



**MULGRAVE
INTERNATIONAL BACCALAUREATE
PROGRAMME OF STUDIES**

**GRADES 11-12
DIPLOMA PROGRAMME**

2010-2011



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MESSAGE FROM THE ASSISTANT HEADS

Over the past 16 years, Mulgrave has established itself as a school of excellence; renowned as an institution of learning where our students are inspired to give of their best in everything they do. We have maintained an enriched academic programme for as long as the school has existed, and we are proud to offer the International Baccalaureate Diploma Programme (IBDP) for all students in Grades 11 and 12. The IBDP provides our senior students the opportunity to receive the recognition of an internationally renowned curriculum that embraces all that we hold dear: excellence in education and life.

The fundamental belief of the IB is that we can create a better world through education. At Mulgrave, we are dedicated to promoting global understanding through citizenship, compassion, caring and service in our local communities and far beyond our borders. The IB programmes from Kindergarten to Grade 12 enable us to educate the “whole child”; true global citizens who can change the world in which we live. Cultural, scientific and technological literacy are embedded in a continuous curriculum. All of the programmes (PYP, MYP and DP) purposefully help students develop the skills and attitudes required for them to be contributing and responsible members of their local and global communities.

Mulgrave is blessed with a team of educators who are preparing our young people for success both at school and university, and thereafter in life. We have an exciting and challenging programme which asks our students to reach beyond themselves to attain new heights. Please carefully read the programme descriptions that follow and contact us for more information if clarification is needed.

*Eddie de Beer
Assistant Head of School*

*Stella Ablett
Assistant Head: Academics*

MULGRAVE INTERNATIONAL BACCALAUREATE DIPLOMA PROGRAMME

Mulgrave offers a single programme in Grades 11 and 12 which integrates the requirements of the BC curriculum and the International Baccalaureate Diploma Programme (IBDP). The IBDP is a two-year university preparatory programme which promotes a broad and balanced curriculum. In consultation with the Assistant Head, Academics, all students choose a programme of studies that can lead to the completion of an IB Diploma. At the end of two years, students may either:

- graduate with an IB Diploma, having satisfied Mulgrave graduation requirements
- graduate with IB certificates in specific subjects, having satisfied Mulgrave graduation requirements
- graduate having satisfied the Mulgrave graduation requirements

Each of these options fulfils the BC Ministry graduation requirements. All students will have the further benefit from the IB teaching approach which, instead of being content-driven, stresses higher level thinking, critical analysis and research-based inquiry.

The Mulgrave IB Learner Profile

The IB Learner Profile identifies the aim of all IB programmes. These programmes guide learners in their development to be internationally minded citizens who, through their common humanity and shared guardianship of the planet, create a better and more peaceful world.

Honouring the qualities described in the IB Learner Profile, all Mulgrave learners strive to be:

Adventurous	<i>They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.</i>
Balanced	<i>They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.</i>
Caring	<i>They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.</i>
Communicative	<i>They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.</i>
Creative	<i>They are willing to make mistakes as an important part of exploration and learning. They continue to develop original ideas and approaches to problem-solving, and apply these strategies to effect positive, meaningful change for the benefit of humanity and the world in which we live.</i>
Inquiring	<i>They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.</i>
Knowledgeable	<i>They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.</i>
Open-minded	<i>They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.</i>
Principled	<i>They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.</i>

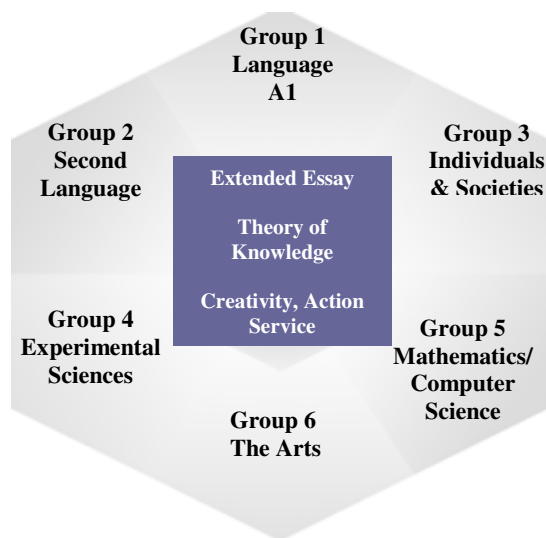
Reflective

They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

Thoughtful

They exercise initiative in applying thinking skills critically and creatively to recognise and approach complex problems, and make reasoned, ethical decisions.

At Mulgrave, we provide the full Diploma Programme, with a selection of courses in each of the six subject groups: Language A1(English), Second Language (French, Spanish, or Mandarin), Individuals and Societies (Economics, Geography or History), Experimental Sciences (Biology, Chemistry, or Physics), Mathematics, Arts (Film, Theatre Arts, or Visual Art). Central to the IBDP are the three core requirements: the Extended Essay, the Theory of Knowledge (TOK) course and the Creativity, Action and Service (CAS) portfolio. The Diploma Programme is well recognised by universities around the world; many actively seek out full IB Diploma students in their recruitment strategies, offering incentives such as early acceptance, scholarships and credit for first year courses.



- Students must take a minimum of 7 courses. At least three and not more than four subjects are taken at Higher Level (HL); the other courses are Standard Level (SL).
- The interdisciplinary TOK course is designed to provide coherence to the entire Diploma Programme by exploring the nature of knowledge across all disciplines, encouraging an appreciation of other cultural perspectives.
- The extended essay (maximum 4000 words) offers the opportunity to investigate a topic of individual interest and acquaints students with the independent research and writing skills expected at a tertiary level.
- Participation in the CAS programme encourages involvement in artistic pursuits, sports and community service work; this is satisfied by completing the Mulgrave CAS Portfolio.

- IB exams are written in May of Grade 12 and are marked externally. Each subject is graded on a scale of 1 (minimum) to 7 (maximum). The maximum grade is 45 (7 each for six courses and 3 bonus marks for the Extended Essay and TOK). Subject to certain restrictions, an IB Diploma is awarded for a minimum grade of 24. At least 20% of the final grade in each subject comes from internally assessed work.
- The following table lists the IB courses offered at Mulgrave School for the 2010-2011 school year:

Group		Standard Level (SL)	Higher Level (HL)
Group 1	Language A1	English	English
Group 2	Second Language	French	French
		Spanish ab initio	
		Mandarin	Mandarin
Group 3	Individuals & Societies	Mandarin ab initio	
		Geography	
		Economics	
Group 4	Experimental Sciences	History	History
		Biology	Biology
		Chemistry	Chemistry
Group 5	Mathematics	Physics	Physics
		Math Studies	
Group 6	The Arts	Math	Math
		Film Studies	Film Studies
		Theatre Arts	Theatre Arts
Core	Extended Essay Theory of Knowledge Creativity, Action, Service (completion of the Mulgrave CAS Portfolio)	Visual Art	Visual Art

Students will complete the following:

- Six courses – one from each group
 - ⇒ three courses at Higher Level (HL)
 - ⇒ three courses at Standard Level (SL)
 - ⇒ with permission, may substitute a second course from group 4 for the group 6 arts course
- Extended Essay
- Theory of Knowledge
- Mulgrave CAS Portfolio (satisfies Creativity, Action, Service requirement)

CONDITIONS FOR AWARDING THE DIPLOMA

The grade points awarded by the examiners are based on a score of one to seven, as follows:

Excellent	7	Mediocre	3
Very good	6	Poor	2
Good	5	Very poor	1
Satisfactory	4		

Points are awarded according to subject-specific criteria.

The candidate may also be awarded up to three points with excellent results on the Extended Essay and Theory of Knowledge.

The IB Diploma is awarded to candidates whose total score reaches or exceeds 24 points, and does not contain any of the failing conditions:

1. Higher Level Subjects
 - a) a grade 2
 - b) a grade 3 not compensated by a grade 5 or above in another higher level subject
2. Standard Level Subjects
 - a) a grade 1
 - b) more than one grade 2
3. Overall result
 - a) more than three grades 3
 - b) more than one 3 if there is a 2 at the standard level

GRADUATION REQUIREMENTS

Academic planning and course selection is a very important process in the Senior School years. Requirements for graduation, determined by the Ministry of Education, are quite specific. In order to graduate, every student in the Graduation Programme needs to fulfill certain minimal requirements. Students will need to earn 48 credits from required courses, 28 credits from elective courses, and 4 credits from Graduation Transitions (portfolio). Graduation requirements are introduced to students in the Planning 10 course.

Required Courses	
Subject Area	Minimum Credits
English 10	4
a Language Arts 11	4
a Language Arts 12	4
Social Studies 10	4
a Social Studies 11 or 12	4
Science 10	4
a Science 11 or 12	4
a Mathematics 10	4
a Mathematics 11 or 12	4
Physical Education 10	4
Planning 10	4
a Fine Arts and/or Applied Skills 10, 11, or 12	4
	48 credits
Elective Courses	
Students must earn at least 28 elective credits for additional Grade 10 - 12 courses.	28 credits
Graduation Transitions	
Students must earn 4 credits for their portfolio.	4 credits
Overall Total	
	80 credits
Of the 80 credits for graduation, at least 16 must be at the Grade 12 level, including a Grade 12 Language Arts course. Others may be required or elective courses.	

The Graduation Program requires that students write provincial exams in the following courses: English 10, Mathematics 10, Science 10, Social Studies 11, and English 12. An exemption may be obtained for the Social Studies 11 exam if the student successfully completes IB History or IB Geography. Students enrolled in IB Economics must still write the Socials Studies 11 provincial examination. In Grades 10 and 11, the provincial exams are worth 20% of the student's final grade. In Grade 12, the provincial exam is worth 40% of the student's final grade.

MULGRAVE COURSE SELECTION POLICIES

Students are asked to select their courses in Term II for the next school year. Based on these requests, the timetable is modified and staffing decisions are made. Therefore, it is sometimes not possible for students to change their timetables during the new school year. Students must make careful choices when selecting courses in Term II.

Courses are selected for the full reporting period and changes during this period are not permitted, unless clearly justified on educational grounds. Students are allowed the first two weeks of the term to come to a decision before finally committing themselves for the rest of the reporting period. A "Change of Elective" form must be completed and approved by the Assistant Head, Academics before any changes can be made.

The number of students enrolled in a class is limited to 24 and allocations will be made on a first come, first served basis. The school holds the right to assign students to alternate options should

the maximum number of students within any elective subject be reached. Courses are subject to enrolment of at least ten students, scheduling requirements and available resources.

MULGRAVE COURSE SELECTION GUIDELINES

Group One:

- In Grade 11, students must select either English HL 11 or English SL 11. The English Department reserves the right to place students in English SL 11 should their academic achievement in Grade 10 indicate that SL is the more appropriate course.

Group Two:

- Students must have completed Mandarin 10 to take Mandarin SL 11.
- Students who have received more than one year of formal studies in Mandarin or Spanish are not eligible for ab initio Mandarin and Spanish.
- Students must have completed French 10 Honours to take French SL/HL 11.

Group Three:

- Note that Economics and Geography are offered at the Standard Level only.

Group Four:

- Students planning on taking Engineering at University must complete Physics and Chemistry in G11 and G12. Math HL and Physics HL are highly recommended.
- Students planning on taking Sciences at University must remember that G11 Physics and G11 Chemistry are required for UBC Sciences.

Group Five:

- Math SL (not Math Studies) is a requirement for students entering Science, Business, Psychology, IT and related fields at university.
- Students wanting to take Math HL must receive approval from the Mathematics Department.
- Math Studies is a non-science preparatory course for university. Students entering the Humanities, Arts, Fine Arts and Music may take this course.

Group Six:

- Students may “opt out” of Group 6 courses to take an additional Group 4 course provided that they are involved in other areas of the Arts. Students must complete the “IB Group Six Change Request” form to “opt out” and obtain approval from the Head of Fine Arts and the Assistant Head, Academics.

ACADEMIC CURRICULUM

Group 1 (Language A1)

The English Department is committed to the delivery of effective instruction in key communication skills (oral communication, written communication, and visual communication) within the context of a rich student-centered learning environment that fosters tolerance, humanity, and creativity. This is the Mission Statement of Mulgrave's English Department and the context for all courses offered by this Department. All courses, as well, address all of the Prescribed Learning Outcomes established by the British Columbia Ministry of Education.

During the Grade 11 and Grade 12 years, students are enrolled in the IB Diploma Programme in which challenging international literary texts are studied and responded to in both oral and written formats. At the end of this two-year programme, students write two IB examinations.

IB English HL

IB English HL encourages students to become independent learners while exploring a very rich subject area. This exploration allows students to enjoy, to analyse, and to respond critically to selected works of literary merit; during their two years in this programme, students will explore literature from such diverse areas as Latin America, North America, the Czech Republic, France, and Ancient Greece. This will help them to develop an international literary 'mindset'. These unique perspectives, coupled with the shared exploration of the human 'condition' will allow students to discover and to explore the richness of world literature as well as the human, thematic, and metaphorical connections among works of literature. In Year 1, eight literary texts (including the novel, the play, nonfiction, and poetry) are examined in depth. This is followed by the exploration of seven literary texts in Year 2 (World Literature and theatre).

Over the two-year programme, students will be evaluated through both Internal and External assessments which are mandated by IB. Internal assessments, conducted in the first year, include both an individual oral commentary and an individual oral presentation. External assessments, conducted during the second year, include two World Literature essays and two examinations; one examination is a commentary on a sight passage (either prose or poetry) and the other is a 'sight' essay based on the area of concentration (theatre).

IB English SL

The goals of the Diploma programme are the same for students enrolled in SL. They are encouraged to become independent learners, to enjoy, to analyse, and to respond critically to selected works of literary merit. In Year 1, six literary texts (including the novel, the play, and poetry) are examined in depth. This is followed by the exploration of five literary texts in Year 2 (World Literature and theatre).

Over the two-year programme students will be evaluated through both Internal and External assessments which are mandated by IB. Internal assessments, conducted in the first year, include both an individual oral commentary and an individual oral presentation. External assessments, conducted during the second year, include one World Literature essay and two examinations; one examination is a commentary on a sight passage (either prose or poetry) and the other is a 'sight' essay based on the area of concentration (theatre).

Group 2 (Second Language)

IB French SL/HL

IB French SL/HL will build upon the vocabulary and grammar that students have learned in their past courses and will continue to develop facility in reading, writing, listening and speaking. Emphasis will be on acquiring, strengthening, and gaining fluency in new vocabulary and grammatical concepts to enable students to function at an increasingly sophisticated level in French when interacting in both oral and written communicative environments. Strategies and activities to meet course goals include written work, drills, dialogues, role play, dictations, group and individual projects, explications de texte, reading, journal writing, free speaking and writing on a theme.

IB French SL/HL is assessed externally through two written examination papers worth 70%. IB internal assessment consists of oral evaluations constituting 30% of the total mark.

IB Mandarin HL/SL/Ab Initio

The course of Chinese as a foreign language focuses on practical modern Chinese and lays a strong foundation in speaking, listening, reading and writing of the Chinese language. For the learners who started last year, the course will provide students with opportunities to widen their vocabulary, to speak in a succession, and to compose a piece of writing correctly. By applying the method of “concise explanation and abundant practice,” students will improve their Chinese to a higher level.

The textbook for this course is New Practical Chinese Reader (1-6). A rhythm of pacing is expected at the speed, in which each lesson should be completed within 3-4 times of classes including a test for this lesson.

During the course, there will be complementary materials to be presented such as Chinese movies, songs, cultural pictures, etc. Students are required to do team work in class activities such as presentations and projects.

IB Mandarin SL/HL/Ab Initio is assessed externally through two written examination papers worth 70%. IB internal assessment consists of oral evaluations constituting 30% of the total mark.

IB Spanish Ab Initio

IB Spanish Ab Initio is a two-year communicative-experiential language course designed to introduce students to the wonderful world of Spanish. Emphasis is placed on a wide variety of reading, writing, listening and speaking tasks that encourage students to communicate in a variety of real life situations. Upon completion of this course, students will have a much better understanding of the language and people of the Spanish speaking world. Core syllabus topics include: the individual (the self and others & the home), food and drink (shopping, eating out, food), towns and services (shopping, public services & communication), education & work (school & future plans), and leisure and travel (hobbies, free time, holidays, travelling and accommodation).

IB Spanish Ab Initio is assessed externally through two written examination papers worth 70%. IB internal assessment consists of oral evaluations constituting 30% of the total mark.

Group 3 (Individuals and Societies)

IB Geography SL

This two-year course is thematic in organisation, human in focus and comprehensive in coverage. At the core are the interrelated themes of population, resources and development; the latter encompassing concepts derived from both economic and quality-of-life principles. Accompanying the core is a series of options in physical geography, each stressing issues of human management and response. The course is strongly skill-orientated, and highlighting the distinctive use of mapping and similar techniques by geographers, this option seeks to integrate the human and physical aspects of the subject through maps and images.

IB Economics SL

IB Standard Level Economics is a two-year course. Economics is a dynamic social science. The study of economics is essentially about the concept of scarcity and the problem of resource allocation.

Although economics involves the formulation of theory, it is not a purely theoretical subject: economic theories can be applied to real-world examples. Neither is economics a discrete subject, since economics incorporates elements of history, geography, psychology, political studies and many other related fields of study. Further, economics does not exist in a vacuum, because it naturally must consider how economics theory is to be applied in an international context.

While there is no assumed background knowledge in this subject, students should have a keen interest in business, world affairs and politics in order to enjoy this course thoroughly. The basic principles of micro and macro economics are covered, except for the theory analysis of the firm (this is only covered at the higher level and in all first year university economics courses).

IB History SL/HL

This is a two-year in-depth analysis of the 20th century with a specific emphasis on Europe and Russia. The course will be taught at the higher level, but students may opt to write the standard level exam. The study of history from an international perspective is increasingly important today. In the contemporary context, one of globalization and technological development, different cultures and societies are increasingly in contact and interdependent. The aim of IB History is to explain trends and developments, continuity and change through time and through individual events. The course is concerned with individuals and societies in the widest context: political, social, economic, cultural and technological. The process of historical inquiry, explanation and interpretation is a never-ending activity, for which historians develop values and conventions which themselves change over time. Students of history investigate a variety of sources, some of which may be of a contentious nature. As new generations seek to explain and analyze the past, they will face problems of determining the accuracy of what is claimed to be reliable historical knowledge and assessing conflicting interpretations of past events.

During the course the student of history is encouraged to reflect on the role of the historian. Does the historian record history, or create it? Can the historian be free of bias in the selection and interpretation of material? Could it be reasonably argued that the individual perception of the historian, despite possible bias, is necessary or even desirable in the interpretation and recording of history?

Group 4 (Experimental Sciences)

IB Biology SL/HL

This is a two-year course taught at the higher level, but students may opt to write the standard level exam.

The IB Biology course is a comprehensive course in general Biology. The core syllabus gives students a general understanding of the fundamental concepts of biology while the higher level and optional topics allow students to study specific topics in further detail. Four themes unify the different topics that make up the core, the additional higher level, and the SL and HL options. These are structure and function; universality vs. diversity; equilibrium within systems; and evolution. Structure and function allows students to see how structures allow some functions to occur while preventing others. Universality versus diversity encourages students to see how living organisms are all interconnected due to the similarity in their structures and functions and, yet, these similarities occur in a world of great diversity. Equilibrium within systems focuses on how dynamic equilibrium is maintained within ecosystems and within organisms. The themes of structure and function, universality versus diversity, and equilibrium within systems are connected by the fourth theme of evolution. At the completion of the higher level biology course, students will be well prepared for further studies at a college or university level in biology or related courses.

IB Biology SL/HL is assessed through three separate examination papers taken at the completion of the course. These exams carry a combined weighting of 76% toward the overall assessment. An internal assessment contributes 24% to each candidate's overall result. The internal assessment is based upon the student's practical work during the course (40 hrs for SL; 60 hrs for HL).

IB Chemistry SL/HL

Chemistry, as the central science, is an essential prerequisite for many university science courses and areas of study. Both the HL and SL course allows students to experience the wonder of the micro-world of atoms and molecules that makes up the fabric of the universe. In addition both courses provide an excellent foundation in all of the different areas of chemistry.

The laboratory component of both courses allows students to investigate and use the scientific method, which involves the formation, testing and modification of hypotheses through observation and measurement. Chemistry also allows the students to develop their problem-solving and analytical skills. It also provides opportunities for the students to become more aware of the moral, ethical, social, economic and environmental implications of using science and technology.

IB Chemistry is assessed through three separate examination papers taken at the completion of the course. These exams carry a combined weighting of 76% toward the overall assessment. An internal assessment contributes 24% to each candidate's overall result. The internal assessment is based upon the student's laboratory work during the course (40 hrs for SL; 60 hrs for HL).

IB Physics SL/HL

Physics is a foundation to the study of most tertiary science courses. Both IB Physics HL and SL aim to help students develop analytical and problem-solving skills. They provide opportunities

for students to understand and apply the principles and concepts of physics to practical situations, as well as to stimulate creativity within a global context. To prepare students for further education and for their adult lives, they engage students in the investigation of scientific questions and the development of plausible solutions. Both courses develop and build on students' sense of wonder about the world around them and encourage a feeling of responsibility to sustain it.

The IB Physics course is an intensive course in general physics. The core syllabus gives a non-calculus presentation of the fundamental parts of physics, while the option part requires calculus in several parts. The options lead to a deeper understanding of the fundamental parts of physics, or a discussion of some of its technique-oriented applications. At the end of the Higher Level course, a student will be prepared for a college or university career in physics or related subjects. The Standard Level course deals with matters in less complexity than the Higher Level course, placing greater emphasis on historical development and social implications.

IB Physics is assessed through three separate examination papers taken at the completion of the course. These exams carry a combined weighting of 76% toward the overall assessment. An internal assessment contributes 24% to each candidate's overall result. The internal assessment is based upon the student's practical work during the course (40 hrs for SL; 60 hrs for HL).

Group 5 (Mathematics)

IB Math Studies SL

Mathematical Studies Standard Level is a two-year IB course designed for students from a variety of backgrounds and abilities. Math Studies provides students with the skills needed to meet the demands of a non-math specialist in a technological society. It aims to emphasise the applications of mathematics in real life situations using investigations, projects and technology.

The course will cover the following topics over a two-year period:

Grade 11: Number and algebra, linear functions, quadratic, exponential and other functions, geometry and trigonometry, trigonometric functions, statistics

Grade 12: Introductory differential calculus, sequences and series, financial mathematics, sets, logic and probability

IB Math Studies is assessed externally through two written examination papers worth 80%. IB internal assessment consists of a project. This must be an individual piece of work completed during Year 2 of the course, involving the collection and/or generation of data. Projects may take the form of mathematical modeling, investigations, applications, statistical surveys, etc. The project is internally assessed by the teacher and externally moderated by the IBO.

IB Mathematics SL

Mathematics Standard Level is a two-year IB course where students build their mathematical skill set in preparation for further studies at the post-secondary level in Sciences and Commerce. The emphasis in this course is on developing students' abilities to analyze situations, apply strategies, critically evaluate their technique and communicate logically. Graphic display

calculators, software and other technologies are used extensively as students investigate mathematical ideas.

The course will cover the following topics over a two-year period:

Grade 11: functions, sequences and series, exponential and logarithmic functions, coordinate geometry, quadratic functions, binomial theorem, circular functions, trigonometry, matrices, and vectors

Grade 12: statistics, probability, differential calculus, and integration

IB Mathematics SL is assessed externally through two written examination papers worth 80%. IB internal assessment consists of a portfolio, which is a collection of two assignments that must be based on different topics and represent two types of tasks: mathematical investigation and mathematical modeling. Students are required to communicate in correct mathematical language to illustrate their work in detail. Students will be assigned two major portfolio assignments over the two years. The portfolio is internally assessed by the teacher and externally moderated by the IBO.

IB Mathematics HL

IB Mathematics HL is a two-year course with a high degree of mathematical content and rigour. Mathematics HL is intended for students with a solid foundation in mathematics, with good competency in many analytical and technical skills. Students will explore topics in greater depth than with the Mathematics SL course, and go well beyond the scope of the British Columbia Principles of Mathematics 11 and Principles of Mathematics 12 courses.

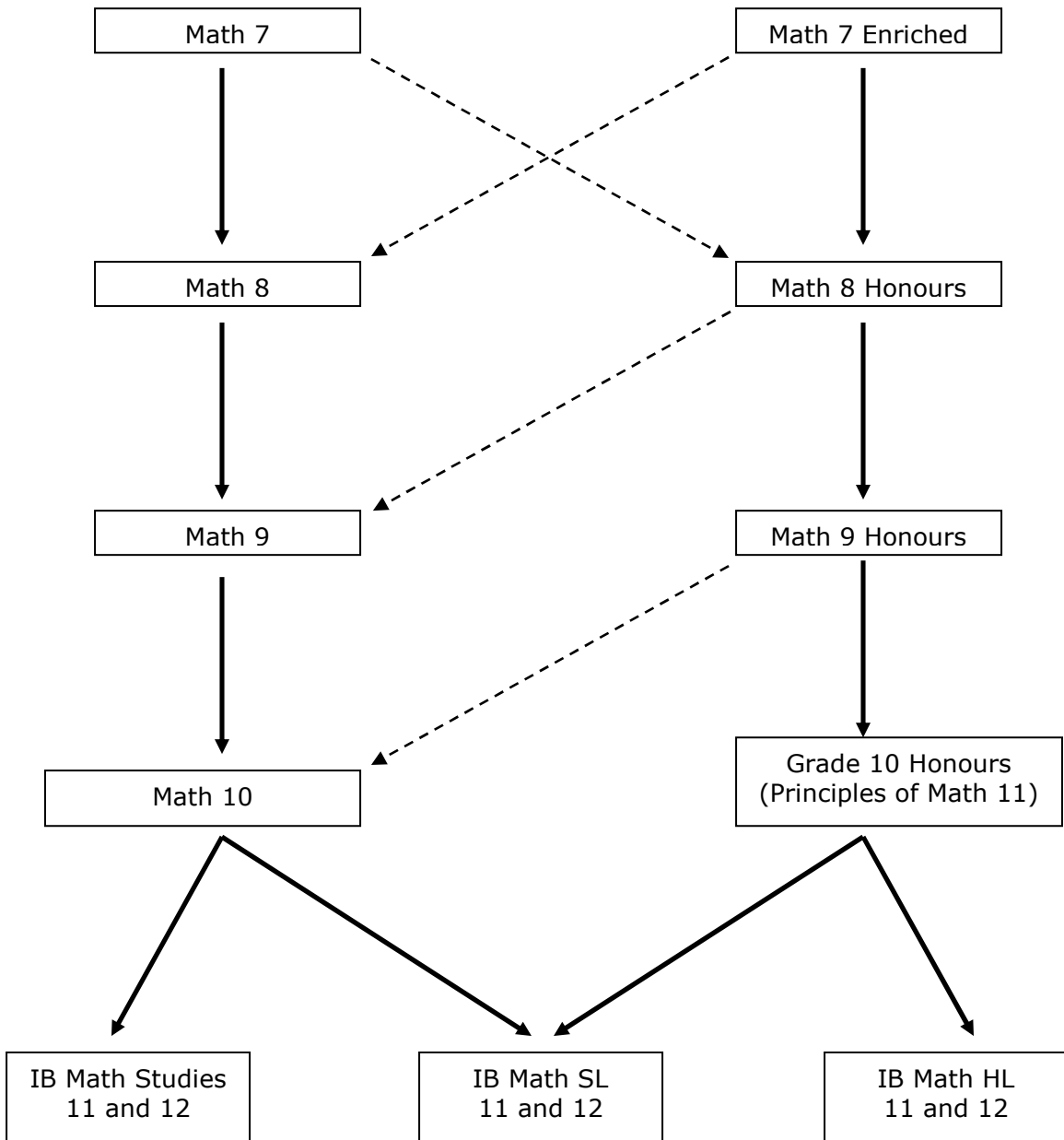
Mathematics HL is appropriate for students whose post-secondary studies will include many mathematics courses and for those who intend to study engineering, physics or computer science. This course provides the opportunity for students to engage in challenging mathematics, and where appropriate, apply their learning in real-world problem solving situations. Students learn important mathematical ideas through the development of mathematical techniques. Students are expected to apply a higher level of rigour to their mathematics, in how they analyze situations, apply strategies, critically evaluate their techniques and communicate their learning.

The content of the course and the teaching methods are designed to increase students' knowledge of, and appreciation for, mathematics. Graphic display calculators, software and other technologies are used extensively as students investigate mathematical ideas. Students are encouraged to consider multi-representations and different approaches in their investigations.

Students will investigate one of the following option topics of the HL curriculum: Statistics and Probability; Sets, Relations and Groups; Series and Differential Equations; Discrete Mathematics.

IB Mathematics HL is assessed externally through two written examination papers worth 80%. IB internal assessment consists of a portfolio, which is a collection of two assignments that must be based on different topics and represent two types of tasks: mathematical investigation and mathematical modeling. Students are required to communicate in correct mathematical language to illustrate their work in detail. Students will be assigned two major portfolio assignments over the two years. The portfolio is internally assessed by the teacher and externally moderated by the IBO.

**Mulgrave Mathematics
2010 - 2011**



IB Film Studies SL/HL

Film is both a powerful communication medium and an art form. The IB Film Studies course aims to develop students' skills so they become adept in both interpreting and making film texts. The film course at HL and SL aims to develop in students the skills necessary to achieve creative and critical independence in their knowledge, experience and enjoyment of film.

The aims are to promote:

- an appreciation and understanding of film as a complex art form
- an ability to formulate stories and ideas in film terms
- the practical and technical skills of production
- critical evaluation of film productions by the student and by others
- a knowledge of film-making traditions in more than one country.

IB Theatre Arts SL/HL

The Mulgrave IB Theatre Arts Programme will provide students with the opportunity, the guidance and the support to become increasingly professional and knowledgeable in the inspiring world of theatre arts. The programme focuses on three major areas: theatre in the making, theatre in performance and theatre in the world. In the first area students develop their knowledge and skills in making theatre. They will study the many technical aspects of theatre and will be exploring the schools of thought on acting style. They will see live theatre presentations, both at the professional and amateur level, and will be analysing all aspects of the technical and creative production. While learning to appreciate the work they are viewing, they will be reflecting and recording in their journals and will be creating scripts. Throughout the course, students will measure their own growth as artists, teammates and individuals. Progressively throughout the course, students will work together exploring their ideas, critiquing their work and using the vocabulary specific to Theatre Arts.

Students are required to apply their performance art skills in front of an audience. In at least one performance they are expected to act and then to take on another role such as directing, designing or providing technical support in a different performance. Much of this course will be studied while exploring world theatre. Students will explore different approaches to theatre both looking at themes and playwrights on a global scale. Theatre in the making and performance will often be explored through a worldly perspective.

Finally, their *Independent Project* is an opportunity to explore an area of interest and develop it into a major theatre project.

IB Visual Arts SL/HL

The Visual Arts course provides students with opportunities to produce meaningful art representative of their personal, aesthetic, and socio-cultural background. Experimentation with a variety of media is encouraged. Assignments allow for individual interpretations of the themes and the selection of materials that will compliment the style and intent of each work. Candidates demonstrate growth and commitment through the study of art, show their technical skills in various projects, express their ideas using imagination and creativity, and use their Investigation Workbook to show the process that connects their research with their artistic production. In April of their graduating year, Visual Arts candidates exhibit their work and discuss their artistic achievements with an IB examiner. Also on exhibit are their Investigation Workbooks. Together

these art pieces serve as a compilation of each student's voice and reflect on their hands-on journey in IB Visual Art.

Extended Essay

One of the important requirements of the IB Diploma is the successful completion of a 3500-4000 word Extended Essay. To write this paper students are required to engage in independent research through an in-depth study of a question relating to one of the subjects they are studying and is of high interest to them. It is a process through which information that can be analysed and evaluated. Students are not expected to contribute new knowledge within the subject. A topic that requires no personal research and/or requires an essentially narrative, summative or descriptive approach is unlikely to be suitable for the Extended Essay.

Students will have a teacher to act as their supervisor for the Extended Essay. The role of the supervisor is to provide encouragement and support. They must not edit the student's work; instead, pose questions, indicate where there is awkwardness of structure, or ask about the hypothesis as cues for offering assistance. Supervisors comment on drafts, but editing is the student's responsibility.

In the spring of the Grade 11 year, students will choose their subject, topic, and supervisor. They will also formulate a research question and develop a working bibliography and detailed outline of their paper. Before leaving school in June, students will hand in the first draft of their essay. During the first term of the Grade 12 year, students will submit three more drafts and the completed essay.

Extended Essays are externally assessed by examiners and are marked on a scale from 0 to 36. This maximum score is made up of the total criterion levels available for each essay, and is divided between general and subject assessment criteria. The Extended Essay contributes to the overall diploma score through the award of points in conjunction with Theory of Knowledge. A maximum of three points are awarded according to a candidate's combined performance in both the Extended Essay and Theory of Knowledge.

Theory of Knowledge

Theory of Knowledge, one of the connective tissues of the IB Diploma Programme, is a two-year programme. It invites students to explore meaning – how it is created, how it is internalised, and how it is shared. It is understood that students do not enter this course as empty vessels to be filled with knowledge and wisdom; they are individuals who are engaged in the process of attempting to make sense of themselves and the world around them.

In order to develop a framework which facilitates analysis and discussion, two key areas are explored: 'ways of knowing' and 'areas of knowledge'. This is done within the context of the 'knower's perspective'. Students are encouraged to examine and to challenge their own assumptions, to recognise and to evaluate societal/cultural assumptions, and to compare assumptions in key bodies of human knowledge.

Throughout the two year programme, students engage in reading, discussion, and forums (both formal and informal); individual and small group presentations are also routinely included. Two

formal evaluations are undertaken. Each student is required (individually or in a small group) to create and deliver a presentation which is directly related to a knowledge issue. This is internally assessed and moderated by IB. The second requirement is to complete a 1200-1600 word essay on one of ten topics prescribed by IB; this is externally evaluated.

Creativity, Action and Service (C.A.S.)

The Mulgrave Senior C.A.S. (Creativity, Action, Service) Programme encourages experiential learning outside the regular curriculum. It represents “real life” or authentic approaches to education that focus on the whole student and the importance of life beyond the world of scholarship. The C.A.S programme combines key elements of the Mulgrave commitment to experiential learning, community service, global citizenship and the internationally acclaimed Duke of Edinburgh Programme. Following the Mulgrave mission and the ideals of an IB World School, the ultimate goal is to inspire "excellence in life" beyond the classroom.

There are three core parts to completing the C.A.S Programme: (1) participation in extracurricular activities (2) documentation and reflection; and (3) a presentation. Although other requirements are included the central expectations are the completion of a minimum of 300 hours over the student’s final two years in the areas of creativity, action and service. This includes 60 hours for creativity, 90 hours for action, and 150 hours for service. Support of the school, local and global communities is incorporated into the service component. As well, students must provide evidence of their activities, engage in meaningful reflection about them, share their experiences with others and demonstrate initiative(s) in the realm of leadership. All together, this mixture of expectations outside the classroom produces an exciting, unique programme which keeps in mind the importance of Mulgrave’s four strands of excellence in academics, arts, athletics and citizenship.

Physical Education

Physical Education 11/12

This sport, recreation and leadership class will help each individual fulfill his or her own unique potential as it relates to the pursuit of better health and quality of life through leisure and sport activity. The main goal of this elective, non-credit course is to allow students to meet the majority of their C.A.S. and DPA requirements within the school day. It will also enable students to develop the knowledge, skills, and attitudes necessary to maintain a healthy lifestyle on their own and outside of school. Students will be provided with opportunities to obtain certification in a sport or recreational area that can be used within and outside of the school in a variety of recreation related fields, and to develop their leadership skills.

