**Computers & Technology Curriculum Overview**

*The Computers & Technology course is focused on providing students with an opportunity to gain and increase technological knowledge and skills necessary for learning in the 21st century.  Students will be exposed to course work where they will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information. Through structured weekly lessons, students will use critical thinking, creative expression, and decision making skills.  Additional course work in internet safety, ethical use of materials and resources, career exploration and proper techniques for keyboarding are introduced at developmentally appropriate grade levels.*

**GRADES K-2**

**Using and Transferring: Content Standard 1: All students will use and transfer technological knowledge and skills for life roles (family member, citizen, worker, consumer, lifelong learner)**

*By the end of Grade 2, each student will:*

1. Identify the computer as a machine that helps people work and is used as a form of entertainment
2. Identify common uses of technology found in daily life
3. Identify places in the community where one can access technology
4. Identify the parts of a computer system and operational terminology
5. Demonstrate the proper use of a computer system

**Using Information Technologies: Content standard 2: All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.**

*By the end of Grade 2, each student will:*

1. Understand proper procedure for turning the computer on, logging in, and shutting down the computer
2. Recognize the functions of basic file menu commands – new, open, close, save, print
3. Recognize letters, numbers, punctuation and specific function of keys
4. Use word processing as a tool to enter letters, numbers and words
5. Recognize proper hand positioning on the keyboard
6. Use word processing as a tool to enter number, words, and short sentences

**Using Technologies: Content Standard 3: All students will apply appropriate technologies to critical thinking, creative expression, and decision making.**

*By the end of Grade 2, each student will:*

1. Use appropriate software to combine text and graphics

**Applying Standards: Content Standard 5: All students will apply ethical and legal standards in planning, using and evaluating technology.**

*By the end of Grade 2, each student will:*

1. Demonstrate respect for the work of others
2. Understand ownership of creative works
3. Understand the consequences of irresponsible uses of technology resources at home or at school

**Understanding and Applying Safe Use: Content Standard 6: All students will use technology following safety measures that apply to both the real world and the virtual world.**

*By the end of Grade 2, each student will:*

1. Be able to list and describe safe and unsafe aspects of technology in relation to oneself and others
2. Be able to identify responsible and safe online behavior and why it is important

**GRADES 3-5**

*Grades 3-5 will build upon skills learned in Grades K-2*

**Using and Transferring: Content Standard 1: All students will use and transfer technological knowledge and skills for life roles (family member, citizen, worker, consumer, lifelong learner)**

*By the end of Grade 5, each student will:*

1. Be able to identify the parts of a computer system and operational terminology – cursor, icon, menu
2. Be able to identify broader uses of technology found in daily life – bar code scanners, ATMs, medical equipment, security alarms, GPS
3. Be able to describe the effects of having technology in the home
4. Understand the impact of messages from different technological sources – television, cellular phones, e-mail
5. Understand and use multiple devices and systems for storage – file servers, flash drives, online storage
6. Be able to use telecommunication terms and concepts – browser, URL, hypertext, www

**Using Information Technologies: Content standard 2: All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.**

*By the end of Grade 5, each student will:*

1. Understand the difference between informal and formal styles of communication – e-mail, text, research paper
2. Understand how to use the file management system
3. Be able to use word processing with more advanced tools – spell check, undo, tab, margins, thesaurus
4. Be able to demonstrate proper keyboarding skills while improving speed and accuracy
5. Be able to access a specific website by typing in the URL under the direction of the teacher
6. Be able to use word processing with more advanced tools – tables, copy, paste, edit, page setup
7. Be able to use the keyboard without looking at the keys while continuing to improve speed and accuracy

**Using Technologies: Content Standard 3: All students will apply appropriate technologies to critical thinking, creative expression, and decision making.**

*By the end of Grade 5, each student will:*

1. Be able to use appropriate software to combine text and graphics
2. Be able to use a variety of technologies to express ideas – voice, data, graphics
3. Be able to use multimedia to present information and ideas
4. Be able to organize and arrange information for a multimedia presentation

**Employing systematic approach: Content Standard 4: All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems and environments.**

*By the end of Grade 5, each student will:*

1. Be able to collect, enter and edit data in graphs and tables
2. Be able to interpret simple information from existing age appropriate databases
3. Recognize spreadsheets as a tool to organize, calculate and graph information

**Applying Standards: Content Standard 5: All students will apply ethical and legal standards in planning, using and evaluating technology.**

*By the end of Grade 5, each student will:*

1. Be able to demonstrate respect for the work of others
2. Understand ownership of creative works
3. Understand the consequences of irresponsible uses of technology resources at home or at school

**Understanding and Applying Safe Use: Content Standard 6: All students will use technology following safety measures that apply to both the real world and the virtual world.**

*By the end of Grade 5, each student will:*

1. Be able to recognize internet advertising – pop ups, you’re a winner

**GRADES 6-8**

*Grades 6-8 will build upon skills learned in Grades K-2 and Grades 3-5*

**Using and Transferring: Content Standard 1: All students will use and transfer technological knowledge and skills for life roles (family member, citizen, worker, consumer, lifelong learner)**

*By the end of Grade 8, each student will:*

1. Be able to identify common uses of technology found in daily life including cell phones, digital cameras, scanners, printers, etc.
2. Be able to easily identify places in the community where one can access technology
3. Be able to identify broader uses of technology found in daily life – bar code, scanners, ATMs medical equipment, security alarms, GPS
4. Be able to identify computer related careers
5. Be able to compare/contrast the impact of messages from different technological sources – television, cellular phones, e-mail
6. Be able to access and use various types of educational software on an individual basis
7. Be able to identify job opportunities and ways technology is related to these opportunities
8. Be able to recognize and use network terminology – stand alone, network, file server
9. Be able to recognize and use terms related to the protection of computers – virus protection, password, network security, firewall
10. Be able to use basic telecommunication tools – email, web quests, Google classroom
11. Use a variety of technological resources to explore career paths and identify areas of interest

**Using Information Technologies: Content standard 2: All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.**

*By the end of Grade 8, each student will:*

1. Use proper keyboarding skills while improving speed and accuracy
2. Be able to enter data into an already prepared database – Microsoft Excel, Google Sheets
3. Be able to use word processing with more advanced tools – tables, copy, paste, edit, page setup
4. Be able to apply menu functions across various applications
5. Be able to evaluate search results for accuracy, appropriateness and bias
6. Be able to modify a simple database and display data in different ways using the Sort function
7. Be able to produce, proofread and edit documents for a variety of content areas using appropriate resources – dictionary, thesaurus spell check
8. Be able to work with two programs simultaneously
9. Be able to demonstrate some knowledge of word processing/desktop publishing features – columns, tables, headers, footers, text box

**Using Technologies: Content Standard 3: All students will apply appropriate technologies to critical thinking, creative expression, and decision making.**

*By the end of Grade 8, each student will:*

1. Be able to use a variety of technologies to express ideas – voice, data, graphics
2. Be able to import graphics from a variety of sources using legal and ethical standards
3. Be able to organize and arrange information for a multimedia presentation
4. Be able to create, modify and import graphics to use in presentations and/or projects
5. Be able to compare/contrast the functions and capabilities of the word processor, database and spreadsheet
6. Be able to use word processing tools to develop documents that include data imported from a spreadsheet

**Employing systematic approach: Content Standard 4: All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems and environments.**

*By the end of Grade 8, each student will:*

1. Be able to identify and understand electronic databases as a way to collect, organize and display data
2. Be able to use spreadsheets to organize, calculate and display data
3. Understand and apply simple formulas
4. Be able to select a graph or chart to best represent data from a spreadsheet
5. Be able to independently calculate, represent an explain data using a spreadsheet

**Applying Standards: Content Standard 5: All students will apply ethical and legal standards in planning, using and evaluating technology.**

*By the end of Grade 8, each student will:*

1. Be able to demonstrate respect for the work of others
2. Understand ownership of creative works and how to cite sources
3. Be able to identify appropriate kinds of information that should/should not be shared online – chat rooms, blogs, games
4. Be able to recognize and model responsible and safe behavior with using technological resources
5. Understand copyright infringement, privacy rights and responsibilities, plagiarism and cheating
6. Understand consequences of illegal use of technology

**Understanding and Applying Safe Use: Content Standard 6: All students will use technology following safety measures that apply to both the real world and the virtual world.**

*By the end of Grade 8, each student will:*

1. Be able to identify responsible and safe online behavior and why it is important
2. Be able to identify the impact of the disposal of technological devices
3. Understand the positive and negative effects that technology could have on our society