



EDUTEKA presenta los estándares del [Currículo para Colegios y Centros de Información de Bibliotecas Escolares](#) que se encuentra en el documento "Estudios de Información, kindergarten a grado 12", desarrollado por la Asociación de Bibliotecas Escolares de Ontario, Canadá. Estos estándares permitirán hacer una valoración acertada de los avances de los estudiantes en el desarrollo de las habilidades necesarias para el adecuado manejo de la información.

Los países avanzados en temas educativos se han preocupado por desarrollar en todos los escolares las habilidades requeridas para aprovechar plenamente los recursos que encuentran en las bibliotecas. El nuevo [Currículo](#) de la Provincia canadiense de Ontario responde a los cambios y a los desafíos de la explosión de la información de las últimas décadas y ofrece un programa completo para fortalecer la Competencia en el Manejo de la Información (CMI) a lo largo de la vida escolar y profesional.

En el currículo, los estudios de la información se encuentran organizados en tres ejes: Búsqueda e Investigación; Tecnologías de la Información; e Información y Sociedad. A su vez, cada uno de estos ejes se organiza de acuerdo a cuatro "meta habilidades": Comprensión de Conceptos/Razonamiento; Organización; Comunicación; y Aplicación.

En el futuro próximo los lectores/usuarios de EDUTEKA podrán disponer de una traducción de este documento que debido a su importancia decidimos ofrecer en inglés como complemento del [Currículo sobre Estudios de Información](#).

MARCO TEÓRICO

BÚSQUEDA E INVESTIGACIÓN (Inquiry and Research)

Los estudiantes necesitan las habilidades y el conocimiento básico sobre búsqueda e investigación para ser competentes en el manejo de la información. La alfabetización en información es un prerrequisito para el éxito en todas las materias del programa, para prepararse para trabajos y educación adicionales, y para aprender durante toda la vida.

El objetivo de la búsqueda y la investigación es promover niveles elevados de pensamiento crítico, de modo que los procesos y los recursos sean apropiados, las conclusiones se basen en pruebas que las respalden, los problemas se resuelvan y las decisiones se tomen de manera que amplíen el aprendizaje a toda la vida.

Todas las materias necesitan poner atención a las expectativas de ésta vertiente (eje). Sin embargo, la investigación ha demostrado que cuando más se benefician los estudiantes es cuando se comprometen en un estudio sistemático del proceso de la investigación, y tienen oportunidades variadas, continuas y bien planificadas para ampliar sus destrezas para el uso de la información.

Los programas de aprendizaje que integran a los maestros y los [Maestros-Bibliotecólogos](#), aterrizan la investigación y la solución de problemas de la información en un continuo de conocimientos y habilidades de información. Este continuo se puede describir como el desarrollo de las meta habilidades que incluyen la comprensión de conceptos/razonamiento, organización, comunicación y aplicación a través del proceso de: preparación para la investigación, acceso a la información, procesamiento de la información y transferencia del aprendizaje.

TECNOLOGÍAS DE LA INFORMACIÓN (Information Technologies)

Los estudiantes necesitan desarrollar habilidades y conocimiento sobre las tecnologías de la información (TICs) para aprovechar la fuerza, efectividad, eficiencia y emoción del aprendizaje en la Era de la Información. De hecho, la alfabetización tecnológica es un componente tan primordial para la competencia en el manejo de la información (alfabetización en información), descuidarla puede afectar de una manera grave el éxito académico futuro y las oportunidades profesionales.

La tecnología de la información (TICs) es un término utilizado para incluir un amplio espectro de tecnologías – medios impresos, digitales, y visuales- para almacenar, recuperar, enviar y transferir información. El término también se usa para describir el estudio o la aplicación de sistemas (especialmente computadores, electrónica digital, telecomunicaciones, catálogos automatizados, etc.) La tecnología de la información es un objetivo importante en las escuelas pues ni el mensaje tecnológico ni el medio son neutrales: el tipo móvil (en tipografía) y el bit digital son la extensión del sentimiento, pensamiento, observación y comprensión. Los programas de aprendizaje deben facilitar a los estudiantes un amplio espectro de lo que es la información, el acceso a las tecnologías y la capacitación en las competencias para el manejo de la información. Esto es importante para todos los estudiantes, y crucial para el éxito de aquellos para quienes, por sus antecedentes o circunstancias económicas, no tienen acceso a las tecnologías de la información en sus casas. La igualdad de acceso a la instrucción de la información y las tecnologías en las escuelas mejorará el aprendizaje para todos los estudiantes, incluyendo los que tienen necesidades especiales.

INFORMACIÓN Y SOCIEDAD (Information and Society)

Los estudiantes necesitan comprender la importancia y las características de la información en la Era de la Información. Necesitan identificar el modo como se organiza, genera y comunica la información. Necesitan desarrollar el disfrute de explorar información de todo tipo. Por encima de todo, los estudiantes necesitan las destrezas y el conocimiento para usar la información a profundidad y con sabiduría con el fin de obtener una satisfacción personal duradera y aportar a la sociedad.

Es el momento de estudiar la información como materia por sí misma, dentro de su propio contexto. Para estudiar la información como materia, se requiere analizar y evaluar el papel que juega dentro de todos los aspectos de la vida humana, desde las finanzas hasta la educación, desde el gobierno local hasta las tendencias globales. Puesto que la información se construye socialmente, no es neutral ni en su objetivo ni en su resultado. Los estudiantes necesitan ser socialmente responsables en cuanto al empleo que hagan de la información y estar muy conscientes de los temas de seguridad, inocuidad y ética que la rodean.

Los estudiantes necesitan aprender sobre el aprendizaje. ¿Cómo funciona, aprende y percibe el cerebro? ¿Cuáles son las etapas mediante las cuales tanto los individuos como las sociedades desarrollan las competencias en el manejo de la información? ¿Cómo nos convertimos no sólo en sociedad de la información sino en una sociedad que aprende? En un mundo tan rápidamente cambiante, donde un dato específico puede perder actualidad rápidamente, son las habilidades meta cognitivas y el conocimiento los que constituyen las bases del aprendizaje independiente para toda la vida. Este reto requiere que todos los maestros proporcionen una variedad de oportunidades, continuas y bien planeadas, para ampliar las competencias en el manejo de la información por parte de los estudiantes.

Ejes o Tendencias en los Estudios de la Información Grados 1º a 12º.

El programa para todos los grados y áreas de las materias, se diseñó con el objeto de desarrollar destrezas en la solución de problemas de información y toma de decisiones, que incluyen el acceder, analizar, aplicar, generar y comunicar información. Los estudiantes deben explorar una diversidad de recursos que incluyan: los impresos y los electrónicos, los medios visuales y otros recursos de la comunidad. Las metas deben conducir a estudiantes competentes en información con la confianza y capacidad suficientes para aplicar sus habilidades de procesamiento de información en sus vidas personales, en su educación futura y en el mundo laboral. Las metas de los estudios de la información se encuentran organizadas dentro de tres ejes que se centran en el proceso, las habilidades aplicadas y el conocimiento contextual.

Los tres ejes son: **Búsqueda e Investigación - Tecnologías de la Información - Información y Sociedad.**

Las tablas 1, 2 y 3 identifican las expectativas generales de cada eje, organizadas de acuerdo con las 4 "meta habilidades": **Comprensión de Conceptos/Razonamiento – Organización – Comunicación - Aplicación.**

Etapas de búsqueda e investigación	Conceptos / Razonamiento	Organización	Comunicación	Aplicación
Preparación para la Investigación	Definir las necesidades de información usando una variedad de estrategias.	Identificar diversas maneras de organizar la información.	Explorar la información usando una diversidad de actividades de grupo.	Relacionar los conocimientos previos con las tareas de información.
Acceder a los recursos	Seleccionar la información apropiada para las necesidades usando diversidad de estrategias.	Recopilar información a partir de recursos usando organizadores internos y las convenciones de los textos.	Colaborar con otros para compartir los hallazgos y las ideas.	Ubicar una variedad de recursos apropiados a partir de una gama de recursos disponibles.
Procesando la información	Analizar y evaluar información usando una variedad de estrategias.	Organizar la información usando una variedad de estructuras y formatos.	Probar las ideas para adaptar las estrategias adecuadas de investigación y solución de problemas.	Sintetizar los hallazgos y formular las conclusiones.
Transfiriendo el aprendizaje	Reflexionar sobre el producto y el proceso de la investigación, y evaluarlos.	Modificar el producto haciéndolo apropiado para el objetivo, la audiencia y el formato.	Presentar los resultados de la investigación en una variedad de formas para una diversidad de audiencias.	Transferir habilidades de información y conocimiento para resolver problemas y tomar decisiones.

Tabla No. 1 - 1er Eje: Búsqueda e Investigación - Expectativas Generales Organizadas de Acuerdo con las "Meta Habilidades".

Conceptos / Razonamiento	Organizar	Comunicar	Aplicar
<ul style="list-style-type: none"> Usar las tecnologías de la información para definir las necesidades, seleccionar, analizar y evaluar la información. Reflexionar sobre la investigación y evaluarla. 	<ul style="list-style-type: none"> Usar las tecnologías de la información para clasificar, recopilar y organizar la información, y para modificar el producto. 	<ul style="list-style-type: none"> Usar las tecnologías de la información para explorar la información, colaborar con otros, probar las ideas y presentar los hallazgos. 	<ul style="list-style-type: none"> Usar las tecnologías de la información para relacionar los conocimientos previos, para ubicar información, para sintetizar los hallazgos, formular conclusiones, y transferir conocimientos y habilidades.

Tabla No 2 - 2º Eje: Tecnologías de la Información - Expectativas Generales Organizadas por "Meta Habilidad".

Conceptos / Razonamiento	Organizar	Comunicar	Aplicar
<ul style="list-style-type: none"> Analizar y evaluar la importancia de la información en la sociedad 	<ul style="list-style-type: none"> Comprender las diversas maneras de organizar y almacenar la información. 	<ul style="list-style-type: none"> Comprender las diversas maneras de generar y comunicar la información. 	<ul style="list-style-type: none"> Transferir nuevos conocimientos y habilidades de información para enriquecer la vida personal y para aportarle a la sociedad.

Tabla No. 3 - 3er Eje: Información y Sociedad - Expectativas Generales Organizadas por Meta Habilidad.

ESTÁNDARES DEL CURRÍCULO PARA COLEGIOS Y CENTROS DE INFORMACIÓN DE BIBLIOTECAS ESCOLARES

ESTUDIOS DE INFORMACIÓN, KINDERGARTEN A GRADO 12 (Asociación de Bibliotecólogos de Ontario - OLA)

Ontario School Library Association
Information Studies
Kindergarten to Grade 12



Curriculum for Schools and School
Library Information Centres, 1998

Inquiry and Research

http://www.accessola.com/action/positions/info_studies/html/research.html

INQUIRY AND RESEARCH: KINDERGARTEN

Overall Expectations. By the end of Kindergarten, students will: Define needs, select information, make sense of information and respond to findings; identify, gather and sort information and observations; explore information, and collaborate with others, test ideas and share findings; relate prior knowledge, locate information, make observations, and adapt to new learning.

Expectations in Specific Areas

Reasoning. By the end of Kindergarten, students will:

- ✓ Ask questions and express feelings about answers found
- ✓ Begin to distinguish between real and imaginary stories and depictions
- ✓ Begin to make predictions about stories and information
- ✓ Make a simple plan to get information and carry out its steps
- ✓ Investigate and describe familiar cultural, geographical and recreational features of their neighbourhood

Organizing. By the end of Kindergarten, students will:

- ✓ Identify some features of books and other written materials
- ✓ Begin to describe the library layout and routines
- ✓ Sort and classify objects by characteristic and category
- ✓ Identify parts of things, such as parts of the body, and describe their separate function

Communicating. By the end of Kindergarten, students will:

- ✓ Ask questions within a group about people, places and things they are curious about
- ✓ Share feelings and ideas about information-based experiences in a variety of verbal and non-verbal ways

- ✓ Use a variety of print and physical materials to communicate information and ideas
- ✓ Choose products for portfolio collections in consultation with peers and teachers

Applying. By the end of Kindergarten, students will:

- ✓ Express wonder and curiosity about the world of information around them
- ✓ Identify new thoughts and feelings arising from information-based activities
- ✓ Make appropriate observations about information results and findings

INQUIRY AND RESEARCH: GRADE 1

Overall Expectations. By the end of Grade 1, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas

Reasoning. By the end of Grade 1, students will:

- ✓ use brainstorming to explore thoughts and feelings
- ✓ role play questions and answers
- ✓ use question starter words
- ✓ distinguish between questions and statements
- ✓ predict content from the cover of a book
- ✓ begin to understand keywords
- ✓ find information from illustrative works
- ✓ predict story sequence and revise/confirm predictions
- ✓ retell a simple story in proper sequence and recall information in it accurately
- ✓ distinguish between real-life and media depictions
- ✓ complete simple self-evaluation charts
- ✓ comment on the ease and difficulty of a task

Organizing. By the end of Grade 1, students will:

- ✓ identify parts of fictional texts such as table of contents and chapters
- ✓ describe library layout and routines
- ✓ complete information tasks within structured time
- ✓ use information from different parts of a book
- ✓ read pictures for information
- ✓ understand what an author and a title are

- ✓ write simple notes
- ✓ draw pictures for storybooks
- ✓ organize information on concrete graphs and pictographs
- ✓ explain sorting method used
- ✓ participate in student–teacher conferencing
- ✓ begin to understand the difference between rough copy and finished product

Communicating. By the end of Grade 1, students will:

- ✓ create group lists of previous knowledge about a particular topic or topics
- ✓ take turns speaking in a group, sharing ideas
- ✓ present research question to group, answering questions for clarifications
- ✓ express feelings and ideas about information-based experiences in a variety of verbal and non-verbal ways
- ✓ recount personal experiences seeking information
- ✓ make predictions about information and stories
- ✓ report findings pictorially
- ✓ create simple dramatic presentations

Applying. By the end of Grade 1, students will:

- ✓ create charts that distinguish what they know and what they need to know
- ✓ identify pattern books and simple poetry texts
- ✓ be familiar with some sections of the library
- ✓ be familiar with the public library
- ✓ organize information into pictographs
- ✓ create story maps
- ✓ express their thoughts and feelings about stories and informational texts
- ✓ complete pictorial self-evaluation
- ✓ talk about new learning
- ✓ make judgments and draw conclusions to solve problems

INQUIRY AND RESEARCH: GRADE 2

Overall Expectations. By the end of Grade 2, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas

Reasoning. By the end of Grade 2, students will:

- ✓ articulate questions
- ✓ experiment with concrete objects
- ✓ cluster ideas
- ✓ collaborate with teacher to plan research-begin to use illustrated dictionaries and encyclopedias
- ✓ select pictures and found objects for information-identify advertisements
- ✓ restate information in a short non-fiction text in their own words
- ✓ retell a story in proper sequence and identify the main idea and characters
- ✓ make conclusions based on completed research
- ✓ participate in peer conferences

Organizing. By the end of Grade 2, students will:

- ✓ identify different forms of information such as story books, informational texts and environmental print
- ✓ identify major Dewey Decimal categories
- ✓ use a table of contents, index and chapter headings
- ✓ look for key words in simple interactive software
- ✓ identify information from basic parts of a graph
- ✓ begin to create timelines
- ✓ make jot notes
- ✓ prepare storyboards
- ✓ create a research folder
- ✓ record sources
- ✓ use graphic organizers
- ✓ make corrections to products
- ✓ practise performances

Communicating. By the end of Grade 2, students will:

- ✓ ask questions for clarification
- ✓ work in small groups effectively, taking responsibility for personal contributions
- ✓ complete simple response journals
- ✓ participate in choral responses
- ✓ create simple research reports
- ✓ restate information in own words
- ✓ construct and label simple graphs

Applying. By the end of Grade 2, students will:

- ✓ create lists of focus words
- ✓ use previously written journal entries
- ✓ identify storybooks and interactive software
- ✓ begin to understand the organization and range of the school library
- ✓ browse library shelves to locate information
- ✓ express their thoughts and feelings about ideas in stories and informational texts
- ✓ identify connections to everyday life
- ✓ make judgments and draw conclusions to solve problems

INQUIRY AND RESEARCH: GRADE 3

Overall Expectations. By the end of Grade 3, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas**Reasoning.** By the end of Grade 3, students will:

- ✓ ask questions to clarify meaning and encourage responses
- ✓ narrow and broaden focus
- ✓ outline necessary resources and plan steps to obtain them
- ✓ select information from a range of print and electronic resources
- ✓ explore bookmarked Internet sites
- ✓ use picture files and globes
- ✓ distinguish between fact and fiction
- ✓ identify and restate main ideas in a piece of writing and cite supporting details
- ✓ interpret data from graphs-reflect on opportunities for further developments
- ✓ complete tracking sheets

Organizing. By the end of Grade 3, students will:

- ✓ Identify the parts of non-fiction texts such as indexes
- ✓ Begin to identify catalogue record elements
- ✓ Explore reference information on Cd-Roms and in simple encyclopedias
- ✓ Use the elements of charts, diagrams and graphs to collect information
- ✓ Enter simple search words
- ✓ Use the features of thesauri to collect information
- ✓ Use titles and subheadings
- ✓ Enter data into simple databases and spreadsheets
- ✓ Use source sheets to record
- ✓ Organize data into charts and diagrams using several criteria
- ✓ Use peer-conferencing to revise work
- ✓ Begin to practise self-editing and proofreading

Communicating. By the end of Grade 3, students will:

- ✓ get feedback from teachers and peers
- ✓ participate in class discussions
- ✓ contribute to group databases
- ✓ participate in small group discussions, including peer and teacher conferences
- ✓ illustrate text appropriately with a range of visual materials
- ✓ explain copyright and plagiarism and report findings without plagiarizing form and ideas of others

Applying. By the end of Grade 3, students will:

- ✓ recall past experiences with information resources
- ✓ begin to make inferences when reading
- ✓ locate chapter books and children's reference books
- ✓ begin to use catalogues to locate materials by call number

- ✓ browse bookmarked sites on the Internet
- ✓ create a variety of charts to collect and organize data according to given criteria
- ✓ begin to develop their own opinions by considering ideas from various materials
- ✓ identify connecting ideas
- ✓ prepare a list of further information problems to solve
- ✓ make judgments and draw conclusions to solve problems

INQUIRY AND RESEARCH: GRADE 4

Overall Expectations. By the end of Grade 4, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas

Reasoning. By the end of Grade 4, students will:

- ✓ formulate questions to guide research
- ✓ create mind maps, subject webs prior to search
- ✓ get an overview of a topic or problem from a variety of reference resources
- ✓ begin to reread, skim, and scan to select appropriate information
- ✓ conduct interviews and surveys
- ✓ begin to bookmark Internet sites relevant to research-identify story elements
- ✓ identify bias in information
- ✓ distinguish between fact and opinion
- ✓ start to complete learning logs and response journals
- ✓ identify how data was collected

Organizing. By the end of Grade 4, students will:

- ✓ use library terminology
- ✓ understand organization of atlases
- ✓ identify Dewey Decimal sub-categories
- ✓ recognize the purposes of different parts of a graph
- ✓ use index in multi-volume works
- ✓ explore specific Web sites on the Internet
- ✓ use conventional symbols, titles and labels when displaying data
- ✓ make notes on such organizers as index cards
- ✓ prepare outlines

- ✓ identify key points
- ✓ use research folder to organize a variety of information
- ✓ routinely edit work, with feedback from teachers and peers
- ✓ choose an appropriate title for research

Communicating. By the end of Grade 4, students will:

- ✓ stay on topic in group discussions
- ✓ begin to participate in telecommunications projects
- ✓ share findings in electronic format, e.g. keypals, conferencing and databases
- ✓ review research strategies in peer and teacher conferencing
- ✓ create simple spreadsheets and tables
- ✓ create dramatizations

Applying. By the end of Grade 4, students will:

- ✓ use an encyclopedia to provide overview of topic
- ✓ clarify meaning with a dictionary
- ✓ search catalogue by author, title, subject
- ✓ locate novels, biographies and myths
- ✓ browse subject directories on the Internet
- ✓ compare findings with predictions
- ✓ identify their own point of view in research
- ✓ relate ideas in materials to personal knowledge and experience
- ✓ make judgments and draw conclusions to solve problems

INQUIRY AND RESEARCH: GRADE 5

Overall Expectations. By the end of Grade 5, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas

Reasoning. By the end of Grade 5, students will:

- ✓ structure search strategies within set timelines
- ✓ build a knowledge base from a variety of resources
- ✓ distinguish different kinds and purposes of questions
- ✓ develop a research focus-select novels, short stories, biographies

- ✓ bookmark and use Internet sites relevant to research
- ✓ select information from a variety of electronic reference materials
- ✓ identify main ideas and supporting details
- ✓ examine currency of data
- ✓ evaluate definitions
- ✓ discuss patterns in data
- ✓ complete self-evaluation on product and process, identifying strengths and weaknesses
- ✓ analyze how data was collected and discuss the reasonableness of results

Organizing. By the end of Grade 5, students will:

- ✓ identify the features of a variety of media
- ✓ understand role of bibliographic conventions
- ✓ determine time required to complete tasks
- ✓ begin to use footnotes and bibliographic citations found in resources to locate other information
- ✓ begin to use simple bibliographic conventions
- ✓ prepare simple flow charts with timelines
- ✓ create simple databases and spreadsheets and output data in a variety of ways
- ✓ understand the needs of the audience and the purpose of the product
- ✓ recognize the need for deadlines and meet them

Communicating. By the end of Grade 5, students will:

- ✓ use appropriate strategies to organize group projects
- ✓ prepare subject webs to connect similar ideas
- ✓ create preliminary outline based on initial findings and test clarity with group
- ✓ create timelines and multi-media presentations
- ✓ use authentic performance strategies to present research

Applying. By the end of Grade 5, students will:

- ✓ prepare a list of potential kinds of resources, prior to beginning search
- ✓ locate periodicals, texts and editorials
- ✓ independently search automated catalogues
- ✓ begin to search the Internet using keywords in single search engines
- ✓ use matrixes to sort facts and similarities, and to evaluate and classify data
- ✓ discover relationships between resources
- ✓ relate research findings to personal knowledge and experience
- ✓ make judgments and draw conclusions to solve problems

INQUIRY AND RESEARCH: GRADE 6

Overall Expectations. By the end of Grade 6, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats

- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas**Reasoning.** By the end of Grade 6, students will:

- ✓ structure search strategies and timelines
- ✓ develop research plans with statement of purpose
- ✓ begin to manage thoughts and feelings arising from research process-select periodicals
- ✓ select national and international atlases
- ✓ compare formats of print and electronic reference materials to facilitate selection of information
- ✓ deconstruct media works
- ✓ identify agreement and disagreement among sources
- ✓ distinguish between primary and secondary sources
- ✓ identify point of view
- ✓ independently complete self-evaluation on all research and information problem solving
- ✓ demonstrate an understanding of probability in making appropriate conclusions and appropriate decisions

Organizing. By the end of Grade 6, students will:

- ✓ explore various subject directories on CD-ROMs
- ✓ describe how information on specific Web sites is structured
- ✓ prepare key words, descriptors and concepts appropriate to intended research, e.g. dictionary definitions; specialized terms in math and science
- ✓ use simple bibliographic conventions
- ✓ use headings and captions
- ✓ design surveys, organize data into self-selected categories and ranges, and record data on spreadsheets
- ✓ compare information selected and interpreted with information needs and adjust research strategies if necessary
- ✓ eliminate irrelevant information

Communicating. By the end of Grade 6, students will:

- ✓ listen to, acknowledge and consider differing opinions in group work
- ✓ work in teams to develop project outlines
- ✓ formulate hypothesis and test validity with peers and teacher
- ✓ evaluate the advantages and disadvantages of various presentation formats
- ✓ experiment with a variety of displays of the same data

Applying. By the end of Grade 6, students will:

- ✓ browse the appropriate sections of the library to expand approaches to a topic
- ✓ locate and read a wide range of resources
- ✓ begin to search the Internet using features of single search engines
- ✓ retrieve information from databases
- ✓ create tree diagrams to analyze parts, and to order or rank information
- ✓ make analogies to connect ideas in a variety of formats
- ✓ analyze data to make inferences and arguments
- ✓ relate research findings to career possibilities and applications in the workplace
- ✓ make judgments and draw conclusions from research to solve problems

INQUIRY AND RESEARCH: GRADE 7

Overall Expectations. By the end of Grade 7, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas

Reasoning. By the end of Grade 7, students will:

- ✓ begin to use planners
- ✓ formulate questions that would synthesize various sources of information and points of view
- ✓ learn to prepare questions in advance of research
- ✓ select a variety of periodicals
- ✓ select information from relevant field study
- ✓ understand plagiarism and copyright
- ✓ examine the authority, validity and reliability of print and online resources
- ✓ begin to identify criteria used to evaluate information
- ✓ begin to articulate the stages of the research process
- ✓ judge if a problem has been identified and solved
- ✓ identify bias in data collection methods

Organizing. By the end of Grade 7, students will:

- ✓ explain the purpose of catalogue record elements
- ✓ distinguish between general and subject specific reference materials
- ✓ describe how different formats record information
- ✓ begin to use simple print or online indexes to periodicals
- ✓ identify conventional symbols, titles and labels that organize data
- ✓ create prefaces and tables of contents
- ✓ use basic surveys
- ✓ use simple bibliographic conventions
- ✓ sort data on tally charts and stem-and-leaf charts
- ✓ edit product for coherence
- ✓ verify the adequacy of information selected

Communicating. By the end of Grade 7, students will:

- ✓ use role play strategies to explore ideas during research process
- ✓ develop subject webs to expand connections among similar ideas
- ✓ use detailed outlines in peer and teacher conferencing to check progress and test clarity of ideas
- ✓ use appropriate transitions in presenting research

- ✓ display data and information in a variety of formats, with and without the use of technology

Applying. By the end of Grade 7, students will:

- ✓ use see references and cross references to expand approaches to a topic
- ✓ independently use the public library to locate information
- ✓ search the Internet using a variety of features in single search engines
- ✓ develop generalizations
- ✓ generalize findings into useful conclusions
- ✓ make inferences and convincing arguments based on data analysis
- ✓ begin to recast a product in a new format for a range of purposes and audiences
- ✓ make judgments and draw conclusions to solve problems

INQUIRY AND RESEARCH: GRADE 8

Overall Expectations. By the end of Grade 8, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas

Reasoning. By the end of Grade 8, students will:

- ✓ recognize elements of potentially successful research questions
- ✓ ask higher-order questions
- ✓ select CD ROM databases
- ✓ select biographical resources
- ✓ compare and verify statements from two or more sources
- ✓ examine assumptions and bias in information
- ✓ identify criteria used to evaluate information
- ✓ articulate the stages of the research process
- ✓ assess bias in data collection methods
- ✓ examine assumptions in product and process

Organizing. By the end of Grade 8, students will:

- ✓ describe the features and conventions of a variety of reference materials
- ✓ use bibliographies and suggested readings in reference materials to investigate further sources
- ✓ use simple print or online indexes to periodicals
- ✓ create paraphrases

- ✓ use legends
- ✓ use matrices to record variables for decision making
- ✓ sort collected information, using general and sample data
- ✓ edit product for unity
- ✓ verify the accuracy of examples and quotations from primary sources
- ✓ check product for bias

Communicating. By the end of Grade 8, students will:

- ✓ use simulation strategies to explore ideas during research process
- ✓ participate in an electronic conference to share and contribute ideas
- ✓ use paraphrase in peer and teacher conferencing to check progress and test clarity of ideas
- ✓ maintain an appropriate tone in presenting research through diction and detail
- ✓ manipulate and present data using spreadsheets
- ✓ begin to use presentation software to present research

Applying. By the end of Grade 8, students will:

- ✓ use previous research folder to generate ideas and approaches
- ✓ compare predicted and experimental results
- ✓ begin to use community resources and organizations for information
- ✓ begin to search the Internet using a range of strategies available in a variety of single search engines
- ✓ identify cause and effect relationships in information
- ✓ determine trends and patterns in information
- ✓ make inferences and convincing arguments based on data analysis
- ✓ recast a product in a new format for a range of purposes and audiences
- ✓ make judgments and draw conclusions to solve problems

INQUIRY AND RESEARCH: GRADE 9

Overall Expectations. By the end of Grade 9, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas

Reasoning. By the end of Grade 9, students will:

- ✓ begin to prioritize questions for significance, relevance and practicality
- ✓ use planners independently

- ✓ manage thoughts and feeling arising from research
- ✓ select a variety of online databases
- ✓ select handbooks, almanacs and directories
- ✓ compare comprehensiveness of sources
- ✓ analyze bias and suggest alternative sources
- ✓ design criteria to evaluate information
- ✓ begin to understand general principles of good research
- ✓ begin to use journal to track product and process, including emotional and intellectual responses

Organizing. By the end of Grade 9, students will:

- ✓ Describe how periodicals are indexed in print or electronic form
- ✓ Use varied dictionary entries to determine connotation, etymology and idiom
- ✓ Gather human resource information from directories, electronic yellow pages and email
- ✓ Begin to create advanced databases and spreadsheets and output information in a variety of ways
- ✓ Chart concept formation
- ✓ Begin to use advanced bibliographic conventions
- ✓ Edit product for emphasis
- ✓ Verify the logic of argument
- ✓ Begin to follow a standard format for a variety of formats

Communicating. By the end of Grade 9, students will:

- ✓ conduct formal interview strategies to explore ideas during research process
- ✓ complete delegated group work
- ✓ use summaries in peer and teacher conferencing to check progress and test clarity of ideas
- ✓ integrate varied forms of and approaches to information in presentations

Applying. By the end of Grade 9, students will:

- ✓ use visual organizers such as mind maps
- ✓ maintain a log of thoughts and feelings as a response to learning
- ✓ use community resources and organizations for information
- ✓ search the Internet using a range of strategies available in a variety of single search engines
- ✓ make connections between sources to provide overview
- ✓ regroup and organize data to make connections
- ✓ analyze conflicting information
- ✓ make judgments and draw conclusions to solve problems

INQUIRY AND RESEARCH: GRADE 10

Overall Expectations. By the end of Grade 10, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas**Reasoning.** By the end of Grade 10, students will:

- ✓ prioritize questions for significance, relevance and practicality
- ✓ form questions into focus and reflect on continual appropriateness of focus
- ✓ select specialized atlases, such as historical and cultural atlases
- ✓ select appropriate census material
- ✓ analyze inaccuracy and ambiguity in information and their effect on argument
- ✓ evaluate the clarity of language to support ideas
- ✓ judge if conclusion follows the argument
- ✓ understand general principles of good research
- ✓ use journal to track product and process, including emotional and intellectual responses

Organizing. By the end of Grade 10, students will:

- ✓ compare the organizational structures of similar reference materials
- ✓ interpret statistical information in varied media such as handbooks, yearbooks, almanacs and reports
- ✓ use advanced print or online indexes to periodicals
- ✓ create advanced databases and spreadsheets and output information in a variety of ways
- ✓ create summaries
- ✓ use advanced bibliographic conventions
- ✓ revise introduction and conclusion to provide context
- ✓ verify accuracy of facts and quotations from secondary sources
- ✓ follow a standard format for a variety of products

Communicating. By the end of Grade 10, students will:

- ✓ use informal debate strategies to explore ideas during research process
- ✓ use informal meeting strategies to share ideas during research
- ✓ use flow charts in peer and teacher conferencing to check progress and test clarity of ideas
- ✓ use presentation software to present research

Applying. By the end of Grade 10, students will:

- ✓ use published print and electronic bibliographies to start search
- ✓ begin to use special libraries, local and virtual, for information
- ✓ begin to search the Internet using a range of strategies available in a variety of meta search engines
- ✓ discover relationships in information
- ✓ make personal meaning from the information analyzed
- ✓ make judgments and draw conclusions to solve problems

INQUIRY AND RESEARCH: GRADE 11

Overall Expectations. By the end of Grade 11, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information
- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies

- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas**Reasoning.** By the end of Grade 11, students will:

- ✓ critique own questions as essential and non essential
- ✓ form questions into thesis and reflect on continual appropriateness of thesis
- ✓ select specialized atlases, such as regional and economic atlases
- ✓ select bibliographies
- ✓ analyze the validity of hypothesis of a resource by examining its primary and secondary sources
- ✓ construct logic statements to test the validity of argument
- ✓ recognize personal learning styles and their impact on research and problem solving
- ✓ set goals for improvement in next research activity

Organizing. By the end of Grade 11, students will:

- ✓ describe different classification systems
- ✓ use specialized indexes such as literary, legal, bibliographic, biographic and business indexes
- ✓ create abstracts
- ✓ use outlining and flowchart software to organize data
- ✓ use advanced surveys
- ✓ re-examine currency of research and modify product in light of new findings

Communicating. By the end of Grade 11, students will:

- ✓ use formal debate strategies to explore ideas during research process
- ✓ use formal meeting strategies to share ideas during research
- ✓ use abstracts in peer and teacher conferencing to check progress
- ✓ publish information in virtual formats, such as Web pages

Applying. By the end of Grade 11, students will:

- ✓ examine published hypotheses for similarities and differences with own hypothesis
- ✓ use special libraries, local and virtual, for information
- ✓ search the Internet using a range of strategies available in a variety of meta search engines
- ✓ begin to extend insights and opinions from findings
- ✓ relate research findings to global perspectives
- ✓ make judgments and draw conclusions to solve problems
- ✓ suggest areas for further research

INQUIRY AND RESEARCH: GRADE 12

Overall Expectations. By the end of Grade 12, students will:

prepare for research:

- ✓ define information needs using a variety of strategies
- ✓ explore information using a variety of group activities
- ✓ identify varied ways of organizing information

- ✓ relate prior knowledge to information tasks;

access resources:

- ✓ locate a variety of appropriate resources from a variety of sources
- ✓ select information appropriate to needs using a variety of strategies
- ✓ gather information from resources using internal organizers and conventions of texts
- ✓ collaborate with others to share findings and ideas;

process information:

- ✓ analyze and evaluate information using a variety of strategies
- ✓ test ideas to adjust research and problem solving strategies
- ✓ sort information using a variety of organizers and formats
- ✓ synthesize findings and formulate conclusions;

transfer learning:

- ✓ revise product appropriate to purpose, audience and format
- ✓ present research findings in a variety of forms for a variety of audiences
- ✓ reflect on and evaluate product and process
- ✓ transfer new information skills and knowledge to solve problems and make decisions.

Expectations in Specific Areas**Reasoning.** By the end of Grade 12, students will:

- ✓ recognize the importance of taking time to internalize questions and findings at all stages of the process
- ✓ select archival material and government documents
- ✓ select journals and abstracts
- ✓ deconstruct an argument to determine original principles
- ✓ analyze both inductive and deductive arguments and evaluate the logic of their conclusions
- ✓ recognize and integrate the learning styles of others in research and problem solving
- ✓ foresee consequences and implications of personal research

Organizing. By the end of Grade 12, students will:

- ✓ identify how resources are classified within different classification systems
- ✓ visit a variety of physical and virtual libraries and describe their features
- ✓ use specialized indexes such as newspaper, journal, and trade indexes to prepare for post-secondary employment and education
- ✓ create précis
- ✓ create relational databases and output information in a variety of ways
- ✓ distinguish between MLA and APA bibliographic conventions
- ✓ use conventions of editing and revising print, media and electronic texts such as proofreader's marks and director's cues

Communicating. By the end of Grade 12, students will:

- ✓ use a variety of seminar strategies to explore ideas during research process
- ✓ conduct an electronic conference to collect ideas from a wide variety of student and expert participants
- ✓ use précis in peer and teacher conferencing to check progress
- ✓ extend presentations to a variety of communities for authentic performance

Applying. By the end of Grade 12, students will:

- ✓ identify the strengths and weaknesses in knowledge and experience prior to task
- ✓ use controlled vocabulary for subject searching
- ✓ locate archival and government documents
- ✓ use free text searching of online resources
- ✓ extend insights and opinions from findings
- ✓ make judgments and draw conclusions to solve problems
- ✓ transfer conclusion reached in one context to another context, e.g., from the arts to the sciences.

Information Technologies

http://www.accessola.com/action/positions/info_studies/html/infotech.html

INFORMATION TECHNOLOGIES: KINDERGARTEN

Overall Expectations. By the end of Kindergarten, students will:

- ✓ use information technology to define needs, select information, make sense of information and respond to findings;
- ✓ use information technology to identify, gather and sort information and observations;
- ✓ use information technology to explore information, and collaborate with others, test ideas and share findings;
- ✓ use information technology to relate prior knowledge, locate information, make observations, and adapt to new learning.

Expectations in Specific Areas

Reasoning. By the end of Kindergarten, students will:

- ✓ respond to information from a variety of media verbally and non-verbally

Organizing. By the end of Kindergarten, students will:

- ✓ use patterning software applications to structure information

Communicating. By the end of Kindergarten, students will:

- ✓ use a variety of software tools and techniques to make products and presentations
- ✓ work with others in using technology

Applying. By the end of Kindergarten, students will:

- ✓ use a variety of familiar technologies appropriately

INFORMATION TECHNOLOGIES: GRADE 2

Overall Expectations. By the end of Grade 2, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 2, students will:

- ✓ select a variety of audio, video and CD resources appropriate to need
- ✓ restate pertinent information from audio and video recordings
- ✓ explore CD-ROMs to introduce a topic

Organizing. By the end of Grade 2, students will:

- ✓ use menus on CD-ROMs to understand the organization of information
- ✓ begin to develop word processor skills such as cut, copy and paste
- ✓ use drawing tools and simple databases to sort and record information
- ✓ explain how information was collected

Communicating. By the end of Grade 2, students will:

- ✓ create a presentation using simple drawing publication software

- ✓ develop basic computer drawing tools such as fill tools
- ✓ explore use of word processing tools such as font size, style and colour to enhance text presentations
- ✓ develop telephone skills through role play
- ✓ comply with an acceptable use policy

Applying. By the end of Grade 2, students will:

- ✓ use basic organizational tools such as alphabetical indexes and hypertext to retrieve information on CD-ROMs
- ✓ search for information by keywords, subject, author and title on OPAC
- ✓ use computer files to share collected information
- ✓ use television and VCR to retrieve information

INFORMATION TECHNOLOGIES: GRADE 3

Overall Expectations. By the end of Grade 3, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 3, students will:

- ✓ identify different media works such as television programs and CD-ROMs and describe the purpose of each
- ✓ identify communication technology tools and describe the function of each such as television, computer, telephone
- ✓ describe how electronic resources enhance reading, viewing and listening for information and pleasure

Organizing. By the end of Grade 3, students will:

- ✓ develop word processor skills such as cut, copy and paste
- ✓ investigate how different formats are organized such as photos, collage and newspapers
- ✓ use camcorder and camera to collect data
- ✓ use audio and video tape to record information
- ✓ use story board organizer to plan projects

Communicating. By the end of Grade 3, students will:

- ✓ create a simple media work such as picture book, advertisement or a video production and adhere to principles of copyright
- ✓ share information using appropriate presentation technologies such as overhead projector and VCR
- ✓ conduct interviews or surveys following a prepared script in small groups using telephone, fax, or Email (penpals)

Applying. By the end of Grade 3, students will:

- ✓ locate and retrieve appropriate resources such as online catalogues, reference CD-ROMs and audio/visual resources
- ✓ use preselected bookmarks to access Web pages
- ✓ identify basic techniques in media production such as camera angle, music, and colour
- ✓ begin to synthesize results lists from searches on CD-ROMs

INFORMATION TECHNOLOGIES: GRADE 4

Overall Expectations. By the end of Grade 4, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 4, students will:

- ✓ explore topic to be investigated using a variety of media such as video, and CD-ROMs
- ✓ analyze story elements in audio, video and electronic presentation

Organizing. By the end of Grade 4, students will:

- ✓ recognize structural elements used to create media works and understand their function
- ✓ use electronic template to record information from telephone interview and surveys
- ✓ use prepared database or spread sheet to enter and edit data

Communicating. By the end of Grade 4, students will:

- ✓ participate in electronic communication
- ✓ create a simple slide show using a prepared template from a digital presentation tool
- ✓ develop word processing/drawing skills to edit and write/create research
- ✓ publish electronically a product for sharing information

Applying. By the end of Grade 4, students will:

- ✓ locate and retrieve appropriate resources such as bookmarked Web sites and subject directories
- ✓ operate a tape recorder and still camera to collect data
- ✓ synthesize results lists from searches on CD-ROMs
- ✓ use graphic applications to illustrate information
- ✓ use word processor to load, edit and save information

INFORMATION TECHNOLOGIES: GRADE 5

Overall Expectations. By the end of Grade 5, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 5, students will:

- ✓ examine media works such as television commercial or documentary film to identify creator's purpose and strategies to achieve it
- ✓ explore topic to be investigated using a variety of media such as videos and television shows

Organizing. By the end of Grade 5, students will:

- ✓ use video and computer applications to organize, sort and visually display data and draw conclusions
- ✓ print selected text, pictures or maps from appropriate electronic resources to collect information and meet information need
- ✓ organize and display data using line graphs, bar graphs, pictographs and circle graphs

Communicating. By the end of Grade 5, students will:

- ✓ participate in electronic communication for peer editing
- ✓ use online collaborative tools to develop team projects
- ✓ prepare simple multimedia works to present research
- ✓ develop presentation software skills such as creating stacks for a slide show
- ✓ publish electronically a product for sharing information

Applying. By the end of Grade 5, students will:

- ✓ use multiple keywords to search OPAC and CD-ROMs
- ✓ begin to search Internet by keywords in single search engines
- ✓ use database or spreadsheet to compare and contrast resources
- ✓ obtain data by phone, letter and online
- ✓ use graphic applications to illustrate information
- ✓ add drawn, scanned, or digital pictures to documents

INFORMATION TECHNOLOGIES: GRADE 6

Overall Expectations. By the end of Grade 6, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 6, students will:

- ✓ investigate common technology tools and identify types of tasks for which they can be used
- ✓ justify the choice of presentation technology and how it meets information needs
- ✓ analyze and evaluate data using appropriate software tools such as outlining and graphic organizers

Organizing. By the end of Grade 6, students will:

- ✓ combine data, design spreadsheets and make charts and graphs to record and display information
- ✓ use organization tools such as timelines, knowledge trees, hypertext links, legends and indexes to record and organize information
- ✓ create storyboard organizer to plan video and electronic slide presentation

Communicating. By the end of Grade 6, students will:

- ✓ integrate text, graphics and sound in presentations
- ✓ use e-mail and web pages to share information
- ✓ contribute information to a class web page
- ✓ prepare a display using different technologies such as scanners, digital cameras and camcorders
- ✓ describe the purpose of netiquette and follow its protocols

Applying. By the end of Grade 6, students will:

- ✓ begin to search the Internet using Boolean operators in single search engines
- ✓ use applications to display data in a variety of ways to determine most effective mode of presentation
- ✓ integrate multimedia tools such as importing sound/graphics
- ✓ use appropriate information technology hardware such as fax, VCR, camcorder, digital camera and computer

INFORMATION TECHNOLOGIES: GRADE 7

Overall Expectations. By the end of Grade 7, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 7, students will:

- ✓ examine media works for usefulness, validity and effectiveness identifying perspective, bias, inclusiveness, stereotyping, intent, credibility
- ✓ analyze a specific problem and select and use appropriate tools to solve it in a variety of technological formats
- ✓ assess the value and usability of a variety of electronic resources such as CD-ROMs, for class and personal use

Organizing. By the end of Grade 7, students will:

- ✓ deconstruct media products such as video and CD-ROM for structural design and techniques
- ✓ use appropriate technology such as VCR and camcorders to collect, revise and edit products for presentation
- ✓ use stationary organizers (templates) to organize data
- ✓ use slide show software to edit and organize information for presentation

Communicating. By the end of Grade 7, students will:

- ✓ import digital pictures for a presentation
- ✓ express data in a variety of graphs, pie charts, histograms
- ✓ present electronic slide show and video of research for target audience for a specific purpose
- ✓ publish a report, newsletter or pamphlet using word processing and desktop publishing software

Applying. By the end of Grade 7, students will:

- ✓ search the Internet using keywords and Boolean operators in single search engines
- ✓ develop skills integrating multimedia tools
- ✓ use appropriate information technology hardware such as fax, VCR, camcorder, camera (digital) and computer
- ✓ use a variety of electronic reference tools, online and on CD-ROM, to investigate a topic

INFORMATION TECHNOLOGIES: GRADE 8

Overall Expectations. By the end of Grade 8, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 8, students will:

- ✓ analyze and deconstruct for usefulness media products such as web sites for techniques, structure, design

- ✓ compare and contrast information on electronic tools
- ✓ assess the value and usability of a variety of electronic resources such as CD-ROMs, for teacher/student use

Organizing. By the end of Grade 8, students will:

- ✓ develop design and construction skills to prepare multimedia presentation
- ✓ use advanced database strategies to record and sort information
- ✓ use a notepad to select, save and print excerpts from a resource

Communicating. By the end of Grade 8, students will:

- ✓ demonstrate a step by step evaluation of a media work or computer application
- ✓ design a web page to report findings with citations for other sources used
- ✓ create an effective digital video presentation
- ✓ model an organizational tool on e-mail or Intranet for others

Applying. By the end of Grade 8, students will:

- ✓ begin to search the Internet using a range of strategies relevant to a variety of single search engines
- ✓ use software in more than one subject area to do research
- ✓ use a variety of electronic reference and telecommunication tools to build a knowledge base on a topic
- ✓ demonstrate to younger students how to use bookmarked web sites for specific projects

INFORMATION TECHNOLOGIES: GRADE 9

Overall Expectations. By the end of Grade 9, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 9, students will:

- ✓ distinguish between primary, secondary and tertiary materials on electronic sources
- ✓ assess the value and usability of various types of electronic resources

Organizing. By the end of Grade 9, students will:

- ✓ create graphs and organizers using appropriate technology tools such as graphs and tables
- ✓ use graphic tools to organize subtopics and keywords
- ✓ use acknowledged format for citing electronic sources
- ✓ record and output information from advanced databases and spreadsheets in a variety of ways

Communicating. By the end of Grade 9, students will:

- ✓ integrate information from a variety of print and electronic sources including digital photos, scanned images, and notepad information for presentations
- ✓ teach others to use a specific electronic tool for research
- ✓ use e-mail to ask questions of experts

Applying. By the end of Grade 9, students will:

- ✓ search the Internet using a range of strategies relevant to a variety of single search engines
- ✓ use a variety of telecommunication tools to locate and retrieve information from such community sources as public and university libraries
- ✓ bookmark appropriate web sites for teacher and students in a specific grade for a specific topic

INFORMATION TECHNOLOGIES: GRADE 10

Overall Expectations. By the end of Grade 10, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 10, students will:

- ✓ access help manuals, menus and online experts
- ✓ analyze a variety of electronic information sources
- ✓ make predications based on manipulation of data by combining database and spreadsheet information

Organizing. By the end of Grade 10, students will:

- ✓ use graphic tools to create a research plan
- ✓ download and manage files from online sites
- ✓ create complex graphic organizers
- ✓ create research documents which include word processing charts, graphs and tables
- ✓ manage bookmark files in simple hierarchies

Communicating. By the end of Grade 10, students will:

- ✓ use advance features of word processing and telecommunication to communicate knowledge
- ✓ define and articulate appropriate terminology terms
- ✓ summarize data from databases and spreadsheets in presentations
- ✓ publish results of research on electronic web pages to receive electronic feedback

Applying. By the end of Grade 10, students will:

- ✓ begin to search the Internet using a range of strategies relevant to a variety of meta search engines
- ✓ use a variety of telecommunication tools to locate and retrieve information from such community sources as police, museums, galleries and social services
- ✓ use flow chart and webbing software to synthesize findings and formulate conclusions

INFORMATION TECHNOLOGIES: GRADE 11

Overall Expectations. By the end of Grade 11, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 11, students will:

- ✓ evaluate electronic resources for validity, authority, relevance and accuracy
- ✓ identify and articulate protocols and responsibilities for use of information from electronic resources
- ✓ establish criteria for evaluating a web page

Organizing. By the end of Grade 11, students will:

- ✓ perform personal file and directory management
- ✓ create relational databases to manage data and apply resources
- ✓ manage bookmark files in complex hierarchies
- ✓ create a web page to organize links to other sources of information

Communicating. By the end of Grade 11, students will:

- ✓ incorporate information from preselected and moderated discussion newsgroups
- ✓ post on the intranet findings re the value and usability of web sites for teacher and/or student use
- ✓ independently teach others how to use a specific electronic tool for research

Applying. By the end of Grade 11, students will:

- ✓ search the Internet using a range of strategies relevant to a variety of meta search engines
- ✓ use flow chart and webbing software to solve problems and make decisions
- ✓ locate and retrieve information from a variety of primary sources such as business and government

INFORMATION TECHNOLOGIES: GRADE 12

Overall Expectations. By the end of Grade 12, students will:

- ✓ use information technology to define needs, select information, analyze information, and reflect on research;
- ✓ use information technology to identify, gather and sort information, and revise product;
- ✓ use information technology to explore information, collaborate with others, test ideas and present findings;
- ✓ use information technology to relate prior knowledge, locate information, synthesize findings, formulate conclusions and transfer knowledge and skills.

Expectations in Specific Areas

Reasoning. By the end of Grade 12, students will:

- ✓ perform complex calculation on databases and spreadsheets to answer information needs
- ✓ prepare web pages with connecting links to demonstrate how criteria for evaluating subject web sites are used
- ✓ identify and analyze the appropriate technology resources for research and problem solving considering validity, authority, relevance and accuracy

Organizing. By the end of Grade 12, students will:

- ✓ use a variety of computer applications to manipulate data to test and support theses and hypotheses
- ✓ use organization tools such as timelines, knowledge trees, hypertext links, legends and indexes to record and organize information

Communicating. By the end of Grade 12, students will:

- ✓ participate in video conferencing to explore a topic and share information online
- ✓ participate in online discussion groups to find information
- ✓ transfer data from a database such as FileMaker to web page to share research findings in database format

Applying. By the end of Grade 12, students will:

- ✓ use free text searching of online resources
- ✓ use controlled vocabulary for subject searching
- ✓ locate and retrieve information from a variety of global resources such as United Nations and World Bank

Information and Society

http://www.accessola.com/action/positions/info_studies/html/infoscty.html

INFORMATION AND SOCIETY: KINDERGARTEN

Overall Expectations. By the end of Kindergarten, students will:

- ✓ demonstrate an understanding of the nature and role of information
- ✓ demonstrate an understanding of how information is organized
- ✓ demonstrate an understanding of ways of creating and communicating information
- ✓ transfer information knowledge and skills to enrich personal life and contribute to society

Expectations in Specific Areas

Reasoning. By the end of Kindergarten, students will:

- ✓ identify safe and unsafe ways of obtaining information
- ✓ identify familiar information-based and technological items and describe their use
- ✓ recognize special places where information is found and describe their function
- ✓ identify people in the community who provide information and describe what they do

Organizing. By the end of Kindergarten, students will:

- ✓ identify patterns, cycles and events in daily life and describe how such patterns provide information
- ✓ identify elements and variations of textual and visual information

Communicating. By the end of Kindergarten, students will:

- ✓ take turns in classroom activities and explain why turns allow for the sharing of information
- ✓ describe features of art forms from a variety of cultures and what they tell us about those cultures
- ✓ demonstrate an understanding of the information-based purposes of rules and routines in different contexts

Applying. By the end of Kindergarten, students will:

- ✓ identify favourite texts and retell the stories in their own words
- ✓ identify and discuss their own interests and preferences
- ✓ connect their own experiences to those of characters in fiction and non-fiction
- ✓ use a variety of simple strategies to solve social problems
- ✓ use familiar materials to express information in new ways

INFORMATION AND SOCIETY: GRADE 1

Overall Expectations. By the end of Grade 1, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 1, students will:

- ✓ define what information is in everyday life
- ✓ identify the qualities of good information such as accuracy and use

Organizing. By the end of Grade 1, students will:

- ✓ recognize the meaning of signs and symbols in everyday life
- ✓ identify ways information is organized at home and school

Communicating. By the end of Grade 1, students will:

- ✓ identify the variety of ways to communicate information
- ✓ describe how stories and books communicate information

Applying. By the end of Grade 1, students will:

- ✓ discover the work of authors and illustrators in simple fiction and non-fiction texts for pleasure and understanding
- ✓ write, listen and present information to express thoughts and feelings
- ✓ connect stories to personal experiences

INFORMATION AND SOCIETY: GRADE 2

Overall Expectations. By the end of Grade 2, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 2, students will:

- ✓ identify ways that books and computers in record and provide textual and visual information
- ✓ describe the variety of purposes for selecting reading materials

Organizing. By the end of Grade 2, students will:

- ✓ summarize the reasons for organizing and storing information
- ✓ explain how dictionaries and encyclopedias are organized
- ✓ describe different forms of fiction texts such as storybooks and chapter books
- ✓ begin to use the Dewey Decimal system, simple indexes and catalogues

Communicating. By the end of Grade 2, students will:

- ✓ identify ways picture books are created to communicate information
- ✓ identify ways animated media are created to communicate information

Applying. By the end of Grade 2, students will:

- ✓ read simple pattern books, chart stories and non-fiction texts for pleasure and understanding
- ✓ create dramatic presentations to express thoughts and feelings

INFORMATION AND SOCIETY: GRADE 3

Overall Expectations. By the end of Grade 3, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 3, students will:

- ✓ recognize the importance of school and public libraries
- ✓ begin to develop criteria for selecting reading materials
- ✓ express and support opinions about personal reading

Organizing. By the end of Grade 3, students will:

- ✓ classify ways information is organized at home and school
- ✓ explain how thesauri are organized

- ✓ describe different forms of non-fiction texts such as instructional manuals, recipes, consumer packaging
- ✓ recognize library layout to locate materials

Communicating. By the end of Grade 3, students will:

- ✓ describe ways information is communicated at home and school
- ✓ identify how everyday products such as labels and packaging are created to communicate information
- ✓ describe the concept and importance of intellectual property, including basic copyright and plagiarism

Applying . By the end of Grade 3, students will:

- ✓ read chapter books and non-fiction texts for pleasure and understanding
- ✓ prepare letters, stories and poems and simple media works to express thoughts and feelings

INFORMATION AND SOCIETY: GRADE 4

Overall Expectations. By the end of Grade 4, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 4, students will:

- ✓ analyze the differences between information produced by oral and written cultures
- ✓ develop criteria for selecting reading materials
- ✓ identify bias in selected information
- ✓ follow acceptable use policies for specific tasks

Organizing. By the end of Grade 4, students will:

- ✓ classify the methods of organizing and storing information such as alphabetical order, subject approach and type of media
- ✓ describe major Dewey Decimal categories
- ✓ compare fiction and non-fiction texts to classify their features

Communicating. By the end of Grade 4, students will:

- ✓ describe the history of writing systems such as alphabets, hieroglyphics, codes and petroglyphs
- ✓ identify how text books are created to communicate information

Applying. By the end of Grade 4, students will:

- ✓ connect stories to personal and others' experiences
- ✓ produce a brief oral report and simple multi-media presentation to express thoughts and feelings
- ✓ begin to identify and apply effective study practices

INFORMATION AND SOCIETY: GRADE 5

Overall Expectations. By the end of Grade 5, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 5, students will:

- ✓ compare the impact of a variety of media on different cultures and communities

- ✓ recognize generic features in fiction and non-fiction and explain preferences
- ✓ demonstrate an understanding of the purpose and importance of an acceptable use policy

Organizing. By the end of Grade 5, students will:

- ✓ describe the origins of organizational systems
- ✓ keep a log of reading, viewing and listening experiences
- ✓ compare different forms of digital texts such as CD-ROM and the Internet

Communicating. By the end of Grade 5, students will:

- ✓ describe the history of the transmission of information such as trade routes, pony express and postal systems
- ✓ identify how commercials are created to communicate information

Applying. By the end of Grade 5, students will:

- ✓ connect information to personal and community issues and perspectives
- ✓ develop the pleasure and habit of reading a variety of inclusive fiction and non-fiction
- ✓ work collaboratively to produce a simple web page

INFORMATION AND SOCIETY: GRADE 6

Overall Expectations. By the end of Grade 6, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 6, students will:

- ✓ evaluate the significance of information in different cultures
- ✓ recognize the reading, viewing and listening preferences of self and others

Organizing. By the end of Grade 6, students will:

- ✓ read about and describe the life and work of individuals who contributed to the organization of print information
- ✓ classify the general types and structures of Web sites for information

Communicating. By the end of Grade 6, students will:

- ✓ describe the history of communication such as Morse code and radio, television and computers
- ✓ identify how audio media are created to communicate information
- ✓ describe the concept and importance of appropriate online behaviour, including basic netiquette

Applying. By the end of Grade 6, students will:

- ✓ begin to develop a yearly reading plan for personal and academic interest
- ✓ follow an acceptable use policy and explain its rationale for safe and responsible use of information
- ✓ identify and apply effective study practices

INFORMATION AND SOCIETY: GRADE 7

Overall Expectations. By the end of Grade 7, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 7, students will:

- ✓ analyze features of our information-based society
- ✓ analyze the ways people learn to read, write, speak and view information
- ✓ appraise the perspectives, opinions and biases of varied writers and producers
- ✓ begin to explain the importance of literacy

Organizing. By the end of Grade 7, students will:

- ✓ read about and describe the life and work of individuals who contributed to the organization of digital information
- ✓ describe how reference materials such as atlases and directories are organized

Communicating. By the end of Grade 7, students will:

- ✓ explain the history of printing including manuscript, type, fax, photocopy, and scanner
- ✓ identify how newspapers and periodicals are created to communicate information
- ✓ begin to provide literacy assistance to other students
- ✓ use information skills and reading experiences to resolve personal issues
- ✓ develop a yearly reading plan for personal and academic interest

Applying. By the end of Grade 7, students will:

- ✓ begin to provide literacy assistance to other students
- ✓ use information skills and reading experiences to resolve personal issues
- ✓ develop a yearly reading plan for personal and academic interest

INFORMATION AND SOCIETY: GRADE 8

Overall Expectations. By the end of Grade 8, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 8, students will:

- ✓ describe information anxiety and overload in contemporary society
- ✓ analyze the role of information in the workplace
- ✓ read and evaluate biographies of pioneers of information
- ✓ analyze features and examples of ethical and unethical uses of information and information technology

Organizing. By the end of Grade 8, students will:

- ✓ describe the features and methods of genealogy and create a family tree
- ✓ visit a variety of physical and virtual libraries and describe their organization

Communicating. By the end of Grade 8, students will:

- ✓ compare ways that information is created and communicated in a variety of formats
- ✓ explain the principles and practice of confidentiality and privacy in communicating information
- ✓ recognize the complexity of copyright in print and digital formats

Applying. By the end of Grade 8, students will:

- ✓ self-regulate perceptions that affect information response
- ✓ use information skills and reading experiences to resolve issues at school
- ✓ connect literature and media to personal experiences and those of others

INFORMATION AND SOCIETY: GRADE 9

Overall Expectations. By the end of Grade 9, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 9, students will:

- ✓ compare methods for using information to solve problems
- ✓ identify the role of information in society in such fields as literacy
- ✓ analyze the impact of information technology on such areas as education and health
- ✓ identify the different kinds of bias in information

Organizing. By the end of Grade 9, students will:

- ✓ classify types of generic fiction and identify significant authors and titles in each genre
- ✓ describe methods of indexing materials in print or electronic form

Communicating. By the end of Grade 9, students will:

- ✓ describe the evolution of communication of information and predict future trends
- ✓ illustrate ways of controlling information such as filtering and censorship

Applying. By the end of Grade 9, students will:

- ✓ compare ways of using linear and lateral thinking to process information
- ✓ link learning from various disciplines
- ✓ use information skills and reading experiences to resolve issues at home
- ✓ begin to identify and apply advanced study practices

INFORMATION AND SOCIETY: GRADE 10

Overall Expectations. By the end of Grade 10, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 10, students will:

- ✓ identify the role of information in society in such fields as criminology
- ✓ analyze the impact of information technology on such areas as environment and global development
- ✓ recognize the importance of reading a variety of fictional texts in understanding various cultures

Organizing. By the end of Grade 10, students will:

- ✓ begin to describe the organizational functions of the brain
- ✓ explain how business materials such as manuals and reports are organized

Communicating. By the end of Grade 10, students will:

- ✓ describe the impact of new technologies on communication such as the Internet, conferences, chat and e-mail
- ✓ identify ways of determining the ownership of intellectual property

Applying. By the end of Grade 10, students will:

- ✓ use such theories as multiple intelligences to determine personal approaches to information
- ✓ describe the legal consequences of interfering with on-line communication

- ✓ use information skills and reading experiences to investigate career choices

INFORMATION AND SOCIETY: GRADE 11

Overall Expectations. By the end of Grade 11, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 11, students will:

- ✓ identify the role of information in society in such fields as medicine and genetic engineering
- ✓ analyze the impact of information technology on such areas as Canadian and world cultures
- ✓ recognize the importance of reading classical fictional texts in understanding various cultures

Organizing. By the end of Grade 11, students will:

- ✓ describe how the brain processes information
- ✓ explain how web pages and search engines are constructed and organized

Communicating. By the end of Grade 11, students will:

- ✓ identify the features of propaganda and explain how it has been used throughout history
- ✓ explain ways of making information secure such as encryption
- ✓ classify ways of determining the intellectual ownership of information

Applying. By the end of Grade 11, students will:

- ✓ develop products and solutions by linking learning from various disciplines
- ✓ report how groups negotiate to reach consensus and make decisions
- ✓ use information skills and reading experiences to resolve issues in the community

INFORMATION AND SOCIETY: GRADE 12

Overall Expectations. By the end of Grade 12, students will:

- ✓ analyze and evaluate the nature and importance of information in personal life and society;
- ✓ demonstrate an understanding of varied ways of organizing and storing information;
- ✓ demonstrate an understanding of varied ways of creating and communicating information;
- ✓ transfer information skills and knowledge to enrich personal life and contribute to society.

Expectations in Specific Areas

Reasoning. By the end of Grade 12, students will:

- ✓ identify the role of information in society in such fields as artificial intelligence and cybernetics
- ✓ analyze the impact of information technology on such areas as economy and politics
- ✓ evaluate the effectiveness of distance learning
- ✓ identify the features of information theory

Organizing. By the end of Grade 12, students will:

- ✓ describe the history of libraries, museums and other institutions that organize and store information
- ✓ identify the features of expert systems

Communicating. By the end of Grade 12, students will:

- ✓ analyze the use of propaganda and the control of communication in contemporary society
- ✓ identify legal and ethical issues related to intellectual property
- ✓ describe ways that businesses, professions and trades communicate information

Applying. By the end of Grade 12, students will:

- ✓ provide literacy assistance within community
- ✓ test research methods in independent study projects
- ✓ express views to a variety of governmental and organizational agencies
- ✓ use information skills and reading experiences to investigate global issues
- ✓ identify and apply advanced study practices