: Science 10 and Mathematics 10

The Physics 11 course is based on the following three units of study:

Unit 1: Waves

Unit 2: Electricity and Magnetism

Unit 3: Atoms

Unit 1 explores the common characteristics of mechanical, sound, and light waves including interference and energy transfer.

Unit 2 explores the action of electric and magnetic fields on matter and their associated properties. Students are given opportunities to investigate electric and magnetic fields in space.

Unit 3 explores the various models of the atoms and explains how the current model depends upon many twentieth-century ideas. Radioactivity, nuclear fission, and nuclear fusion are also examined.



## **Physics 12 (academic, 1 credit)**

Course Code: 011152

Prerequisite: Mathematics 11 and Physics 11

The Physics 12 course is based on the following five units of study:

Unit 1: Linear Motion

Unit 2: Forces

Unit 3: Two-Dimensional Motion

Unit 4: Impulse and Momentum

Unit 5: Work and Energy

Unit 1 investigates the relationship between uniform and accelerated motion.

Unit 2 explains how forces can be measured and represented as vectors. Friction, cohesion, and adhesion are examined as forces that can effect change in an object.

Unit 3 allows students to study two-dimensional motion, such as projectiles and to analyse the accelerated motion resulting in a non-linear path.

Unit 4 explores momentum and impulse as they relate to an object's motion. Students will discover that momentum is conserved no matter how complex the interaction of an object's movement may be.

Unit 5 explores the relationship between work and energy and how energy in a system can be changed by doing work. Students will learn that energy of an object or system remains constant as transformation takes place.



## Social Studies

### **Canadian History 11 (academic, 1 credit)**

Course Code: 012330

Canadian History 11 covers the following units: Globalization, Development, Sovereignty, Governance and Justice. Topics studied may include First Nations, Colonialism, Confederation, the World Wars, Free Trade, Constitutional Issues, Canada's Role in the Global Community, Industrialization, Human Rights Issues, and Immigration/Migration.

### **Economics 11 (academic, 1 credit)**

Course Code: 012023

Canadian Economics begins with a general study of the economy of the local community leading into selected aspects such as important private firms, important occupational groups, local unions, three levels of government, government spending, taxation; and expanding to the provincial and regional economy, to consider primary, secondary, and tertiary industries. Distribution of wealth and power, labour movement, free enterprise, crown corporations, taxation, and economic ties with the world are also considered as parts of the Canadian economy. Various economic principles, issues, and theories that affect the lives of students are included.

### **Economics 12 (academic, 1 credit)**

Course Code: 012024

National/International Economics, an extension of Economics 11, provides for a deeper study of selected economics issues as well as consideration of certain theories. The unit on microeconomics considers such topics as demand and supply; product differentiation; production; and markets. Macroeconomics considers national accounts; economic indicators and government policy; money, banking, and finance; and economic growth. There are also three optional units: history of economic ideas; international economy; and comparative economics.



## **Geography 10 (academic, 1 credit)**

Course Code: 012223

This course deals with physical geography. This course has been designed in two sections, Part A and Part B. Part A of the program is devoted to the Graphic Environment. Through it, students are helped to develop an understanding of the practical experience in constructing, using, and interpreting some of the image, map, and graphing skills commonly used by geographers to analyze the environment. Part B, The Physical Environment, deals with the various land, ocean, and atmospheric processes that are at work sculpting the face of the earth, as well as illustrating that Earth's ecosystems are in delicate balance and require careful stewardship. The following units of study are covered:

Part A — Graphic Environment

Unit 1: Data Collection

Unit 2: Data Processing and Representation

Unit 3: Data Interpretation and Utilization

Part B — The Physical Environment

Unit 1: Geographic Perspective

Unit 2: Land Environment

Unit 3: Ocean Environment

Unit 4: Atmospheric Environment

Unit 5: A Small Blue Planet

## **Geography 11 (academic, 1 credit)**

Course Code: 012019

This course covers contemporary Canadian geography with its regional and cultural diversities, and includes a systematic examination of such general characteristics as Canada's vast areas, its northern character, its climate, and its economic development. In the first half of the course, Canada is studied both in the context of its continental North American setting and through its component regions and sub-regions. The second half provides a thematic treatment of such topics as pollution, urbanization, resource development, changing technology, and rural life

## **Global Geography 12 (academic, 1 credit)**

Course Code: 012209

This course explores major themes that help us to understand the nature and origins of complex humanity/environment relationships in the contemporary world. Guided by the fundamental themes and skills of modern geography, students will pursue this exploration through eight compulsory: Our Fragile Planet: A Geographical Perspective; Perilous Processes: Our Planet at Risk; The Peopled Planet: Standing Room Only?; Feeding the Planet: Food for Thought; Global Resources: The Good Earth; Global Factory: For Whose Benefit?; Urbanization: A Mixed Blessing; The Future Planet: Under New Management. By using geographic skills and techniques, by learning and applying a body of skills and techniques, by learning and applying a body of geographic knowledge, and by developing their own planet management awareness, students will become informed global geography students.



## **History 10 (academic, 1 credit)**

Course Code: 012008

This course allows students the opportunity to develop an understanding of the concepts of civilization through the examination of the concept of civilization through the examination of the origins of civilization and a comparison of some civilizations that have contributed to the nature of the modern world. There are six broad chronological divisions in the course: (1) The Evolution of Human Beings; (2) The Birth of Civilizations (Mesopotamia, Egypt, China, Africa, the Americas, etc.); (3) Greece; (4) Rome; (5) The Middle Ages; and (6) The Renaissance and Reformation.

## **Global History 12 (academic, 1 credit)**

Course Code: 012169

This course examines major themes in the history of the post-World War II era. Students will examine these themes in five compulsory units: East-West: The role of Super Power in the Post-World War II Era; North-South: The Origins and Consequences of Economic Disparity; The Pursuit of Justice; Societal and Technological Change; Acknowledging Global Interdependence: The Legacy of the Twentieth Century. In their study of these units, students will examine history from three perspectives—social, economic, and political—and will use the research and inquiry skills of the historian. Throughout their studies, students will address the focus question of the course: "Has humanity emerged into a world whose actions are governed more by interdependence at the global level than by dependence or independence at the national or international level?"

## **Law 12 (academic, 1 credit)**

Course Code: 012028

The Canadian law course is designed to provide students with (1) a knowledge of law and its function in society, and (2) the opportunity to develop skills and attitudes that will enable students to understand the process of law. Topics include the Canadian legal system, crimes and crime control, injuries and wrongs, human rights, property rights, promises and agreements, business relations, family relations, and courts and trials.

## **Sociology 12 (open, 1 credit)**

Course Code: 012027

This course is designed to give an understanding of the basic aspects of sociology to allow for in-depth studies in Canadian sociological issues, and to allow for active participation of the students in a local community/sociological project. Canadian sociological issues that might be considered include the family, students and schools, poverty, minority groups, women in society, labour and management, conflict, crime in Canada, punishment and rehabilitation, and the future.



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## **Technology-Related Education**

### **Computer-Related Studies 12 (academic, 1 credit)**

Course Code: 100038

This is an academic course designed for students who are interested in studying computers and who want to expand their knowledge of computer technology. This is an excellent course to help students develop and apply computer literacy skills. Topics covered include word processing, managing information with database management software, introduction to and use of electronic communications (Internet, e-mail), and using electronic spreadsheets for problem solving, using applications programs, and creating programs through the use of a structured programming language.



## Special Services

### Learning Resource Strategies 10, 11, 12 (open, 1 credit)

Learning Resource Strategies is an elective, full-credit course which is offered within the Landmark East High School Program at the grade 10, 11 and 12 levels. This course is designed to help students acquire and implement the literacy skills (reading, writing), study skills, and course concepts necessary to succeed within the demands of a university preparatory level high school program.

This course is available to students who require supplementary reinforcement of literacy skills, study skills, and concept development, beyond that which would be provided within their other high school courses.

The outcome of this course is that students will demonstrate greater competency and independence in the skill areas focused upon so that they will be able to reach their full academic potential during their high school career.

In terms of the Landmark East High School Program, this course may be appropriate for students whose literacy abilities, study skills and/or general background knowledge need reinforcement. The objective is to help students meet the demands of their other high school courses.

The objectives for the Learning Resource Strategies credit course are as follows:

- To teach, reinforce and encourage independent implementation of remedial literacy skills (reading, written expression)
- To teach, reinforce and encourage independent implementation of study skills
  - (a) Organizational skills
  - (b) Research skills
  - (c) Note taking skills
  - (d) Time management for completion of short and long-term assignments
  - (e) Organizing study time
  - (f) Developing personalized active study routines
- To reinforce concepts and skills taught in content based high school courses



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# NOTES