

Mr. Kim's Courses Year Plans 2017 – 2018

Email – kkim@wvschools.ca Phone – 604-981-1300 Website – <http://mrkim.2myclass.com>

Course	September	October	November	December	January	February	March	April	May	June
IT 8 Exploratory	-Expectations Procedures Quiz -File Management -Keyboarding Ergonomics -Google Classroom -IB MYP Learning Profile (Large Document Formatting)	-MYP Unit - Making Algorithmic Designs MYP Criteria A, B, C, D 6 weeks - 18 classes	-Algorithmic Design Assignment Google Doc -summative task – use computational thinking to create a digital design incorporating programming logic				**same format in Term 2 and Term 3 rotation** MYP Design Cycle Criterion A – Inquiring and Analyzing Criterion B – Developing Ideas Criterion C – Creating Solutions Criterion D – Evaluating			
	Keyboarding (Speed and Technique) / Timing Spreadsheet									

Course	September Computer Information Systems	October	November Applied Digital	December Communication	January	February Digital Media Development	March	April Computer Programming	May	June
IT 9	<p>-Expectations Procedures Quiz</p> <p>-File Management</p> <p>-SMART Goals</p> <p>-Google Classroom</p> <p>-MYP Unit – Problem Solving Unit</p> <p>(explore problem solving process and the different ways humans and computers solve problems)</p> <p>MYP Criteria C 8 weeks</p>	<p>-MYP Unit Design Folder Workbook</p> <p>-summative tasks</p> <p>Design an application that solves a problem</p>	<p>-MYP Unit – Web Design Unit</p> <p>(discover the languages that power the web) (build your own websites in HTML and CSS)</p> <p>MYP Criteria A, B, C, D 8 weeks</p>	<p>-MYP Unit Design Folder Workbook</p> <p>-summative task</p> <p>Compile all work and publish a personal website to share</p>	<p>-MYP Unit – Animation and Games Unit</p> <p>(learn the powerful constructs underlying programming languages. Build inter-active animations and games in JavaScript using Game Lab)</p> <p>MYP Criteria A, B, C, D 8 weeks</p>	<p>-MYP Unit Design Folder Workbook</p> <p>-summative task</p> <p>Design a personalized interactive program</p>	<p>-MYP Unit – The Design Process Unit</p> <p>(follow a design process to identify and empathize problems faced by a target audience) (Prototype an app to help solve that problem in App Lab)</p> <p>MYP Criteria A, B 4 weeks</p> <p>-MYP Unit Design Folder Workbook</p> <p>-summative task</p> <p>In an iterative team project, during which students have the opportunity to identify a need that they care about, prototype solutions both on paper and in App Lab, and test their solutions with real users to get feedback and drive further iteration.</p>	<p>-MYP Unit – Data and Society Unit</p> <p>(learn how information is represented, collected, analyzed, and visualized by computers)(Investigate how data is collected online and weigh the potential benefits and harms to individuals and society at large)</p> <p>MYP Criteria C, D 8 weeks</p>	<p>-MYP Unit Design Folder Workbook</p> <p>-summative task</p> <p>Manipulate data using an infographic to persuade an audience on topic of choice</p> <p>-MYP Unit – Physical Computing Unit</p> <p>(explore the relationship between hardware and software while building interactive projects)</p> <p>MYP Criteria C, D 8 weeks</p>	<p>-MYP Unit Design Folder Workbook</p> <p>-summative task</p> <p>Use Circuit Playground as a basis for an innovation design of their choice</p>

Course	September	October	November	December	January	February	March	April	May	June
	Computer Information Systems		Applied Digital Communication / Digital Media Development			Computer Programming				
ICT 11 Programming Pre-AP ICTP 11 (4 credits)	-Expectations Procedures Quiz -File Management -SMART Goals -Google Classroom -Human Computer Interaction Unit- -summative task-journal entries	-Problem Solving - Algorithms and Abstractions Unit- -summative task-Computer Science Unplugged mini-assignments -Social Implication of Computing Unit- (interwoven within all units) - Privacy, Owning Ideas, Ethics, Computers & War, Computers & Self, Computers & Community, Risks of Computing, Computer & Work, Censorship & Pornography, Professional Standards of Ethics -summative task-Explore PT	-Web Design Unit-	-Introduction to Web Design- -summative task-HTML5, Cascading Style Sheets (CSS3) / JavaScript / Node.js / Python / PHP / Perl / Ruby	-Physical Programming Unit-	-Introduction to Physical Programming- -summative task-Processing, Arduino and Raspberry Pi Projects	-Programming Unit-	-Java Programming (Units 1 – 8)	-Java Programming (Units 1 – 8)	-Java Programming (Units 1 – 8)
Course	September	October	November	December	January	February	March	April	May	June
ICT 12 Programming (Blended) ICTP 12 (4 credits)	-Expectations Procedures Quiz -File Management -SMART Goals -Google Classroom	-Problem Solving - Algorithms and Abstractions Unit- -summative task-Computer Science Unplugged mini-assignments -Social Implication of Computing Unit- (interwoven within all units)	-App Design Unit-	-Introduction to App Design	-summative task -app developed using one of the following App Inventor, iOS SDK, Android SDK, Touch Develop, Thinkable	-Programming Unit-	-Java Programming (Units 9 – 17)	-Java Programming (Units 9 – 17)	-Java Programming (Units 9 – 17)	-Physical Programming Unit- -Physical Programming Review- -summative task-Processing, Arduino and Raspberry Pi Projects

Course	September	October	November	December	January	February	March	April	May	June
AP Computer Science Principles 12 APCSP 12 (4 credits) Computational Thinking Practices: Connecting Computing [P1] Creating Computational Artifacts [P2] Abstracting [P3] Analyzing Problems and Artifacts [P4] Communicating [P5] Collaborating [P6] Big Ideas: Creativity [1], Abstraction [2], Data and Information [3], Algorithms [4], Programming [5], The Internet [6], Global Impact [7]	Core -Skill Building Activities to Prepare AP Students -Google Classroom Unit 1 – The Internet (5 weeks) - This unit explores the technical challenges and questions that arise from the need to represent digital information in computers and transfer it between people and computational devices. Topics include: the digital representation of information especially, numbers, text, and communication protocols. Big Ideas:	Core Computational Thinking Practices (CTP): P1, P3, P4, P5, P6 Enduring Understandings (EU): 2.1, 2.3, 3.1, 3.3, 6.1, 6.2, 7.1, 7.2, 7.3, 7.4, 7.5 Unit 2 – Digital Information (6 weeks) - This unit further explores the ways that digital information is encoded, represented and manipulated. In this unit students will look at and generate data, clean it, manipulate it, and create and use visualizations to identify patterns and trends. Big Ideas: Creativity [1], Abstraction [2], Data and Information [3], Programming [5],	Application Computational Thinking Practices (CTP): P1, P2, P3, P4, P5, P6 Enduring Understandings (EU): 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 5.1, 7.1, 7.2, 7.3, 7.4, 7.5 Big Ideas: Abstraction [2], Algorithms [4], Programming [5] Computational Thinking Practices (CTP): P2, P3, P4, P5, P6 Enduring Understandings (EU): 2.2, 4.1, 5.1, 5.2, 5.3, 5.4	Application Unit 3 – Intro to Programming (4 weeks) - This unit introduces students to programming in the JavaScript language and creating small applications (apps) that live on the web. Big Ideas: Abstraction [2], Algorithms [4], Programming [5] Computational Thinking Practices (CTP): P2, P3, P4, P5, P6 Enduring Understandings (EU): 2.2, 4.1, 5.1, 5.2, 5.3, 5.4	Application Unit 4 – Big Data and Privacy (4 weeks) - The data rich world we live in also introduces many complex questions related to public policy, law, ethics and societal impact. The major goals of the unit are 1) for students to develop a well-rounded and balanced view about data in the world around them and both the positive and negative effects of it and 2) to understand the basics of how and why modern encryption works. Big Ideas: Creativity [1], Data and Information [3], Algorithms [4], The Internet [6], Global Impact [7]	Application Unit 5– Building Apps (7 weeks) - This unit continues to develop students' ability to program in the JavaScript language, using App Lab environment to create a series of small applications (apps) that live on the web, each highlighting a core concept of programming. In this unit, students transition to creating event - driven apps. Big Ideas: Creativity [1], Abstraction [2], Data and Information [3], Algorithms [4], Programming [5], Computational Thinking Practices (CTP): P1, P2, P3, P4, P5,	Exhibition Unit 6 – Performance Tasks (20 hours – 17 classes) - This unit is primarily set aside to ensure that students have enough time in class to work on and complete their performance tasks for submission to the College Board. In the official submission to the College Board, teachers will attest that all student work is original and that the appropriate amount of class time 8 hours for Explore, 12 hours for Create was provided. Big Ideas: Creativity [1], Abstraction [2], Data and	Assessment Through-Course Performance Tasks – 40% of assessment score Explore – Impact of Computing Innovations (8 hours class time) 16% Create – Application of Ideas (12 hours of class time) 24%	Assessment Study Review Practice Exam End of Course AP Computer Science Principles Exam – 60% of assessment score (74 questions – single and multiple select) (2 hours) Students will receive a final exam score of 1–5, derived from their performance on both the through-course assessment and the end-of-course exam. AP Score 5 – Extremely Well Qualified 4 – Well Qualified 3 – Qualified 2 – Possibly Qualified 1 – No Recommendation	Capstone Project CSP Post-AP – Databases and Using Data in your Apps (20 hours – 17 classes) 5% to final term mark – complete / incomplete

	Abstraction [2], Data and Information [3], The Internet [6], Global Impact [7]	Global Impact [7]			Computational Thinking Practices (CTP): P1, P2, P3, P4, P5, P6 Enduring Understandings (EU): 1.1, 1.2, 2.3, 3.1, 3.2, 3.3, 4.2, 6.3, 7.2, 7.3, 7.4, 7.5	P6 Enduring Understandings (EU): 1.1, 1.2, 1.3, 2.2, 2.3, 3.1, 4.1, 4.2, 5.1, 5.2, 5.3, 5.4, 5.5	Information [3], Algorithms [4], Programming [5], The Internet [6], Global Impact [7] Computational Thinking Practices (CTP): P1, P2, P3, P4, P5, P6 Enduring Understandings (EU): 5.1, 7.5			
the topics and assignments in the above courses are subject to change without notice at the discretion of the instructor depending on the availability of time, resources, and adequate facility										
school year 10 months - 43 weeks - 301 days **School Act - school year approximately 193 day with 186 days in session or 37 weeks or 952 hours of instruction for students in grades 8 to 12**										

Course	September	October	November	December	January	February	March	April	May	June
Physical Education 8	-Expectations and Procedures -MYP Unit- -Team Games- End Zone Games- Rugby Football Ultimate	-MYP Unit- -Team Games- Goalie Games- Soccer Lacrosse Interdisciplinary Unit (ID) Baseline Testing - Fitness, Strength, and Conditioning	-MYP Unit- -Team Games- Goalie Games-continued Floor Hockey Floorball Ringette	-MYP Unit- -Dance- Solo and Partner -Dance Forms- -Polka Dancing -Square Dancing -Jive -Cha Cha -Mexican Hat Dance -Electric Slide -Macarena -Bird Dance -Limbo -Line Dancing	-MYP Unit- -Team Games- Basketball Kabbadi Tchoukball Quidditch	-MYP Unit- -Movement- Wrestling	-MYP Unit- -Weight Room / Active Living- -Weight room Introduction -Weight room Safety -Health Screening -Goal Setting -Strength and Conditioning Program Development	-MYP Unit- -Racket Games- Badminton Pickleball Tennis	-MYP Unit- -Non-Invasive Games- Volleyball Softball Stickball Cricket Post-Testing - Fitness, Strength, and Conditioning	-MYP Unit- -Minor Games- Capture the Flag Man Tracker Man Hunter Pirate Ship Hide and Seek Red Light Green Light Red Rover Duck Duck Goose British Bulldogs Star Wars
	Timed Runs / Core Training PE Leadership Training									
Physical Education 9 Boys	-Expectations and Procedures -MYP Unit- -Team Games- End Zone Games- Rugby Football Ultimate	-MYP Unit- -Team Games- Goalie Games- Soccer Lacrosse Baseline Testing - Fitness, Strength, and Conditioning	-MYP Unit- -Team Games- Goalie Games-continued Floor Hockey Floorball Ringette Term End - Fitness, Strength, and Conditioning Testing	-MYP Unit- -Dance- Solo and Partner -Dance Forms- -Polka Dancing -Square Dancing -Jive -Cha Cha -Mexican Hat Dance -Electric Slide -Macarena -Bird Dance -Limbo -Line Dancing	-MYP Unit- -Team Games- Basketball Kabbadi Tchoukball Quidditch	-MYP Unit- -Movement- Wrestling	-MYP Unit- -Weight Room / Active Living- -Weight room Introduction -Weight room Safety -Health Screening -Goal Setting	-MYP Unit- -Racket Sports- Badminton Pickleball Tennis	-MYP Unit- -Non-Invasive Sports- Volleyball Softball Stickball Cricket Interdisciplinary Unit (ID) Post-Testing - Fitness, Strength, and Conditioning	-MYP Unit- -Minor Games- Capture the Flag Man Tracker Man Hunter Pirate Ship Hide and Seek Red Light Green Light Red Rover Duck Duck Goose British Bulldogs Star Wars
	Timed Runs / Core Training PE Leadership Training									

Applied Design, Skills, and Technologies

BC Curriculum

Computer Science Standards for Students (ISTE) – Creativity and Innovation, Communication and Collaboration, Research and Information Fluency, Critical Thinking, Problem Solving, and Decision Making, Digital Citizenship, Technology Operations and Concepts

Grade 8

Applied Digital Communication Strand - Computer and Data Analysis Unit – practice notepad, APA citation, bibliography, large document formatting, spreadsheet (SUM, AVERAGE, RANGE, DATE), column graph, Gantt chart, algorithmic design assignment

Computer Information Systems Strand – Design Problem Solving Unit– Design Cycle

Digital Media Development Strand – Media Design Unit – Pencil Code (<https://gym.pencilcode.net>)

Computer Programming Strand - Introduction to Programming Unit – Pencil Code (<https://gym.pencilcode.net>)

Grade 9

Applied Digital Communication Strand - Computer and Data Analysis Unit – data gathering, data analysis, relational databases

Computer Information Systems Strand - Problem Solving – Algorithms and Abstractions Unit – Trump Tower Design Problem

Digital Media Development Strand - Web Design Unit – HTML5, Cascading Style Sheets (CSS3), JavaScript, Photoshop, Flash

Computer Programming Strand – Programming Unit – Scratch Programming remix / Scratch Game Engine (Super Mario Brother or Flappy Bird)

Computer Programming Strand - Physical Programming – mini drones (Tynker) / Arduino

Grade 11 Programming Pre AP

Applied Digital Communication Strand – Human Computer Interaction Unit / Social Implication of Computing Unit (interwoven within all units) - Privacy, Owning Ideas, Ethics, Computers & War, Computers & Self, Computers & Community, Risks of Computing, Computer & Work, Censorship & Pornography, Professional Standards of Ethics – Explore Performance Task

Computer Information Systems Strand - Problem Solving – Algorithms and Abstractions Unit – Computer Science Unplugged mini-assignments

Digital Media Development Strand - Web Design Unit – HTML5, Cascading Style Sheets (CSS3), JavaScript, Node.js, Python, PHP, Perl, Ruby

Computer Programming Strand - Physical Programming Unit – Processing, Arduino and Raspberry Pi Projects

Computer Programming Strand – Programming Unit – Java (Units 1 – 8)

Grade 12 Programming (Blended)

Applied Digital Communication Strand – (interwoven within all units) - Privacy, Owning Ideas, Ethics, Computers & War, Computers & Self, Computers & Community, Risks of Computing, Computer & Work, Censorship & Pornography, Professional Standards of Ethics

Computer Information Systems Strand - Problem Solving – Algorithms and Abstractions Unit– Computer Science Unplugged mini-assignments

Digital Media Development Strand - App Design Unit – app developed using one of the following App Inventor, IOS SDK, Android SDK, Touch Develop, Thinkable

Computer Programming Strand - Physical Programming Unit – Processing, Arduino and Raspberry Pi Projects

Computer Programming Strand – Programming Unit – Java (Units 9 – 17)

AP Computer Science Principles 12

Big Ideas – Creativity, Abstraction, Data and Information, Algorithms, Programming, The Internet, Global Impact

Units Description	Big Ideas (BI)	Computational Thinking Practices (CTP)	Enduring Understandings (EU)
<p>Unit 1 – The Internet</p> <p>- This unit explores the technical challenges and questions that arise from the need to represent digital information in computers and transfer it between people and computational devices. Topics include: the digital representation of information especially, numbers, text, and communication protocols.</p>	<p>Abstraction [2] Data and Information [3] The Internet [6] Global Impact [7]</p>	<p>Connecting Computing [P1] Abstracting [P3] Analyzing Problems and Artifacts [P4] Communicating [P5] Collaborating [P6]</p>	<p>2.1, 2.3, 3.1, 3.3, 6.1, 6.2, 7.1, 7.2, 7.3, 7.4, 7.5</p>
<p>Unit 2 – Digital Information</p> <p>- This unit further explores the ways that digital information is encoded, represented and manipulated. In this unit students will look at and generate data, clean it, manipulate it, and create and use visualizations to identify patterns and trends.</p>	<p>Creativity [1] Abstraction [2] Data and Information [3] Programming [5] Global Impact [7]</p>	<p>Connecting Computing [P1] Creating Computational Artifacts [P2] Abstracting [P3] Analyzing Problems and Artifacts [P4] Communicating [P5] Collaborating [P6]</p>	<p>1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 5.1, 7.1, 7.2, 7.3, 7.4, 7.5</p>
<p>Unit 3 – Intro to Programming</p> <p>- This unit introduces students to programming in the JavaScript language and creating small applications (apps) that live on the web.</p>	<p>Abstraction [2] Algorithms [4] Programming [5]</p>	<p>Creating Computational Artifacts [P2] Abstracting [P3] Analyzing Problems and Artifacts [P4] Communicating [P5] Collaborating [P6]</p>	<p>2.2, 4.1, 5.1, 5.2, 5.3, 5.4</p>
<p>Unit 4 – Big Data and Privacy</p> <p>- The data rich world we live in also introduces many complex questions related to public policy, law, ethics and societal impact. The major goals of the unit are 1) for students to develop a well-rounded and balanced view about data in the world around them and both the positive and negative effects of it and 2) to understand the basics of how and why modern encryption works.</p>	<p>Creativity [1] Data and Information [3] Algorithms [4] The Internet [6] Global Impact [7]</p>	<p>Connecting Computing [P1] Creating Computational Artifacts [P2] Abstracting [P3] Analyzing Problems and Artifacts [P4] Communicating [P5] Collaborating [P6]</p>	<p>1.1, 1.2, 2.3, 3.1, 3.2, 3.3, 4.2, 6.3, 7.2, 7.3, 7.4, 7.5</p>
<p>Unit 5 – Building Apps</p> <p>- This unit continues to develop students’ ability to program in the JavaScript language, using App Lab environment to create a series of small applications</p>	<p>Creativity [1] Abstraction [2] Data and Information [3] Algorithms [4] Programming [5]</p>	<p>Connecting Computing [P1] Creating Computational Artifacts [P2] Abstracting [P3] Analyzing Problems and Artifacts [P4] Communicating [P5]</p>	<p>1.1, 1.2, 1.3, 2.2, 2.3, 3.1, 4.1, 4.2, 5.1, 5.2, 5.3, 5.4, 5.5</p>

(apps) that live on the web, each highlighting a core concept of programming. In this unit, students transition to creating event driven apps.		Collaborating [P6]	
<p>Unit 6 – Performance Tasks</p> <p>- This unit is primarily set aside to ensure that students have enough time in class to work on and complete their performance tasks for submission to the College Board. In the official submission to the College Board, teachers will attest that all student work is original and that the appropriate amount of class time 8 hours for Explore, 12 hours for Create was provided.</p>	Creativity [1] Abstraction [2] Data and Information [3] Algorithms [4] Programming [5] The Internet [6] Global Impact [7]	Connecting Computing [P1] Creating Computational Artifacts [P2] Abstracting [P3] Analyzing Problems and Artifacts [P4] Communicating [P5] Collaborating [P6]	5.1, 7.5