

# Information and Communication Technology Integration 10–12

## Outcome Components

Students will demonstrate expected performance levels in five IT-based learning outcome areas within the context of essential graduation learnings and outcomes specified for the public school program as a whole.

## Key-Stage Curriculum Outcomes

By the end of grade 12, in addition to the grade 9 outcomes, students will be expected to

### Basic Operations and Concepts (BOC)

- Concepts and skills associated with the safe, efficient operation of a range of information and communication technologies.

BOC 12.1 (relates to 9.1–9.4) use a wide variety of technology, demonstrate a clear understanding of technological applications, and consistently apply appropriate technology to solve curriculum problems

BOC 12.2 (relates to 9.5) demonstrate an ability to assess the application of technology to solve problems, particularly to evaluate significant effects which estimations, program flaws and human error have on any given solution

BOC 12.3 (relates to 9.6) demonstrate facility with the specialized vocabulary associated with the technology they use

BOC 12.4 (relates to 9.7) take personal responsibility for their safe and ergonomic use of technology for learning

### Social, Ethical, and Human Issues (SEHI)

- The understanding associated with the use of ICT, which encourages in students a commitment to pursue personal and social good, particularly to build and improve their learning environments and to foster stronger relationships with their peers and others who support their learning.

SEHI 12.1 (relates to 9.1–9.4) behave ethically and with accuracy as they generate and distribute information about themselves, others, and curriculum topics under study

SEHI 12.2 (relates to 9.2) articulate an informed and critical understanding of mass media, popular culture and electronic information environments; their techniques; and the effects of those techniques

SEHI 12.3 (relates to 9.1–9.4) critically analyze the impacts of evolving technologies on themselves, societies, and the environment

SEHI 12.4 (relates to 9.2–9.4) demonstrate habits of perception, analysis, judgment and selectivity as they contribute to society through the discerning and critical use and creation of information resources and technology

SEHI 12.5 (relates to 9.3, 9.4) act responsibly when faced with ethical issues that arise from their use of information and ICT and perspectives

SEHI 12.6 (relates to 9.5) demonstrate an appreciation of the role of technology-related careers in the larger community and assess technology-related career opportunities within the context of their personal values and needs

SEHI 12.7 (relates to 9.8) follow the *Public School Program Network Access and Use Policy*

## Productivity Tools and Software (PTS)

- The efficient selection and use of ICT to perform tasks such as
  - the exploration of ideas
  - data collection
  - data manipulation, including the discovery of patterns and relationships
  - problem solving
  - the representation of learning

PTS 12.1 (relates to 9.1) use electronic planning software to support the development and analysis of efficient, personal study and research plans independently

PTS 12.2 (relates to 9.2, 9.6) evaluate, select, and use the following to learn and to represent curriculum concepts under study: specialized software, including computer-based simulations; and measuring, sampling and recording devices, including complex calculators

PTS 12.3 (relates to 9.3, 9.4) write and represent their research using the structures, features, conventions, and techniques of specialized publication and presentation formats with growing fluency

PTS 12.4 (relates to 9.4, 9.5) evaluate, select and use a range of media, and information and communication technology, to create, edit, and publish their work independently

PTS 12.5 (relates to PTS 9.6 and RPSD 9.2) create electronic charts, tables and graphs; and design, create, and manipulate spread sheets and databases, as part of the process of collecting, analyzing, and displaying data independently

## Communications Technology (CT)

- Specific, interactive technology use supports student collaboration and sharing through communication.

CT 12.1 (relates to 9.1) use language, in a range of aural, print, media and electronic forms to explore and express their perceptions, feelings, ideas and attitudes; refine their thinking; and interact, negotiate, and collaborate with others in order to build their understanding

CT 12.2 (relates to 9.1, 9.2) critically apply technological skills in a range of electronic, visual, and print media for formal and informal communication

CT 12.3 (relates to 9.1) design and create electronic documents to accomplish curricular tasks

CT 12.4 (relates to CT 9.3) discover, share and reflect upon their own and others' cultures, values, and understandings as they are expressed in electronic and other formats

CT 12.5 (relates to 9.1–9.3) use multimedia hardware and authoring software to develop non-linear, interactive presentations

CT 12.6 (relates to 9.3) assess the value and application of information and communication technology in personal and career-related pursuits

## Research, Problem Solving, and Decision Making (RPSD)

- Students' organization, reasoning, and evaluation of their learning rationalize their use of information and communication technology.

RPSD 12.1 (relates to 9.1) select appropriate devices and software to collect data, solve problems and note patterns; to make logical decisions and draw conclusions; and to present results, with general supervision

RPSD 12.2 (relates to 9.4) identify, evaluate, and compare the quality, congruencies, discrepancies, omissions, biases, and perspectives of information content of print, media, and electronic resources

RPSD 12.3 (relates to 9.3–9.8) evaluate and organize ideas and information from a wide range of media and a variety of sources to meet their curriculum needs efficiently and independently

RPSD 12.4 (relates to 9.7) identify the strengths and limitations of different approaches to research, and select those approaches which efficiently meet their learning needs

RPSD 12.5 (relates to 9.4–9.8) contribute to the development of criteria for selecting a research topic, and, based on those criteria, define and complete a research task efficiently

RPSD 12.6 (relates to 9.9) accurately record and cite, using academically accepted formats and standards, sources of information contributing to their research