High School Curriculum

LITERATURE & LANGUAGE

English 11 - Throughout this course, students will develop competence in thinking, reading, writing, speaking, and listening for multiple audiences and purposes; explore the use of writing to increase their critical thinking skills and to make sense of literature, the world and themselves; and develop writing skills through both academic and creative writing. Students will also look at pieces of non-fiction as a means of supplementing and adding depth and perspective to the study of literature.

English 12 - This class provides students with a platform to think critically as well as creatively, contemplate their personal perspective by understanding new ones, and gain insight into multiple cultures and literary periods. Through their study and exploration of different literary genres, you will have the opportunity to develop sophisticated reading and writing skills. Throughout this course, students will develop competence in thinking, reading, writing, speaking, and listening for multiple audiences and purposes; explore the use of writing to increase their critical thinking skills and to make sense of literature, the world and themselves; and develop writing skills through both academic and creative writing. Students will also look at pieces of non-fiction as a means of supplementing and adding depth and perspective to the study of literature.

Drama 11 - This course is comprised of 4 parts: foundation, movement, speech and theatre. Through discussion, journaling, reading, writing, practice and preparation and a final production, students will improve their dramatic creation skills and use a variety of techniques and forms. The students will work collaboratively and independently on scene creation, character development, and on their leadership abilities. The students will have an opportunity to present their final production to a group of students, families and guests in a chosen port.

French 11 & 12 - This course is designed to facilitate the development of French language and comprehension skills.

Students will develop their ability to:

- Understand the meaning of a text
- Understand the meaning of a spoken message
- Express themselves orally
- Write text

Content:

- The verb tenses (present tense, past tense, future tense, imperfect, conditional)
- Gender and number (masculine, feminine, singular, plural)
- The affirmative, negative and interrogative form
- Vocabulary related to everyday life
- Sentence structure
- The basic parts of speech
- The basic rules of pronunciation and spelling

HUMANITIES & SOCIAL SCIENCES

Canadian History 11 - This course addresses the study of Canadian history through the examination of continuing persistent questions that have shaped the development of Canada. These questions are addressed through the following five themes:
1. Globalization: What has been Canada's place in the community of nations, and what should Canada's role be?
2. Development: How has the Canadian economy evolved in an attempt to meet the need and wants of Canada's peoples?
3. Governance: Have governments in Canada, past and present, been reflective of Canadian societies?
4. Sovereignty: How have struggles for sovereignty defined Canada and how do they continue to define Canada?
5. Justice: How has Canada struggled for a just and fair society?

Global History 12 - Global History 12 journeys through a course of five compulsory units, each of which focuses upon an historical construct of the post-World War II era. The study of these units is based upon the historical method and employs political, economic, and social perspectives. The question that unifies the course overall is, '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?' The concept of power and the role it has played in the social, economic, and political history of the period is foundational to studying this question. Consistent attention to the varied requirements of this comprehensive and cohesive historical study will enable students to propose reasonable answers to the question: How did the world arrive at its current state at the close of the 20th century?

Global Geography 12 - Geography is the study of the physical and human environments of the world and the way in which these environments interact with each other. Using a systems perspective this course will consider interconnections and interdependence and explore our planet as a Global Village.

Unit 1- Systems Perspective – Everything is connected
Unit 2- Fragile and Dynamic Planet – Physical Geography
Unit 3- Food for Thought – Resources
Unit 4- A Numbers Game – Development and Population

Unit 5- City Slickers – Urbanization
Unit 6- Back to the Future – Potential, Possibility and Action

Political Science 12 - This course is comprised of three themes: Political Thinking, Comparative Government and International Politics.

The objectives of Theme 1: Political Thinking are:
1. to provide an understanding of the process of political decision making
2. to further an understanding of the democratic process
3. to establish awareness on the part of the student of different political points of view and to create in the student an element of political sophistication
4. to illustrate the relationship that exists in society between freedom, on the one hand, and responsibility on the other
5. to emphasize the above objectives in terms of their relevance to the Canadian political system.

The objective of Theme 2: Comparative Government is to compare and contrast the Canadian political process to the system(s) adopted in the United Kingdom, the United States of America and/or the Union of Soviet Socialist Republics.

The objective of Theme 3: International Politics is to give the student an understanding of the development and importance of international relations. This understanding is brought about by examining such concepts as balance of power, dynastic marriages, territorial rivalry, ideological rivalry, international peace forums and international economic relations.

Economics 11 - This course is designed so that students will understand economics to be a discipline consisting of a body of knowledge and a method of inquiry. Topics covered include: the functions of an economic system, the application of the concepts of specialization and division of labour, money and banking, inflation and its influence on the economy, index numbers and the cost of living, GNP, the relationship between spending and employment, the classical roots of economic principles, the economics of government, economics and specialization, income distributions, interdependence in an economy, basic economic theories and systems, economics and developing countries.

Anthropology 12 - Study of culture, cultural interactions and people. Introduction to four areas of study: Physical, Biological, Linguistics and Archaeology. Relation of themes of study to the various ports of call visited throughout the school year. Students are expected to demonstrate knowledge of the above topics through written work and oral presentations.

Psychology 12 - General Psychology is designed to introduce the student to the history of psychology and explore the biological influences on psychology, personality theorists, and the theories of learning and the principles of learning. Other topics covered in this course include: the learner, how to learn efficiently, the process of thinking, facing frustration and conflict, roles, behavior disorders and their treatments, introspection and self-growth.

Aboriginal Studies 12 - Students will gain a greater understanding of the current issues facing Aboriginal peoples worldwide. Aboriginal Studies 12 enables students to demonstrate an understanding of the issues of Aboriginal rights and self-government, Aboriginal land claims, Aboriginal peoples in Canadian

society and Aboriginal world issues. By the end of the course students will: demonstrate an understanding that Canadian Aboriginal peoples have an inherent right to self-government and self-determination; demonstrate an understanding of Aboriginal land rights, entitlements and current land claim negotiations with the Government of Canada; demonstrate an understanding of the impact of colonialism experienced by Aboriginal peoples in Canada; demonstrate an understanding that indigenous peoples around the world face common issues in their history, geography, politics, economics, education and culture.

Design 11/Multimedia 12 - These courses focus on the importance of communication by using the written word in many different genres ranging from the informal to the formal and technical. Emphasis will be placed on the development of effective writing skills and improving editing proficiency. Topics include the following; fiction and creative writing; technical writing; critical writing; interviewing; travel writing; editorial writing; orally presented written work and response, and reading written work and response. At the end of the course, the student will be able to write, using clear, concise and proper language in a variety of genres; edit his/her own work or another student's work by looking at grammar, spelling, structure and style; prepare his/her work to be published using desktop publishing software, including layout and design. These courses will also include elements of design such as aesthetic expression, product design and the use of processes and technologies in solving design problems.

Sociology of Community 11 and 12 - This course is compulsory for all Class Afloat students and serves as the cornerstone for building, living, extracting and applying the life experience that is Class Afloat. The course consists of four 55-hour modules. Using foundational matrices and the constructs of classical and contemporary social theory, students will learn the various means of generating, analyzing, interpreting, presenting and applying new knowledge about themselves and the world in which they live. Students who successfully complete each module will be able to articulate and to demonstrate a clear sense of self, of the community they are building and the milestones by which they will measure their development within the microcosm of the school and vessel and the macrocosm of the global community. They will acquire a sound knowledge of the instruments of sociological analysis and will acquire the language of sociological study. Students will understand the meaning of culture and of values as they define and frame citizenship and community.

MATHEMATICS & SCIENCE

Biology 12 (Advanced) - Biology 12 encourages students to:

- develop knowledge and understanding of biological concepts;
- develop the skills to use this knowledge and understanding in new situations;
- develop an understanding of the methods used by scientists;
- be aware of the advances in technology that are relevant to biology;
- recognize the value and responsible use of biology in society; sustain and develop an interest in, and enjoyment of, biology;
- show knowledge and understanding of the facts, principles and concepts from different areas of biology and to make and use connections between them.

The course topics include: control and co-ordination (i.e. the role of the nervous and endocrine systems in maintaining homeostasis); reproduction and development; DNA, cell division and Mendelian genetics; populations and population genetics.

Chemistry 11 – Students will study 3 main units in Chemistry 11:
Unit 1- Stoichiometry: Students will begin with a review of the concepts learned in Science 9& 10 – nomenclature and formula writing, writing balanced chemical reactions and reaction predictions. This unit introduces the quantitative aspect of chemistry, including moles, significant figures, measurements and calculations. This involves single and multi-step problem solving.
Unit 2- From Structures to Properties: Students will review the concepts learned in Science 9&10- atomic structure and the periodic table. Students will expand on this knowledge, including the quantum mechanical model of the atom and the theories of ionic of covalent bonding. This unit focuses on bonding and the theoretical foundation of chemistry.

Unit 3- Organic Chemistry: Organic chemistry is the study of molecular compounds of carbon. Students will investigate the classification of organic molecules, nomenclature, the type of bonding and the atoms present, as well as the reactions of organic compounds. This unit will reinforce the concept of valence electrons, bonding, and intermolecular forces covered in the previous unit.

Chemistry 12 (Advanced) - Students will study 4 main units in Chemistry 12:
Unit 1 - Thermochemistry: Energy changes accompany all chemical reactions. This unit examines these changes in depth - you will learn how these energy changes can be measured experimentally and calculated from tables. You will also learn how to predict which chemical changes will occur on their own.
Unit 2 - Solutions, Kinetics, & Equilibrium: This unit introduces the concept of reaction rates - how reaction rates can be measured and calculated. You will learn about the collision theory, which provides the basis for our understanding of why reactions occur at different rates, and how the speed of a reaction can be altered.
Unit 3 - Acids and Bases: In this unit we'll examine what the properties are of acids and bases, and learn about the chemical nature of these important compounds. You'll learn what pH is and how to calculate the pH of a solution and explore buffers and acid base equilibria.
Unit 4 - Electrochemistry: Oxidation-reduction reactions, cells & batteries.

Physics 11 - This course will discuss the major topics of motion. The first unit will explore kinematics and how objects move. The second unit will investigate dynamics and why objects move. The third unit will cover energy and how energy is conserved in a closed system. Finally, the forth unit will explore waves and how light and sound waves propagate.

By the end of this course, students should be able to:
1. Demonstrate a basic knowledge of the topics discussed in the course description.
2. Use creativity and logic to solve both math-based and technology-based problems, and to communicate scientific ideas.
3. Demonstrate an understanding of how physics affects the “real-world” and where we can see physics in our everyday lives.

4. Demonstrate an attitude that supports the pursuit of further studies in Physics, and how this may affect him/ her-self, society, and the environment.

Physics 12 (Advanced) – Students will study the following topics:
1. Force, Motion, Work and Energy
2. Fields (magnetic, electric, gravitational)
3. Waves and Modern Physics
4. Radioactivity

Oceans 11 - The general objective of Oceans 11 is to familiarize students with the marine environment which surrounds them. Students are expected to understand and identify the different types of ocean habitats encountered through direct observation and hands-on investigation. Further, the students will become familiar with the communities of organisms that inhabit and survive in these regions and the adaptations which make survival possible. The students will be able to recognize and understand the following concepts: primary food productivity; food webs; physiological adaptations of marine organisms; basic taxonomy; physical oceanography; properties of seawater; origin and structure of ocean basins. Oceans 11 will also include the exploration of topics related to: coastal zones, fisheries, aquaculture and navigation. Emphasis will be placed on the application of learned concepts to a specific marine environment or region through a complete research project. This assignment includes the collection of information and data, planning and organization of material, and the preparation of written and visual representations of subject matter.

Foundations of Mathematics 11 - The general outcomes of this course state that the students will develop spatial sense and proportional reasoning, statistical reasoning, algebraic and graphical reasoning through the study of relations and will develop an appreciation of the role of mathematics in society. It is expected that the students demonstrate an understanding of and proficiency with calculations & decide which arithmetic operation or operations can be used to solve a problem and then solve the problem. In the study of Patterns and Relations, they will use patterns to describe the world and to solve problems and represent algebraic expressions in multiple ways. In their practice, students are expected to learn to use algebraic and graphical models to generalize patterns, make predictions and solve problems. In the Shape and Space unit, students will be expected to describe and compare everyday phenomena, using either direct or indirect measurement and describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.

Mathematics 12 (Advanced) - This course will discuss the major topics of quadratic equations, exponential growth, circle geometry, and probability. Within these major topics, students will explore patterns, graphing, problem-solving, modeling, and calculations.

By the end of this course, students should be able to:
1. Demonstrate a basic knowledge of the topics discussed in the course description.
2. Use creativity and logic to solve both math-based and technology-based problems, and to communicate scientific ideas.
3. Demonstrate an understanding of how math affects the “real-world” and where we can see math in our everyday lives.

4. Demonstrate an attitude that supports the pursuit of further studies in math, and how this may affect him/ her-self, society, and the environment.

Pre-Calculus 11 - It is expected that the student develop algebraic reasoning and number sense, trigonometric reasoning and develop algebraic and graphical reasoning through the study of relations. They will achieve these general outcomes by studying the following specific outcomes, taken from WNCP.ca:

1. Demonstrate an understanding of the absolute value of real numbers.
2. Solve problems that involve operations on radicals and radical expressions with numerical and variable radicands.
3. Solve problems that involve radical equations (limited to square roots).

4. Determine equivalent forms of rational expressions (limited to numerators and denominators that are monomials, binomials or trinomials).
5. Perform operations on rational expressions (limited to numerators and denominators that are monomials, binomials or trinomials).
6. Solve problems that involve rational equations (limited to numerators and denominators that are monomials, binomials or trinomials)
7. Trigonometry: Demonstrate an understanding of angles in standard position [0° to 360°].
8. Solve problems, using the three primary trigonometric ratios for angles from 0° to 360° in standard position
9. Solve problems, using the cosine law and sine law, including the ambiguous case.
10. Factor polynomial expressions of the form: $ax+ bx +c$, $a \neq , 0$
11. Graph and analyze absolute value functions (limited to linear and quadratic functions) to solve problems.
12. Analyze quadratic functions and determine the:
- o vertex
- o domain and range
- o direction of opening
- o axis of symmetry
- o x- and y intercepts.

13. Solve problems that involve quadratic equations
14. Solve, algebraically and graphically, problems that involve systems of linear-quadratic and quadratic-quadratic equations in two variables.
15. Solve problems that involve linear and quadratic inequalities in two variables.
16. Solve problems that involve quadratic inequalities in one variable.
17. Analyze arithmetic sequences and series to solve problems.
18. Analyze geometric sequences and series to solve problems.
19. Graph and analyze reciprocal functions (limited to the reciprocal of linear and quadratic functions).

Pre-Calculus 12 -This course is intended mainly for those students who are planning to study mathematics, science or technical programs at a post-secondary level. Major topics include sequences and series, functions, trigonometry, complex numbers, and modelling.

Calculus 12 - This course is a highly advanced course which is designed to increase the student's awareness of the scope of mathematics and to prepare the student for further courses in calculus, vector analysis and related fields. Accordingly, students will be better able to understand the many practical applications of the mathematics of calculus and vectors. Units of study cover the following topics: introduction to calculus, derivatives of algebraic relations, applications of derivatives, and integration.