



# **FIS Course Guide**

## **Grades 6–8**

### **School Year 2024/2025**

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# FIS Course Guide Gr 6–8



## Purpose of the Course Guide

During the Middle School years, we hope to tap into the natural enthusiasm for learning that middle school students possess by challenging them through academics and providing numerous opportunities to explore a variety of interests. Our goal is to guide students to be independent, globally aware, caring learners and citizens of the world. We are excited to share our diverse selection of courses in this course guide, which provides descriptions of classes offered in Grades 6–8. We hope students will consider which courses will best meet their abilities, needs and interests. This guide contains information to support students in this exciting process. We hope you take the time to read through all the areas: Visual and Performing Arts, English, Humanities, Languages, Math, Science, and Other course options.

## Course Placement

Courses will be offered based on student interest and enrollment. If a course is canceled due to low enrollment, students will be notified and an alternate course may be chosen.

### Languages

Students will be placed in language classes based on past experience and/or placement testing taken at FIS. The language faculty will consult with individual students regarding their language placement and students will require teacher recommendation for all levels except Language Acquisition Level 1 (beginners) classes.

### Mathematics

Students in Grade 8 will be placed in one of two mathematics levels/classes based on a variety of outcomes, including teacher recommendation.

All students should consult with their current math teacher or take a placement test to determine the most appropriate Grade 8 math level/class.

### Assessment/Grading in the Middle School (Grades 6–8):

Teachers of Middle School students use standards based assessment which has a 4-level proficiency scale: Beginning, Intermediate, Proficient, Advanced. The target is for all students to meet the standards indicated by “Proficient”. During Semester 2, Grade 8 students will receive grades of 1-7 in preparation for transitioning to Grade 9.

## Eventual Academic Pathways Offered at FIS in Grades 9–12

### FIS High School Diploma

All Grade 9–12 students at FIS pursue a High School Diploma. Upon successful completion of all FIS graduation credit requirements, students will receive an FIS High School Diploma accredited by the United States’ New England Association of Schools & Colleges (NEASC).

In addition to the High School Diploma, students may opt to pursue an International Baccalaureate (IB) Diploma. Students who do not wish to pursue an IB Diploma are flexible to enroll in any combination of non-IB and IB courses, provided they meet the graduation requirements.

### The IB Diploma Programme

In Grades 11 and 12, students may pursue the International Baccalaureate Diploma Programme (IBDP) — a rigorous two year program that is required by most European universities for admission and highly regarded by universities worldwide. Students must take six courses within specific subject areas in addition to the Theory of Knowledge course (a course that explores areas of knowledge and ways of knowing). In addition, students complete a 4000-word research essay on a topic of their choice.

Whether students ultimately achieve the IBDP is determined by exams taken in each of the six subjects at the end of Grade 12 in conjunction with relevant coursework completed throughout the two years. Each course is graded on a 1–7 scale (7 being the highest). A maximum of 45 points can be achieved and a minimum of 24 points are required to earn the IBDP.

How students perform in Grade 10 is a good indicator of whether they are suited for the IBDP. A solid foundation in subjects and strong study skills are required to successfully pursue the IBDP in Grades 11 and 12.

More information on graduation pathways can be found on the FIS counseling site and in the Grades 9–12 Course Guide.

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### Visual and Performing Arts

In Grades 6 and 7, students take drama, art, design technology (see “Other Courses” page) and a musical course (music/band/choir) at least once over these two years. Students might choose to take some of these classes for both years. In Grade 8, depending on their interests, students choose several classes from the following: drama, dance, art, design technology, music, band and choir.

Students have the opportunity to take additional visual arts classes in Grades 6–8 if they are not taking a third language class.

**BAND 6** Students must already play a brass, woodwind or percussion instrument. Students need to purchase or rent an instrument and are expected to participate in the band performance each semester. The Band director will help connect you with an instrument supplier if needed.

**BAND 7–8** Students must play a brass, woodwind or percussion instrument. Students need to own or rent an instrument and are expected to participate in the band performance each semester. The Band director can help connect you with an instrument supplier if needed. Interested students are encouraged to audition for Honor Band Festivals and/or Jazz Band which have rehearsals at various times throughout the year.

**Band 6:** Yearlong class - meets 3 out of 8 days

**Band 7:** Yearlong class - meets 3 out of 8 days

**Band 8:** Yearlong class - meets 4 out of 8 days.

**CHOIR 6–8** Students will learn proper vocal technique and various vocal styles as well as basic music theory and note reading. They participate in a performance each semester they are enrolled in Choir. Interested students are encouraged to try out/audition for: Honor Girls’ Choir, or Honor Boys’ Choir which have rehearsals at various times throughout the year.

**Choir 6** introduces students to a variety of styles of choral music composed for unison and two-part choirs (soprano and alto).

Semester or yearlong class (students can choose) - meets 3 out of 8 days

**Choir 7** introduces students to a variety of styles of choral music composed for unison and two-part choirs (soprano and alto).

Semester or yearlong class (students can choose) - meets 3 out of 8 days

**Choir 8** introduces students to a variety of styles of choral music composed for SAB Choirs (Soprano, Alto and Baritone).

Semester or yearlong class (students can choose) - meets 4 out of 8 days

**MUSIC 6–8** includes musical appreciation, theory of music, listening to various styles of music, introduction to instruments, musical history and practical music-making/composing.

**Music 6** additionally teaches the basics of the ukulele in the practical music-making unit.

Semester class - meets 3 out of 8 days

**Music 7** additionally teaches the basics of the African djembe drum in the practical music-making unit.

Semester class - meets 3 out of 8 days

**Music 8** additionally teaches the basics of various instruments in the practical music-making unit, with specific focus on the guitar.

Semester class - meets 4 out of 8 days

**Chamber Orchestra 6–8** is an after school program and does not count as one of the ‘musical’ courses students choose from in Grades 6–8; therefore students may additionally join orchestra after school. All players of violin, viola, cello and double bass are welcome to take part, regardless of their previous experience. In the fall, students generally begin preparing a program of classical and baroque works for the December concert, while the spring is often devoted to lighter selections, with the addition of solos and chamber music. In rehearsals, students learn and enhance their instrumental and ensemble playing skills, but also explore the rich repertoire and the tradition of classical music. Students learn to communicate with each other and with the listener through music, and to understand music as a language and form of expression.

Yearlong class - meets once a week after school (though not part of the school day, this class appears on the report card/transcript with a grade of Pass/Fail)

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**DRAMA & DANCE 6–8** Students explore aspects of drama and movement as methods of communication. This includes improvisation, devising in groups, mime, developing a role, script work, physical theater, as well as choreography, dance elements and simple choreographic structures in some terms. Students will be involved in discussions in small and large groups and reflect upon outcomes.

**Drama 6** Students study: Drama Foundations (ensemble building, tableaux and silent scenes), Global Folktales, Script Adaptation and Play Making.

Semester class - meets 3 out of 8 days

**Drama 7** Students study: Devised and Physical Theater (characterization, movement, and mime), Improvisation, Monologues, Scene Work and Student Directed Play.

Semester class - meets 3 out of 8 days

**Drama 8** is designed to introduce students to some of the broad aspects of theater through the exploration of performance skills. The aim is to raise their interest and awareness of the theater arts. Students study voice and speech, movement, performance techniques, group work, acting using improvisation as a starting point, characterization and expression, as well as developing cohesion as an ensemble through the creation of original theater performances.

Semester class - meets 4 out of 8 days

**Dance 8** introduces students to the artform of dance. Students will explore various styles and techniques that enhance their expression, rhythm, and creativity. Students will also improve their physical fitness, coordination, and confidence. This course is open to all levels of dance experience and interest.

Semester class - meets 4 out of 8 days

Each year, Grade 6-8 students have the opportunity to participate in a theater production - auditioning as actors, participating as set designers, make-up artists, and backstage assistants. Rehearsals for the production are held after school, and sometimes on weekends as the performance nears.

**Art 6** encourages students to develop drawing, painting, observational, and other skills as they explore connections between the real and abstract world.

Semester class - meets 3 out of 8 days

**Art 7** encourages students to recognize links between meaning and abstraction and to appreciate that expressivity and emotion can be integral parts of meaningful work. Students learn to recognize and interpret historical and cultural precedents in visual arts.

Semester class - meets 3 out of 8 days

**Art 8** encourages students to appreciate art and to recognize the uniqueness of their individual point of view while expanding their understanding and allowing for additional points of view. Students are challenged to demonstrate personal initiative and research how history and culture influence art.

Semester class - meets 4 out of 8 days

*The following two art classes may be taken if a student is not taking an additional language.*

**3D Art in the Round 6-7** allows students in Grades 6 and 7 to explore art through various media such as sculpture, fabrics and carving. This class may be taken in both Grades 6 and 7 since the units of study are not repeated consecutive years.

Semester class - meets 6 out of 8 days

**Printmaking Techniques in the Studio 8** is for students in Grade 8 who wish to develop their creativity and explore the many fascinating techniques that printmaking entails. Intaglio, calligraphic and transfer techniques will be among the many approaches to image-making that are investigated. Come find out why mark-making rules the realm of printmaking and why printmakers are the scientists of the art world.

Semester class - meets 6 out of 8 days

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### English

In Grades 6–8, the English Language and Literature classes and the English Language Acquisition classes are organized around inquiry-driven concept based units. All students are required to take the appropriate grade level English Language and Literature course each year unless enrolled in English Language Acquisition Beginning/Emerging classes.

**G6 English Language and Literature** is a course where students gain fundamental language skills through the concepts of perspectives, relationships, changes, creative communication and identity. It is also hoped that they will develop a love of literature and a growing awareness of their place in our shared world. The course covers a wide range of skills, genres, and themes that include short story and novel elements, poetic devices and features of ancient and modern myths. In writing, students examine the elements of an effective paragraph, and learn to write analytical essays and poetry. In reading, students apply active reading strategies to explore various genres independently and critically. Finally, students identify and work to eliminate conventional errors such as fragmented sentences and run-on sentences, as well as other mechanical errors.

Yearlong class - meets 6 out of 8 days

**G7 English Language and Literature** is a course where students continue to build fundamental language skills that help form a strong foundation for all areas of learning. Each unit is based around a key concept, such as Identity or Justice, that helps students see patterns and make connections between literary and non-literary texts. Their reading includes a brief study of a Shakespeare play. Students develop their informative, persuasive, and imaginative writing and speaking, and their comprehension and analysis of how language is used in various contexts. Students build a fundamental understanding of the structure and style of persuasive analytical writing throughout this course, and apply their skills across a range of assessments. Grade 7 students are also introduced to the critical analysis of film.

Yearlong class - meets 6 out of 8 days

**G8 English Language and Literature** helps students further consolidate fundamental language skills and add depth to their informative, persuasive, and imaginative writing and speaking. Each unit is based around a key concept, such as Creativity or Perspectives, to encourage students to glean transferable understandings that may be applied in an interdisciplinary setting. Their reading includes a Shakespeare play. This course promotes students' social and academic development by emphasizing a greater sense of independence and individual responsibility. Students are encouraged to identify connections between different types of texts and consider why certain text types are used for particular purposes. Students will refine their essay writing skills and also learn how to deliver their opinions and insights in oral presentations.

Yearlong class - meets 6 out of 8 days

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**G6–8 English Language Acquisition (ELA) Beginning (CEFR A1)** is a three period course with each period (class) addressing a different focus (see below). Students in this level group do not take English or Humanities. The overall ELA Beginning course assists students in acquiring the English knowledge and skills that they need in order to function and communicate proficiently in all academic disciplines. The program takes traditional language areas into consideration following a can-do philosophy.

ELA Reading/Writing develops foundational reading and writing skills and fundamental conversational and academic vocabulary.

ELA Language develops integrated language skills with a more specific focus on the mechanics of the language.

ELA Subject Support develops major concepts, skills and vocabulary in Humanities and helps them to access the language demands of the curriculum in their other subjects.

**Placement:** Based on student proficiency level, teacher recommendation and testing

Semester or yearlong class - meets 18 times during the eight day cycle

**G6–8 English Language Acquisition (ELA) Emerging (CEFR A2-B1)** is a 2 period course with each period (class) addressing a different focus (see below). Students in this level group take Humanities but not English. The overall ELA Emerging course assists students in acquiring the English knowledge and skills that they need in order to function and communicate proficiently in all academic disciplines. The program takes traditional language areas into consideration following a can-do philosophy.

ELA Reading/Writing further develops reading and writing skills and conversational and academic vocabulary.

ELA Subject Support develops major concepts, skills and vocabulary in Humanities and helps them to access the language demands of the curriculum in their other subjects.

**Placement:** Based on student proficiency level, teacher recommendation and testing

Semester or yearlong class - meets 12 times during the eight day cycle

**G6–8 English Language Acquisition (ELA) Transitioning (CEFR B1-B2)** is a one period (class) course. Students in ELA Transitioning take both English and Humanities. This course aims to help students develop the critical reading, writing, listening, speaking and research skills that they need in order to function and communicate proficiently in all academic disciplines. As well as focusing on language acquisition, some class time is devoted to helping students understand and complete assignments in their other subjects.

**Placement:** Based on student proficiency level, teacher recommendation and testing

Semester or yearlong class - meets 6 times during the 8 day cycle

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### Languages

Most students in Grades 6-8 take German unless, enrolled in both an ELA or Learning Support class and an Identity Language Class or Korean, Japanese or French Language and Literature class. Language and Literature classes are for near fluent or fluent speakers.

**G6–7 French Language Acquisition Level 1** This course is designed to help students develop proficiency in the four basic skills: listening, speaking, reading and writing. At the same time, these courses aim to introduce students to the appreciation of the diverse cultures of French speaking countries. The emphasis is on communication.

**Placement:** based on student proficiency level, teacher recommendation and placement test.

Yearlong class - meets 6 out of 8 days

**G8 French Language Acquisition Level 1** This course is comprehensive and academically challenging, combining the Beginner and Intermediate courses in one year of study. Students are able to use the present and past tenses by the end of the course and have a broad range of vocabulary and expression in the language.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

**G7 French Language Acquisition Level 1/2, G8 French Language Acquisition Level 1/2** These courses are designed to further the development of correct pronunciation, recognition and use of more advanced word patterns, as well as assimilation and expansion of basic elements of grammar including the past tense. Emphasis is placed on everyday conversation.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

**G8 French Language Acquisition Level 2/3** The objective of this course is to solidify the vocabulary through deeper study of familiar themes and the grammatical focus is the formation and use of the past tenses as well as the conditional and future tenses. Emphasis is placed on written expression as well as an increased fluency and comprehension.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

**G6-7 French Language and Literature** This course is designed to consolidate and use a full range of vocabulary and grammatical features as well as to introduce French literature.

**Placement:** previous enrollment in a French speaking school, using French as mother tongue and student proficiency.

Yearlong class - meets 6 out of 8 days

**G8 French Language and Literature** This class is offered to francophone students in Grade 8 whose aim is to strengthen their home language through the exploration of literature and culture, to develop their proficiency, or to become candidates for the French Language IB programs in Grades 11 and 12. It offers a wide range of literary and non-literary text types, writing styles and techniques, allowing students to comment on the significance of any possible contexts, audiences, purpose, and the use of linguistic and literary devices.

**Placement:** previous enrollment in a French speaking school, using French as mother tongue and student proficiency.

Yearlong class - meets 6 out of 8 days

**G6 German Language Acquisition Level 1, G7 German Language Acquisition Level 1, G8 German Language Acquisition Level 1** These courses introduce students to German language, life and civilization and are designed to facilitate their living in the Frankfurt area. The courses aim to enable students to comprehend and speak basic German. Cultural similarities and differences and knowledge of German-speaking countries are also included. The objectives are to develop the skills of listening, reading, speaking and writing at a basic level. Students learn basic vocabulary and set phrases.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

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**G6 German Language Acquisition Level 1/2, G7 German Language Acquisition Level 1/2, G8 German Language Acquisition Level 1/2** These courses enable students to ask and answer simple questions, to initiate and respond to simple statements, and to work on conversational fluency. Students' vocabulary is enlarged on topical themes. Writing relevant to the course topics is practiced. Specific attention is given to German culture in Germany.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

**G6 German Language Acquisition Level 2/3, G7 German Language Acquisition Level 2/3, G8 German Language Acquisition Level 2/3** These courses are aimed at increasing students' ability to handle most social and general conversations and to communicate on definite topics relating to particular interests with a reasonable degree of accuracy; also to improve reading and comprehension skills with emphasis on fluency and pronunciation. Writing skills are developed with focus on clarity and reasonable accuracy.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

**G6 German Language Acquisition Level 3/4, G7 German Language Acquisition Level 3-4, G8 German Language Acquisition Level 3-4**

This is a one year course designed for highly competent language learners 6–7. Students will review and improve the four language skills of writing, reading, speaking, listening comprehension; it is the aim to expand vocabulary and idiomatic expression and to further fluency of speech. Some students at this level might progress to the Language and Literature class at a future stage.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

**G6 German Language and Literature, G7 German Language and Literature, G8 German Language and Literature** This class is offered to near fluent and fluent students whose aim is to strengthen their German skills through the exploration of literature and culture, to develop their proficiency, or to become candidates for the German Language A IB diploma programs in Grades 11 and 12. It offers a wide range of literary and non-literary text types, writing styles and techniques, allowing students to comment on the significance of any possible contexts, audiences, purpose, and the use of linguistic and literary devices, as well as developing students' appreciation of literature. These courses also stress mastery of grammar, spelling, sentence structure and punctuation, and competence in various types of writing.

**Placement:** fluent or near fluent command of German

Yearlong class - meets 6 out of 8 days

**G6-7 Japanese Language and Literature** This class aims to develop the four domains of language learning; listening, speaking, reading and writing. Students will comprehensively develop a solid foundation in Kanji, words and expressions and grammar. They will also deepen their understanding of the Japanese language and culture by reading a variety of text types and genres. Texts are mainly selected from textbooks used in schools in Japan. Students will also learn essay writing and how to communicate effectively in the Japanese language.

**Placement:** fluent or near fluent command of Japanese.

Yearlong class - meets 6 out of 8 days

**G6 Korean Language and Literature, G7 Korean Language and Literature, G8 Korean Language and Literature** These classes teach skills for understanding texts, writing and speaking. Students will learn various genres of literature, grammar, and aspects of Korean culture. The Korean course books which are used are also used at Korean public schools. Also, one or two books for each grade level is used to improve students' writing skills. In addition, students will learn Chinese characters, as many Korean words are structured on these characters.

**Placement:** fluent or near fluent command of Korean

Yearlong class - meets 6 out of 8 days

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**G6-7 Spanish Language Acquisition Level 1** The objectives of this course is to introduce the development of correct pronunciation, recognition and use of simple word patterns in the present tense, and the assimilation of basic elements of grammar and spelling. Emphasis is placed on communication in everyday life situations.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

**G8 Spanish Language Acquisition Level 1** This course is comprehensive and academically challenging, combining the Beginner and Intermediate courses in one year of study. Students are able to handle the present and past tenses by the end of the course and have a broad range of vocabulary and expression in the language.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

**G7 Spanish Language Acquisition Level 1/2, G8 Spanish Language Acquisition Level 1/2** The objectives of these courses are to further the development of correct pronunciation, recognition and use of more advanced word patterns, as well as assimilation and expansion of basic elements of grammar including the past tense. Emphasis is placed on everyday conversation.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

**G8 Spanish Language Acquisition Level 2/3** The objective of this course is to solidify the vocabulary through deeper study of familiar themes and the grammatical focus is the formation and use of the past tenses as well as the conditional and future forms. Emphasis is placed on written expression as well as an increased fluency and comprehension.

**Placement:** based on student proficiency level, teacher recommendation and placement test

Yearlong class - meets 6 out of 8 days

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**G6–7 Spanish Language and Literature** This course is designed to engage students in the study of many aspects of the language and literature of Spanish speaking communities and their cultures. We also explore the target culture in relation to others. It offers a study of a wide range of literary and non-literary text types, writing styles and techniques, allowing students to comment on the significance of any possible contexts, audiences, purpose, etc. Over the course of the year, students will refine their essay writing skills and learn how to debate a contentious topic. Students build their speaking and listening skills in a variety of formats, such as speeches, role play, and class debates. In reading and writing work they develop their understanding of central aspects of human experience, characters and relationships, and how writers use stylistic devices to guide readers' insights.

**Placement:** fluent or near fluent command of Spanish and teacher recommendation

Yearlong class - meets 6 out of 8 days

**G8 Spanish Language and Literature** This course is designed to engage students in the study of many aspects of the language and literature of Spanish speaking communities and their cultures. We also explore the target culture in relation to others. It offers a study of a wide range of literary and non-literary text types, writing styles and techniques, allowing students to comment on the significance of any possible contexts, audiences, purpose, etc. Over the course of the year, students will refine their essay writing skills and learn how to debate a contentious topic. Students build their speaking and listening skills in a variety of formats, such as speeches, role play, and class debates. In reading and writing work they develop their understanding of central aspects of human experience, characters and relationships, and how writers use stylistic devices to guide readers' insights.

**Placement:** fluent or near fluent command of Spanish and teacher recommendation

Year long class-meets 6 out of 8 days

**G6–8 Identity Language Classes:** This is a self-study course with two pathways. One is for home language learners, the other is for language acquisition students. When a student has a home language that is not offered at FIS we support students with an online program and weekly tutoring during class time. The language acquisition pathway is for those students who have had a significant lived experience with a language that is not their home language or host country's language. The FIS Identity Language Coordinator matches the best program to the student and also works with outside tutors who teach students oral and aural skills as well as providing them with a cultural connection once a week during class time. There is an additional cost for this class.

**Placement:** Availability of online class and approval by Identity Language Coordinator

Yearlong class - meets 6 out of 8 days

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### Humanities

Humanities in Grades 6-8 includes the disciplines of History, Geography, Economics and Global Politics. Students are encouraged to inquire deeply into concepts, the Sustainable Development Goals and our active participation in the world around us.

**Humanities 6** The focus of Humanities 6 will be the exploration of cultural identities, how civilizations developed, and how sustainability plays a role in all countries around the world. The integration of map skills will help students understand where places are in the world. Students will explore the development of ancient civilizations with a conceptual lens to examine how government structures functioned and how power was an integral part of this structure. Throughout the year, students will reflect on change over time through collaborative projects, research, and guided argumentative writing.

Yearlong class - meets 6 out of 8 days

**Humanities 7** encourages students to develop Global Understandings. The history content aligns with a field trip to the Medieval walled city of Rothenburg ob Tauber to begin the study of the Middle Ages. Students delve into the growth of new ideas and influences from Ancient Rome and gain an understanding of the progression of ideas through the Middle Ages and into the Renaissance. Students explore the concept of disruption playing a role in the many changes that occurred during this time in history. This concept will also be integrated into a unit on Globalization. Students will delve into the topics of development and globalization to gain a better understanding of how we are all connected in one form or another. They continually explore the question "How interconnected are we?" throughout the year. The sustainable development goals and review of map skills are integrated throughout this semester..

Yearlong class - meets 6 out of 8 days

**Humanities 8** focuses on students developing the capacity to know, analyze, explain and argue interdisciplinary challenges in our social world. Using case studies of Arctic communities, they investigate the impact of climate change and the global need for resource management and future development. The key concept of Revolution guides the inquiry and reflection of the impact of the Industrial Revolution on current resources and how change and continuity lead to transformation of individuals and societies, such as (seen) in the French Revolution. For the Resources Under Pressure interdisciplinary unit students will look at pressures of population and the changing environment's impact on resources. Finally, students will complete an end of year inquiry project in which they will investigate methods for taking action on a global issue that they feel passionate about. Throughout the year students build a variety of skills as they engage in research, speech writing, presentation projects, infographics, interpretation and analysis of sources along with persuasive essay writing.

Yearlong class - meets 6 out of 8 days

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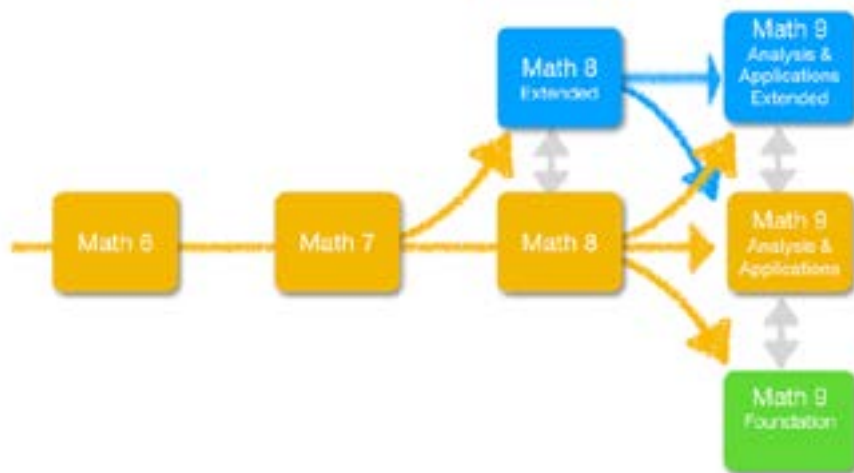


### Mathematics

All Grades 6–8 students follow an integrated mathematics program and are required to take the appropriate grade level course. Topics are taught from each of three strands: Number and Algebra, Measurement Geometry, and Statistics and Probability. Students are taught in mixed ability groups until Grade 8. Students should have a scientific (non-graphing) calculator, which will be used throughout the Grades 6–8 math courses. We have the Casio FX-85GTPlus available for purchase at the FIS bookstore.

Please see the Math Progression Chart below:

### Upper School Math Progression Chart Grades 6–8



**Math 6** is a problem-based curriculum rooted in content and practice standards to foster learning and achievement for all. Students learn by doing math, solving problems in mathematical and real-world contexts, and constructing arguments using precise language. Units of study include: Area and Surface Area, Introducing Ratios, Unit Rates and Percentages, Fraction Operations, Arithmetic in Base 10, Expressions and Equations, Rational Numbers, Data Sets and Distributions.

Yearlong class - meets 6 out of 8 days

**Math 7** students continue to develop mathematics procedural skills along with an increasingly sophisticated understanding of mathematical concepts. Concepts are taught through a problem curriculum to foster learning and achievement for all. Students learn by doing math, solving problems in mathematical and real-world contexts, and constructing arguments using precise language.

Students are encouraged to recognise the connections between the areas of mathematics and other disciplines, appreciate mathematics as an accessible, enjoyable discipline to study, and an important aspect of lifelong learning. Units of study include: Scale Drawings, Introducing Proportional Relationships, Measuring Circles,

Proportional Relationships and Percentages, Rational Number Arithmetic, Expressions, Equations and Inequalities, Angles, Triangles and Prisms, Probability and Sampling.

Yearlong class - meets 6 out of 8 days

**Math 8 and Math 8 Extended** In Grade 8 there are two levels of math - *Math 8* and *Math 8 Extended*. Both courses cover a common base of learner expectations. The Extended course progresses with increasing depth while extending students' understanding and integrating multiple mathematics concepts with application. Units of study include: Foundations of Algebra, Linear Relationships and Equations, Functions and Volume, Exponents, Pythagorean Theorem and Irrational Numbers, Statistics, and Linear Systems.

**Placement** is based on MAP testing, placement assessment, Semester 2 performance on Power Standards, and teacher recommendation. New Grade 8 students are assigned a math course based on their math placement assessment.

Yearlong class - meets 6 out of 8 days.

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### Science

Science in Grades 6–8 is an integrated course and all students are required to take the appropriate grade level science course each year. Students are asked to be scientists and engineers as they learn the practices and behaviors to investigate and build models and theories about the natural world and systems. The aim is to provide students with a good foundation of scientific knowledge enabling them to make informed judgments and decisions about scientific issues and to use the acquired scientific process skills for successful problem solving.

**Science 6** begins with Molecules to Organisms as students inquire into cell theory, cell structures and functions, interacting body systems, and information processing. The course progresses on to studies in Thermal Energy, followed by Water, Weather, and Climate. The course ends with a look at Human Impacts on the Environment.

Yearlong class - meets 6 out of 8 days

**Science 7** begins with Structure and Properties of Matter and Chemical Reactions. Students continue to develop understandings of the Interdependent Relationships in Ecosystems, Disruptions to Ecosystems, and evaluate the solutions to those disruptions. From there, students study Space Systems, including earth-sun-moon interactions, and scale relationships in our solar system. The year ends with a study of Earth Science, looking at geologic processes that shape our world.

Yearlong class - meets 6 out of 8 days

**Science 8** begins with a study of physics as students inquire into Forces and Motion, Energy (kinetic and potential), and Wave Phenomena. In the second semester, we examine biology by looking at how reproductive success is based on traits both physical and behavioral, and that those traits are influenced by environmental and genetic factors. Students develop their understanding of Natural Selection by examining mutations and the inheritance of traits.

Yearlong class - meets 6 out of 8 days

Students will take one semester of Environmental Systems and Societies and one semester of Chemistry in Grade 9.

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### Other Courses

Some additional classes from this grouping can be taken if students are not enrolled in a third language. Each of these are noted below.

**DESIGN TECHNOLOGY 6–8** is a practical subject focused on problem-solving. Students will develop skills, knowledge and understanding of the design cycle and technologies in order to use information, materials, and processes to help devise practical solutions to design challenges. The fundamental components of all Design Technology/Design Thinking work are grouped into six criteria, (1) Empathy, (2) Define, (3) Ideate, (4) Develop, (5) Manufacture/Action, and (6) Evaluation. Students investigate a design context, materials, manufacturing process, tools and equipment before planning, producing and evaluating a solution.

**Design Technology 6** Students engage in a number of short focused projects. They experience ‘making’ in the workshop, graphics techniques, CAD modeling, 3D printing, laser cutting and computational thinking. The goal is to develop their confidence in ‘making’.

Semester class - meets 3 out of 8 days

**Design Technology 7** focuses on sustainability. Students undertake a design and make a project with sustainable design as the goal. Students will use a range of tools, machinery and computer aided design techniques to produce finished products that incorporate a recycled component.

Semester class - meets 3 out of 8 days

**Design Technology 8** engages students in a full design project from start to finish. They are introduced to Fusion 360, an advanced computer aided design software package. Students will use this software to design and make a project of their choice. Their project is then manufactured using the laser cutter.

Semester class - meets 4 out of 8 days

*The following two classes may be taken if a student is not enrolled in an additional language.*

**Product Design 6–7** students will explore and develop a range of skills needed in order to successfully design a product. They will learn about Computer Assisted Design (CAD) and CAD Rendering, and develop specific craft, technical drawing, and design skills. This class may be taken in both Grades 6 and 7 since the units of study are not repeated consecutive years.

Semester class - meets 6 out of 8 days

**Innovation and Design 8** focuses on skill development and practical tasks: a mood light, team challenge, marketing task. Students will also work to solve a ‘real world’ problem where your design skills, knowledge of world events, culture, and desire to make a difference will all come together to design possible solutions to everyday challenges. You will create scale models to test your ideas.

Semester class - meets 6 out of 8 days

**ENHANCED LEARNING 6–7** All students in Grades 6 and 7 take Enhanced Learning.

**Enhanced Learning 6** is an extension or enhancement of subject specific learning. The students will make use of our MakerSpaces/Workshops to explore problem solving as “makers”. Students will learn through the lens of a scientist, engineer, and explorer to innovate, create and synthesize knowledge and skills. This future orientated class investigates how technology shapes our lives, and the potential impacts of humans as well as machines on our future world.

Year long class-meets 1 out of 8 days

**Enhanced Learning 7** focuses on developing the technological, learning, and social skills students will need throughout their schooling and beyond. These will include the IB Approaches to Learning skills-thinking, self-management, communication, social and research.

Year long class-meets 1 out of 8 days

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**PHYSICAL EDUCATION (PE) 6–8** the physical education department provides a fun, dynamic, engaging, and collaborative environment that develops the whole child through diverse physical activities. We inspire students to become confident and competent learners who value and understand the importance of movement and health now and in their futures. We teach students to apply self-management skills, in particular goal setting, to take action on their health and wellbeing.

**Physical Education and Health 6** introduces students to a wide range of experiences including Adventure Challenge, Physical Health, Invasion Games, Cultural Dance, Net Games, Track and Field and Striking and Fielding. Students will record and reflect on their growth throughout the year under the main categories of Active Living, Personal Health and Well-Being and Movement Competence and Concepts. In addition students learn and apply important life and health skills during the health education blocks. Human Sexuality, Nutrition, Mental Wellbeing, are topics included in the Health component of Physical Education.

Yearlong class - meets 5 out of 8 days (Health is one of the 5 lessons)

**Physical Education and Health 7** Builds on the knowledge and skills from Grade 6 through the units of Adventure Challenge, Physical Health, Invasion Games, Acrogymnastics, Net Games, Track and Field and Striking and Fielding. Students also record and reflect on their growth under the main categories of Active Living, Personal Health and Well-Being and Movement Competence and Concepts. In addition students learn and apply important life and health skills during the health education blocks. Human Sexuality, Substance

Abuse (focus on Vaping), Sleep and Screen Time are topics included in the Health component of Physical Education.

Yearlong class - meets 5 out of 8 days (Health is one of the 5 lessons)

**Physical Education and Health 8** Refines and further develops students skills and prepares them for Grade 9 and 10 PE, through the units of Adventure Challenge, Physical Health, Invasion Games, Street Dance, Adaptive PE, International Games and Striking and Fielding. Students will record and reflect on their growth throughout the year under the main categories of Active Living, Personal Health and Well-Being and Movement Competence and Concepts. Grade 8 students also take part in health units which include; Substance Abuse, Sexuality Education and Nutrition.

Yearlong class - meets 4 out of 8 days (Health is one of the 4 lessons)

*The following class may be taken if a student is not enrolled in an additional language.*

**Physical Activity for Life 8** During the 1st half of the class, students will take part in a wide range of experiences aimed to broaden their Physical Literacy. These range from traditional team sports and games, to individual activities like Parkour and yoga, to training options like TRX and fitness training (these are just a few examples). During the 2nd half of the semester, students will get to take a deep dive into a personal passion project.

Semester class - meets 6 out of 8 days

**LEARNING SUPPORT CLASSES** are designed to further support students with their learning needs. To be enrolled in these classes a student should have educational testing and a diagnosed learning difference. Students take one of these classes in lieu of a third language.

**Executive Functioning 6–8** is designed to aid students with organization, writing, and give them specific subject support. Students will work directly with the teacher to address their own academic strengths and weaknesses and formulate strategies to build their academic skills. The teacher will individualize the support of each student by creating a learning intervention plan and develop activities that help develop academic skills. The course is designed to help students improve their academic skills, enabling them to access the mainstream curriculum and experience success both in and outside of the school context.

**Placement:** Teacher placement

Semester or yearlong class - meets 6 out of 8 days

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**Math Recovery 6–8** is designed to aid students with math concepts including: problem solving, numerical operations, mathematical tools, and math fluency. The course can give specific subject support. Students work directly with the teacher to address their own academic strengths and weaknesses and formulate strategies to build their academic skills. The teacher will individualize the support of each student by creating a learning intervention plan and develop activities that help develop academic skills. The course is designed to help students improve their academic skills, so they can have academic success.

**Placement:** Teacher placement

Semester or yearlong class - meets 6 out of 8 days

**Reading and Writing 6–8** focuses on individual needs that strengthen writing skills through academic and creative writing. Some of the activities are: journaling, research projects, class novels, film study, PEEL, planning and revising. The reading part of the class is designed to meet the individual needs of students in the areas of: fluency, comprehension, vocabulary development, speaking and study skills. The class also offers subject support.

**Placement:** Teacher placement

Semester or yearlong class - meets 6 out of 8 days

*The following classes may be taken if not studying an additional language.*

**Digital Explorers: Discovering the World of Tech 6–7** is a project based course designed for students to navigate the vast and dynamic realm of technology. This course ensures a comprehensive, future-ready learning experience. As digital explorers, students will embark on an adventure through the world of tech, gaining essential skills and insights into the digital world.

Semester class - meets 6 out of 8 days

**Creative Computing: Unleashing Digital Imagination 6–7** explores the fusion of media and technology, from digital storytelling to data visualization, social media marketing, ethics, video production, podcasting, graphic design, virtual/augmented reality, media culture, economics, convergence, interactive design, security, copyright, AI and Robotics.

Semester class - meets 6 out of 8 days

**Computer Technology 8** enables students to accomplish IT work more effectively, using a wide variety of tools. This class is appropriate for students interested in word-processing, web-browsing, email, etc, and are interested in learning more technical, challenging techniques. Topics include: web-page design & construction, graphics design & editing, Web 2.0 tools (blogs, wikis, etc), Javascript programming for the Web, vector graphics design, sound & video editing, Scratch video game programming. This class is good preparation for the Grade 9 Computer Technology Advanced course.

Semester class - meets 6 out of 8 days

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