

## INFORMATION AND COMMUNICATION TECHNOLOGY

### Division III

**LEGEND:**

★ - As there is much overlap for the various outcomes, the star indicates ultimate grade level responsibility. Outcomes achieved at earlier grade levels are not repeated in the next level, however it is assumed that the skills are progressive, as in a spiraling curriculum, with simple skills leading to more complex ones and earlier outcomes being maintained and demonstrated at higher levels of efficiency and application.

**On-going** – indicates those outcomes covered in normal day-to-day use of technology

**Illustrative examples are listed by Grade/Subject/Unit, Theme, Topic or Strand if applicable/Example Number if applicable**

e.g. 7Science3 means Gr. 7 Science, Theme 3

If there is more than one lesson in any given unit, the lessons will be numbered accordingly, e.g. 7Science3-1 and 7Science3-2

#### Communicating, Inquiring, Decision Making and Problem Solving

GO #	SO#	Specific Outcome	Gr. 7	Gr. 8	Gr. 9
<b>C1</b>	<b>Students will access, use, and communicate information from a variety of technologies.</b>				
	3.1	plan and conduct a search, using a wide variety of electronic sources	★ 7SocialAC	8LA 8Science3 8Science4	9LA 9Science3 9ScienceR 9SocialB
	3.2	refine searches to limit sources to a manageable number	★ 7Science5 7SocialAC	8Science3 8Science4	9LA 9ScienceR
	3.3	access and operate multimedia applications and technologies from stand-alone and online sources		★ 8Science3 8Science4	9ScienceR
	3.4	access and retrieve information through the electronic network	★ 7SocialAC		9ScienceR
	3.5	analyze and synthesize information to create a product	<i>On-going</i>		
3.6	communicate in a persuasive and engaging manner, through appropriate forms, such as speeches, letters, reports and multimedia presentations, applying information technologies for content, audience and purpose	★ <i>Reports</i>  7Science3 7Science5 7SocialA 7SocialB	★ <i>Speeches Multimedia</i>  8LA	★ <i>Article Position Paper</i> 9Health 9LA 9Math 9Science3 9ScienceR 9SocialA 9SocialB	



GO #	SO#	Specific Outcome	Gr. 7	Gr. 8	Gr. 9
<b>C2</b>	<b>Students will seek alternative viewpoints, using information technologies.</b>				
	3.1	access diverse viewpoints on particular topics by using appropriate technologies	★ 7SocialB 7SocialAC		9LA 9ScienceR
	3.2	assemble and organize different viewpoints in order to assess their validity	7SocialAC		★ 9LA
	3.3	use information technology to find facts that support or refute diverse viewpoints	7SocialAC		★ 9LA
<b>C3</b>	<b>Students will critically assess information accessed through the use of a variety of technologies.</b>				
	3.1	evaluate the authority and reliability of electronic sources	<i>On-going</i>		
	3.2	evaluate the relevance of electronically accessed information to a particular topic	<i>On-going</i>		
<b>C4</b>	<b>Students will use organizational processes and tools to manage inquiry.</b>				
	3.1	create a plan for an inquiry that includes consideration of time management	★	★	★
			<i>Teacher Directed</i>	➔	<i>Student Directed</i>
			7SocialA 7SocialB 7SocialAC	8Math 8Science4 8SocialA	9ScienceR 9SocialA 9SocialB 9SocialAC
3.2	develop a process to manage volumes of information that can be available through electronic sources	★ 7SocialB 7SocialAC	8SocialA	9ScienceR	
3.3	demonstrate the advanced search skills necessary to limit the number of hits desired for online and offline databases; for example, the use of “and” or “or” between search topics and the choice of appropriate search engines for the topic	<i>On-going</i>			
<b>C5</b>	<b>Students will use technology to aid collaboration during inquiry.</b>				
	3.1	access, retrieve and share information from electronic sources, such as common files	<i>On-going</i>		
	3.2	use networks to brainstorm, plan and share ideas with group members	7LA	8SocialA	★ 9ScienceR



GO #	SO#	Specific Outcome	Gr. 7	Gr. 8	Gr. 9
C6	<b>Students will use technology to investigate and/or solve problems.</b>				
	3.1	articulate clearly a plan of action to use technology to solve a problem		8SocialA	★ 9Health 9ScienceR 9SocialB
	3.2	identify the appropriate materials and tools to use in order to accomplish a plan of action	★ <i>Introductory Word Processor</i>  7LA 7Math 7Science3 7SocialA	★ <i>Database, Multimedia Presentation, Spreadsheet</i>  8Math 8Science4 8SocialA	★ <i>Advanced Word Processor, Advanced Spreadsheet, Web Page</i> 9Science3 9ScienceR 9SocialB 9SocialAC
	3.3	evaluate choices and the progress in problem solving then redefine the plan of action as appropriate	★ 7Math	8SocialA	9ScienceR
	3.4	pose and test solutions to problems by using computer applications, such as computer-assisted design or simulation/modelling software	★ 7Math		
	3.5	create a simulation or a model by using technology that permits the making of inferences	★ 7Math		
C7	<b>Students will use electronic research techniques to construct personal knowledge and meaning.</b>				
	3.1	identify patterns in organized information	★ 7Math 7Science3	8SocialA	9Math 9Science3 9SocialA
	3.2	make connections among related, organized data, and assemble various pieces into a unified message	★ 7LA 7Math 7Science3 7Science5 7SocialA 7SocialB	8LA 8Science4 8SocialA	9Health 9LA 9Math 9Science3 9ScienceR 9SocialA 9SocialAC



Foundational Operations, Knowledge and Concepts					
GO #	SO#	Specific Outcome	Gr. 7	Gr. 8	Gr. 9
F1	<b>Students will demonstrate an understanding of the nature of technology.</b>				
	3.1	demonstrate an understanding that information can be transmitted through a variety of media	☆ <i>Introductory Word Processor</i>  7LA 7Math 7Science3 7Science5 7SocialA 7SocialAC 7SocialB	☆ <i>Database, Multimedia Presentation, Spreadsheet</i>  8LA 8Math 8Science3 8Science4 8SocialA	☆ <i>Advanced Word Processor, Advanced Spreadsheet, Web Page</i> 9Health 9LA 9Math 9Science3 9ScienceR 9SocialA 9SocialB 9SocialAC
	3.2	explain the concept of software and hardware compatibility			☆ 9ScienceR
	3.3	apply terminology appropriate to the technology being used at this division level (NOTE: One of the needs that has been identified at the jurisdiction level is to create a list of terminology appropriate to the various grade levels. This is a project that will be the focus of Technology Committee meetings in the 2000-2001 school year.)	☆ 7LA 7Math 7Science3 7Science5 7SocialA 7SocialAC 7SocialB	☆ 8LA 8Math 8Science3 8Science4 8SocialA	☆ 9Health 9LA 9Math 9Science3 9ScienceR 9SocialA 9ScienceR
	3.4	demonstrate an understanding that digital technology follows a logical order of operations	☆ 7Math	8LA 8Math 8SocialA	9Health 9Math 9SocialA
	3.5	explain the difference between digital and analog data on communication systems			☆ 9ScienceR
	3.6	explain how the need for global communication affects technology around the world	7Science3	☆ 8Science4	9ScienceR
	3.7	demonstrate the ability to troubleshoot technical problems	<i>On-going</i>		
	3.8	demonstrate an understanding that technology is a process, technique or tool used to alter human activity	7Math 7Science5	☆ 8Math	9Math 9SocialA



GO #	SO#	Specific Outcome	Gr. 7	Gr. 8	Gr. 9
F2	<b>Students will understand the role of technology as it applies to self, work and society.</b>				
	3.1	describe the impact of communication technologies on past, present and future workplaces, lifestyles and the environment	★ 7SocialA		9Health
	3.2	identify potential technology-related career paths		8Math	★ 9Health 9Math
	3.3	identify the cultural impact of global communication	★ 7SocialA 7SocialB	8Science4	9SocialB
	3.4	evaluate the driving forces behind various technological inventions	7Math	★ 8Science4	
	3.5	make inferences regarding future trends in the development and impact of communication technologies	7SocialA		★ 9SocialAC
	3.6	explain ways in which technology can assist in the monitoring of local and global environmental conditions	7Science3 7Science5	★ 8Math 8Science4	9Math 9ScienceR 9SocialAC
	3.7	analyze and assess the impact on society of having limitless access to information		8LA 8Science3 8Science4	★ 9LA
	3.8	identify the manner in which telecommunications technology affects time and distance		★ 8Science4	9SocialAC
F3	<b>Students will demonstrate a moral and ethical approach to the use of technology.</b>				
	3.1	use time and resources on the network wisely	<i>On-going</i>		
	3.2	explain the issues involved in balancing the right to access information with the right to personal privacy		8Math	★ 9Health
	3.3	understand the need for copyright legislation	<i>On-going</i>		
	3.4	cite sources when using copyright and/or public domain material	<i>On-going</i>		
	3.5	download and transmit only materials that comply with the established network use policies and practices	<i>On-going</i>		
	3.6	model and assume personal responsibility for ethical behavior and attitudes and acceptable use of information technologies and sources in local and global contexts	<i>On-going</i>		



GO #	SO#	Specific Outcome	Gr. 7	Gr. 8	Gr. 9
F4	<b>Students will become discerning consumers of mass media and electronic information.</b>				
	3.1	identify aspects of style in a presentation	7LA 7Science3	★ 8LA 8Science3 8Science4	9Health 9Science3 9ScienceR 9SocialA 9SocialB
	3.2	understand the nature of various media and how they are consciously used to influence an audience		★ 8Math 8Science3	9LA 9Math 9SocialA
	3.3	identify specific techniques used by the media to elicit particular responses from an audience		★ 8Math 8Science3	9Health 9Math
	3.4	recognize that the ability of technology to manipulate images and sound can alter the meaning of a communication		★ 8Science3	9SocialA 9SocialB
F5	<b>Students will practice the concepts of ergonomics and safety when using technology.</b>				
	3.1	identify risks to health and safety that result from improper use of technology	<i>On-going</i>		
	3.2	identify and apply safety procedures required for the technology being used	<i>On-going</i>		
F6	<b>Students will demonstrate a basic understanding of the operating skills required in a variety of technologies.</b>				
	3.1	connect and use audio, video and digital equipment		★ 8LA 8Science3	9ScienceR
	3.2	perform routine data maintenance and management of personal files	<i>On-going</i>		
	3.3	demonstrate proficiency in uploading and downloading text, image, audio and video files	★ <i>Text Image</i> 7SocialA 7SocialB	★ <i>Audio Video</i> 8LA 8Science3 8Science4 8SocialA	9ScienceR
	3.4	demonstrate the ability to control devices electronically		★ 8LA 8Science4	9ScienceR
	3.5	describe the steps involved in loading software			★ 9ScienceR
	3.6	identify and apply safety procedures, including antivirus scans and virus checks, to maintain data integrity			★ 9ScienceR



## Processes for Productivity

GO #	SO#	Specific Outcome	Gr. 7	Gr. 8	Gr. 9
P1	<b>Students will compose, revise and edit text.</b>				
	3.1	design a document, using style sheets and with attention to page layout, that incorporates advanced word processing techniques, including headers, footers, margins, columns, table of contents, bibliography and index	★ <i>Headers</i> <i>Footers</i> <i>Margins</i> <i>Bibliography</i> 7SocialA		★ <i>Columns</i> <i>Style sheets</i> <i>TOC</i> <i>Index</i>  9Health 9LA 9ScienceR 9SocialB
	3.2	use advanced word processing menu features to accomplish a task; for example, insert a table, graph or text from another document	★ 7Math 7Science3		9Science3 9ScienceR 9SocialAC
	3.3	revise text documents based on feedback from others	7SocialA	★ 8Science3 8Science4	9Math 9ScienceR
	3.4	use appropriate communication technology to elicit feedback from others	7LA	8SocialA	★ 9LA 9ScienceR
P2	<b>Students will organize and manipulate data.</b>				
	3.1	design, create and modify a database for a specific purpose		★ 8SocialA	
	3.2	design, create and modify a spreadsheet for a specific purpose, using functions such as SUM, PRODUCT, QUOTIENT and AVERAGE		8Math	★ 9Science3 9ScienceR 9SocialAC
	3.3	use a variety of technological graphing tools to draw graphs for data involving one or two variables		8Math	★ 9Math 9Science3 9ScienceR 9SocialAC
	3.4	use a scientific calculator or a computer to solve problems involving rational numbers	7Math		★ 9Math
P3	<b>Students will communicate through multimedia.</b>				
	3.1	create multimedia presentations that take into account audiences of diverse size, age, gender, ethnicity and geographic location		★ 8Science4	
	3.2	create multimedia presentations that incorporate meaningful graphics, audio, video, and text gathered from remote sources	7SocialB	★ 8LA 8Science3 8Science4	9ScienceR 9SocialA



GO #	SO#	Specific Outcome	Gr. 7	Gr. 8	Gr. 9
P4	<b>Students will integrate various applications.</b>				
	3.1	integrate information from a database into a text document		★ 8SocialA	
	3.2	integrate database reports into a text document		★ 8SocialA	
	3.3	emphasize information, using placement and colour	★ 7LA 7Science3 7SocialB	8LA 8SocialA	9Health 9Science3 9SocialA 9SocialAC
P5	<b>Students will navigate and create hyperlinked resources.</b>				
	3.1	create a multiple-link web page			★ 9ScienceR
	3.2	demonstrate proficient use of various information retrieval technologies	★ 7SocialAC	8Math 8Science4	9SocialAC
P6	<b>Students will use communication technology to interact with others.</b>				
	3.1	communicate with a targeted audience, within a controlled environment, by using such communication technologies as email and web browsers			★ 9ScienceR
	3.2	demonstrate proficiency in accessing local area network, wide area network and Internet services, including uploading and downloading text, image, audio and video files	★ <i>Text</i> <i>Image</i> 7SocialB 7SocialAC	★ <i>Audio</i> <i>Video</i> 8LA 8Science3 8SocialA	

