



Applied Design, Skills, and Technologies 4-8 – Content

Grade	Computational Thinking	Computers and Communications Devices	Digital Literacy
4-5	<p><input type="checkbox"/> Students are expected to use the learning standards for Curricular Competencies from Applied Design, Skills, and Technologies 4–5 in combination with grade-level content from other areas of learning in cross-curricular activities to develop foundational mindsets and skills in design thinking and making.</p>		
6-7	<p><input type="checkbox"/> Students will experience a minimum of three modules of Applied Design, Skills, and Technologies 6–7 in each of Grades 6 and 7. Schools may choose from among the modules listed below or develop new modules that use the Curricular Competencies of Applied Design, Skills, and Technologies 6–7 with locally developed content. Locally developed modules can be offered in addition to, or instead of, the modules in the provincial curriculum.</p>		
6-7	<ul style="list-style-type: none"> <input type="checkbox"/> simple algorithms that reflect computational thinking <input type="checkbox"/> visual representations of problems and data <input type="checkbox"/> evolution of programming languages <input type="checkbox"/> visual programming 	<ul style="list-style-type: none"> <input type="checkbox"/> computer system architecture, including hardware and software, network infrastructure (local), intranet/ Internet, and personal communication devices <input type="checkbox"/> strategies for identifying and troubleshooting simple hardware and software problems <input type="checkbox"/> function of input and output devices, including 3D printing and adaptive technologies for those with special needs <input type="checkbox"/> ergonomics in use of computers and computing devices <input type="checkbox"/> effective and efficient keyboarding techniques 	<ul style="list-style-type: none"> <input type="checkbox"/> Internet safety <input type="checkbox"/> digital self-image, citizenship, relationships, and communication <input type="checkbox"/> legal and ethical considerations, including creative credit and copyright, and cyberbullying <input type="checkbox"/> methods for personal media management <input type="checkbox"/> search techniques, how search results are selected and ranked, and criteria for evaluating search results <input type="checkbox"/> strategies to identify personal learning networks
8	<p><input type="checkbox"/> The curriculum is designed to be offered in modules or courses of various lengths. Schools are required to provide students with the equivalent of a full-year “course” in Applied Design, Skills, and Technologies. This “course” can be made up of one or more modules. Schools may choose from among the modules listed below or develop new modules that use the Curricular Competencies of Applied Design, Skills, and Technologies 8 with locally developed content. Locally developed modules can be offered in addition to, or instead of, the modules in the provincial curriculum.</p>		
8	<ul style="list-style-type: none"> <input type="checkbox"/> software programs as specific and sequential instructions with algorithms that can be reliably repeated by others <input type="checkbox"/> debugging algorithms and programs by breaking problems down into a series of sub-problems <input type="checkbox"/> binary number system (1s and 0s) to represent data <input type="checkbox"/> programming languages, including visual programming in relation to text-based programming and programming modular components 	<ul style="list-style-type: none"> <input type="checkbox"/> design and function of digital infrastructures, from personal communication systems to wide area networks and the Internet of Things <input type="checkbox"/> social, cultural, and economic impact of mobile devices <input type="checkbox"/> systems for information transfer and communication, including videos, blogs, podcasts, and social media <input type="checkbox"/> keyboarding techniques 	<ul style="list-style-type: none"> <input type="checkbox"/> elements of digital citizenship <input type="checkbox"/> ethical and legal implications of current and future technologies <input type="checkbox"/> strategies for curating personal digital content, including management, personalization, organization, and maintenance of digital content; e-mail management; and workflow <input type="checkbox"/> search techniques, how search results are selected and ranked, and criteria for evaluating search results <input type="checkbox"/> strategies to engage with personal learning networks